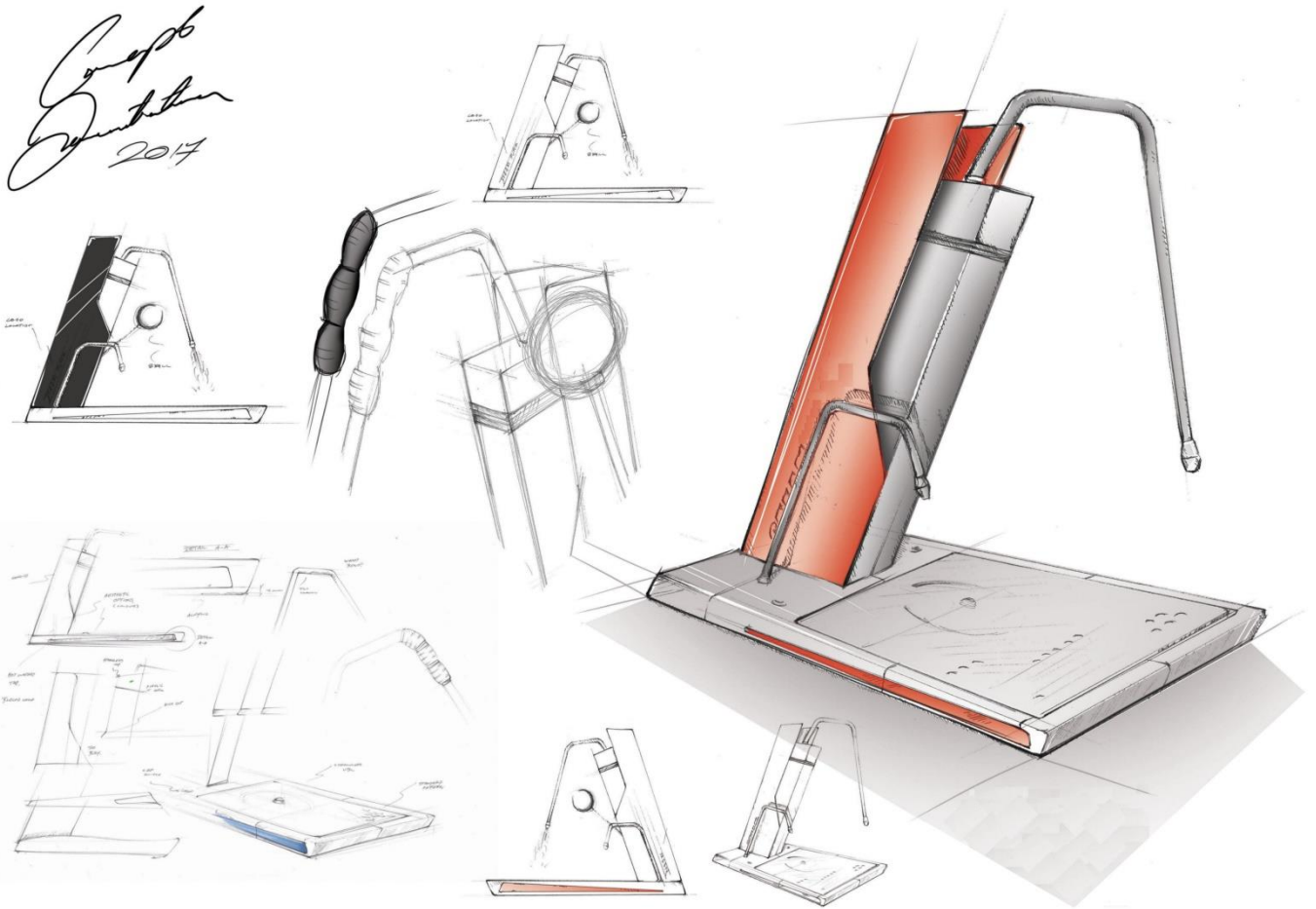


Designed by Baristas for Baristas

Beautiful design, easy to use ...

Steam

Operating Manual



The latest version of this manual is available online at
<https://www.STEAM.international/technical/>

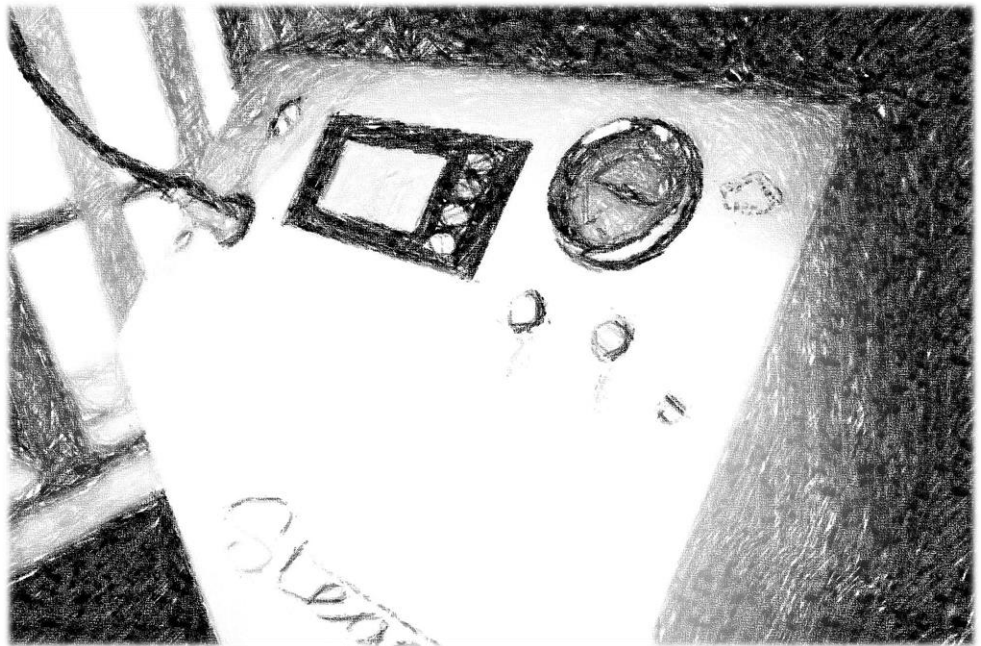
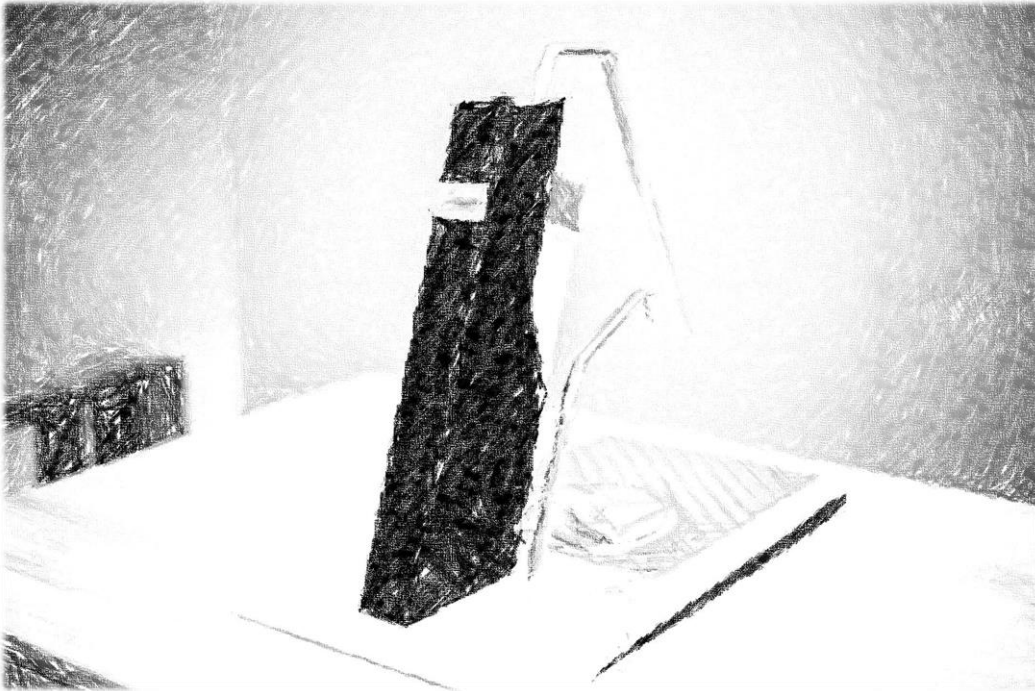


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General Warnings and Safety

1) This operating manual is an essential part of the product and must be supplied to users. **Users are asked to read the warnings and cautions carefully, as they provide valuable information concerning safety during installation, operation and maintenance.** This manual must be kept in a safe place and must be available for consultation to new and experienced users.

2) Inspect the packaging and make sure there are no signs of damage which might affect the enclosed machine.

3) Carefully remove the packaging and check the STEAM's integrity.

4) Packaging (including boxes, plastic bags etc) must not be left within easy reach of children due to the potential danger it represents, nor should packaging be discarded in the environment.

5) Check to see that data on the compliance plate corresponds to those of the electrical supply to which the STEAM will be hooked up.

6) Installation must be in compliance with local electrical and plumbing codes and regulations. Installation must also comply with manufacturer instructions and must be performed by qualified and authorized personnel.

7) Incorrect installation may cause injury and damage to people, animals and objects for which the manufacturer shall not be held responsible.

8) Safe electrical operation of this device will only be achieved when the connection to the power outlet has been completed correctly and in compliance with all local, national, and international electrical codes and safety regulations, and in particular, by grounding the unit. Make sure grounding has been done properly as it represents a fundamental safety requirement. Ensure qualified personnel check all connections.

9) You must ensure that the capacity of the available electrical system is suitable for the maximum power consumption indicated on the STEAM compliance plate.

10) We do not recommend using adapters, multiple plugs and/or extension cords. If you cannot avoid using them, make sure that they conform to local, national, and international electrical codes and safety regulations. Power and current ratings indicated on adapters and extension cords must not be exceeded.

11) **This STEAM must be used exclusively for the functions it has been designed and built for. Any other application is inappropriate and dangerous.**

12) Using any electrical device requires that rules are observed. In particular:
- do not touch the device with wet or damp hands or feet;
- do not use the device while having no shoes on your feet;

- do not use extension cords in bath or shower rooms;
- do not unplug the device from the power outlet by pulling on the power supply cable;
- do not expose the device to rain, sun, etc.;

- do not allow children or untrained personnel to use this STEAM.

13) Before carrying out any maintenance and/or cleaning, disconnect the machine from the electrical network by unplugging the cord or by switching off the corresponding circuit breaker and make sure that the STEAM is completely cold with no steam pressure. For cleaning, follow the instructions contained in this manual.

14) **If the STEAM is operating in a faulty manner or breaks down, disconnect it from the electrical network (as described in the preceding point) and close the water supply valve. Do not attempt to repair it.** Contact a qualified and authorized professional to perform any repair. **Any repairs must be performed exclusively by the manufacturer or by an authorized centre using only original parts. Non-compliance with the above could compromise the safe operation of the machine.**

15) Your installer needs to use an approved connector as required by local, national, and international electrical codes and regulations.

16) In order to avoid potentially dangerous overheating, it is recommended that the power supply cable be fully extended.

17) **Do not obstruct air intake and exhaust grilles.**

18) The STEAM's power supply cable must not be replaced by users. If the power supply cable becomes damaged, disconnect the STEAM from the electrical network by switching off the corresponding circuit breaker and close off the water supply; to replace the power supply cord, contact qualified professionals only.

Note:

In case of any doubt, do not proceed and contact your dealer or retailer immediately. They will send out specialized personnel authorized to perform service on your STEAM. The manufacturer shall not be held responsible for any damage caused by improper and/or irrational use.

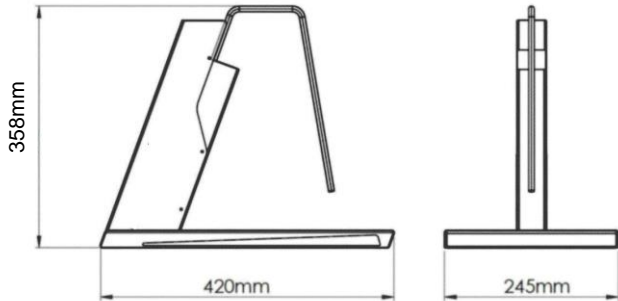
Warning !

The STEAM and Steam Generator must be installed to comply with applicable federal, state and local plumbing codes.

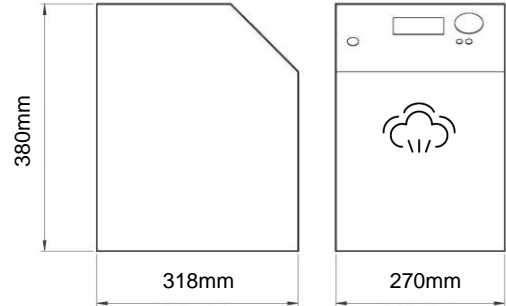
Steam Generator and Bench Top STEAM

This operating manual refers exclusively to the model below of our manufacture

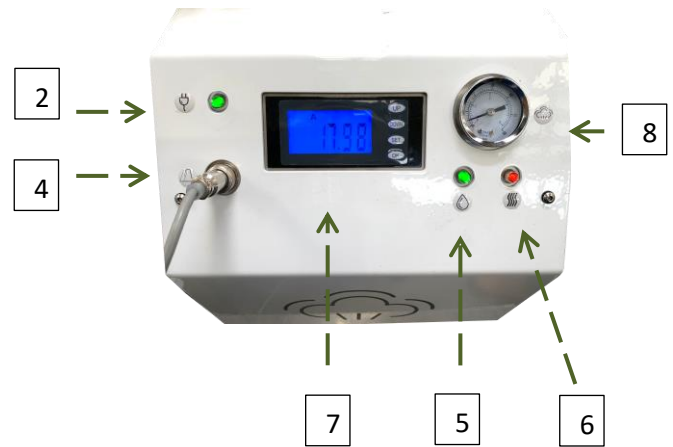
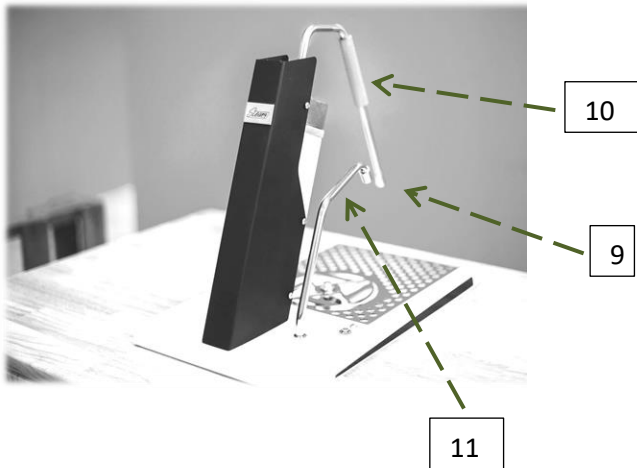
Common Dimensions, Weights, and Features



Weight 5.6kg

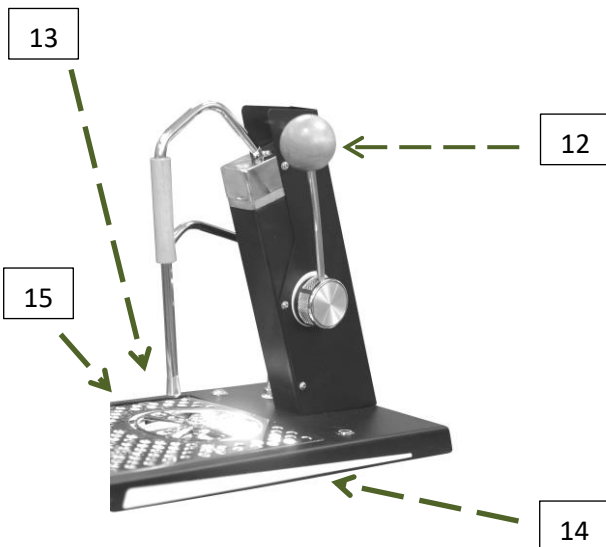


Weight 21.1kg



Legend

- 1 STEAM On/Off
- 2 Mains Power Connected LED
- 3 Hot Water Dispense Switch
- 4 Bench Top STEAM Plug
- 5 Water Fill Indicator Lamp
- 6 Steam Generator Heating Indicator Lamp
- 7 Amps Power and Usage Display
- 8 Steam Generator Pressure Gauge
- 9 Steam Wand Tip
- 10 Steam Wand Heat Protection
- 11 Hot and Cold Water Outlet
- 12 Optional: Steam Wand Lever
- 13 Pitcher / Jug Rinser Disk
- 14 Drainage Tray with Light
- 15 Removable Drainage Tray Cover



Icons

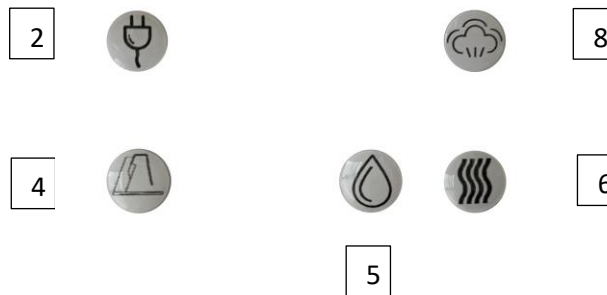
Bench Top STEAM



Steam Generator Top



Steam Generator Angled Panel



Steam Generator Front



Steam Generator



Inlet Cold Water

Pressure Over 2 bar
Green

Pressure Low Red



81

82

91

STEAM - Handbuilt in Melbourne
 Volts 220/240AC Watts 4800 Amps 20
 Phase 1 Hz 50/60 Date: Jan 2020
 Steam Boiler Op 1.9 Bar Steam Boiler Litres 5.0
 Pressure MAX Steam 2.5 Bar MIN Water Inlet 2.5 Bar
 S/N: 8106-B-20-1.9-P-N-240
 Made in Australia www.STEAM.international



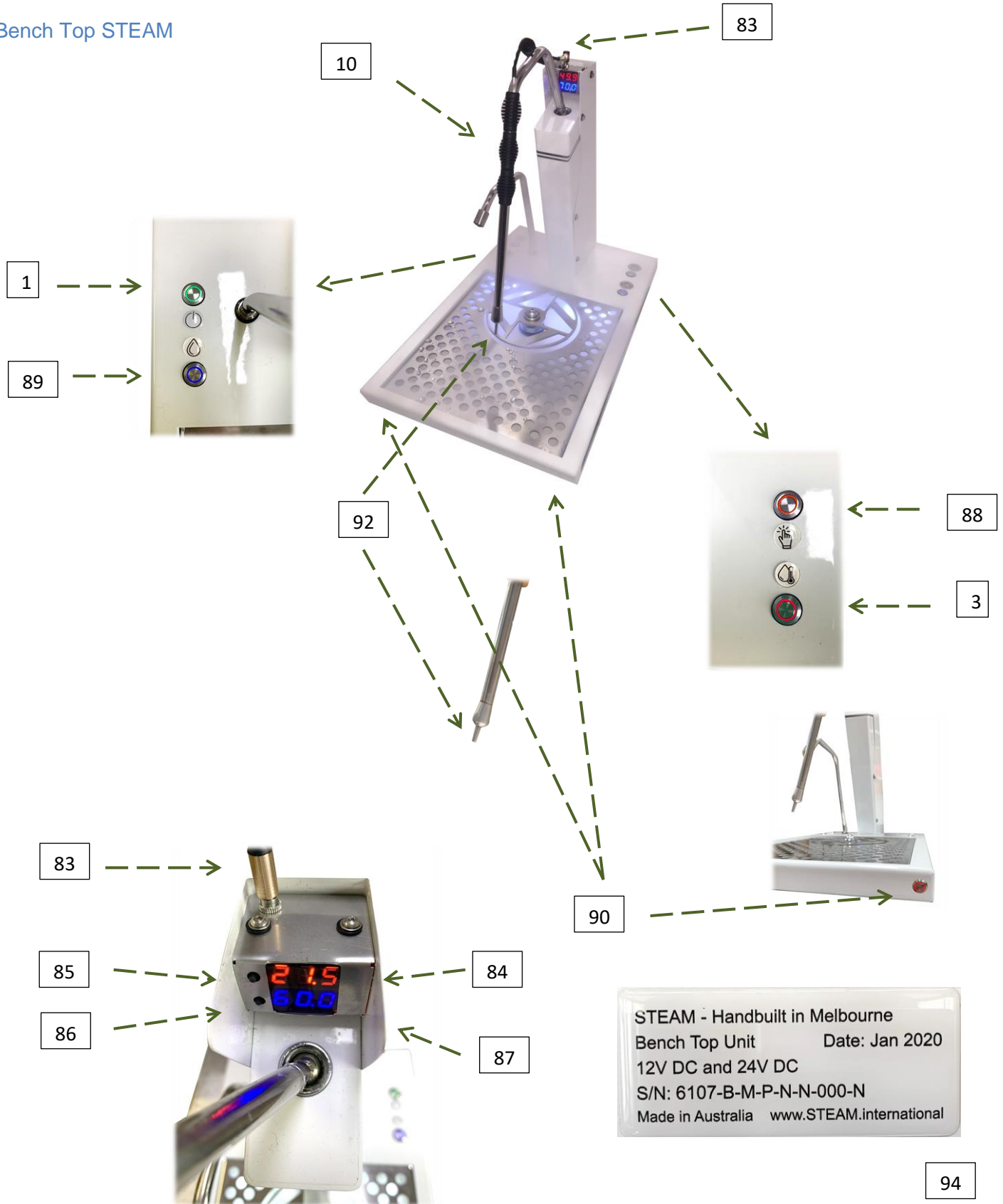
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Legend

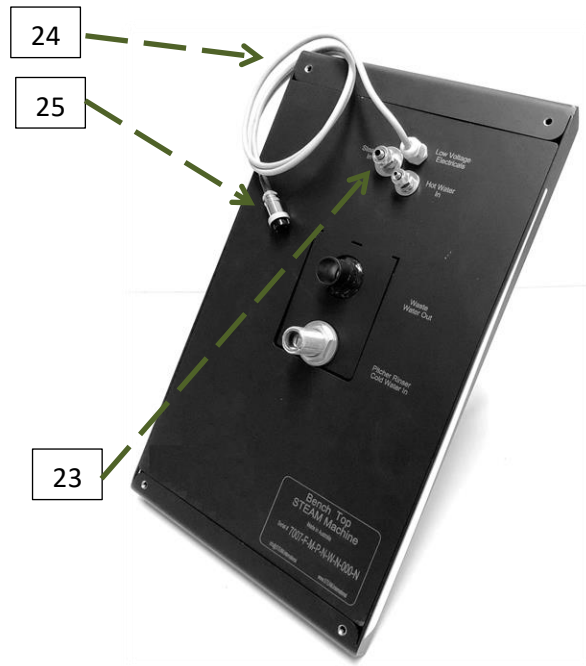
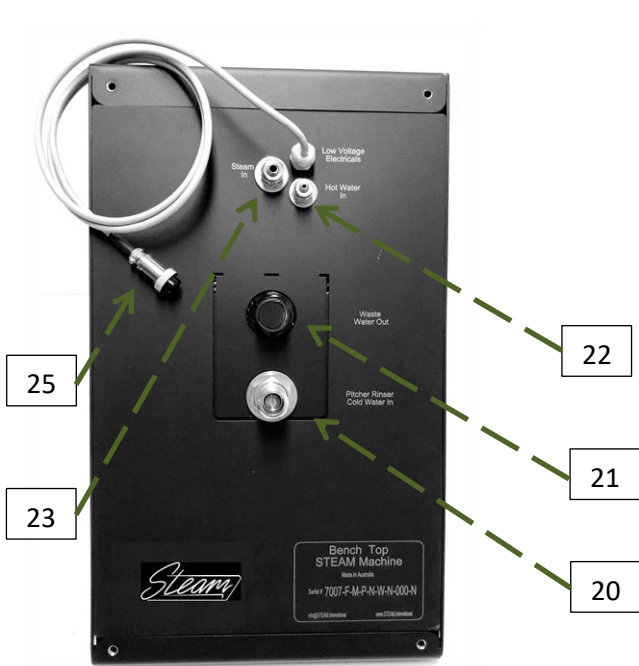
- 81 Water Pressure Indicator LED
- 82 Steam Pressure Adjustment Service Hole
- 83 Temperature Probe Jack
- 84 Actual temperature (Red)
- 85 Set + button
- 86 °C/°F - button
- 87 Target temperature (Blue)
- 88 Temperature Controller Override Switch
- 89 Cold Water Dispense Switch
- 90 Steam Start/Stop Switch
- 91 Compliance Plate
- 92 Temperature Probe
- 93 Hot Water Temperature Adjustment Knob
- 94 Bench top STEAM Compliance Plate

Bench Top STEAM



STEAM - Handbuilt in Melbourne
 Bench Top Unit Date: Jan 2020
 12V DC and 24V DC
 S/N: 6107-B-M-P-N-N-000-N
 Made in Australia www.STEAM.international

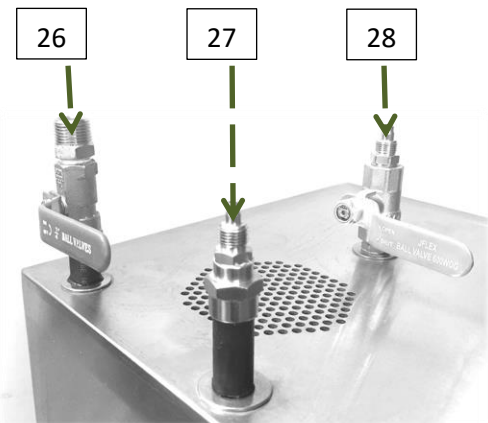
94



Legend

- 20 Pitcher/ Jug Rinser Water Inlet
- 21 Waste Liquid Drainage Out
- 22 Hot Water Inlet Fitting
- 23 Steam Inlet Fitting
- 24 Low Voltage Electrical Cable
- 25 Bench Top STEAM Low Voltage Electrical

NEW PHOTO

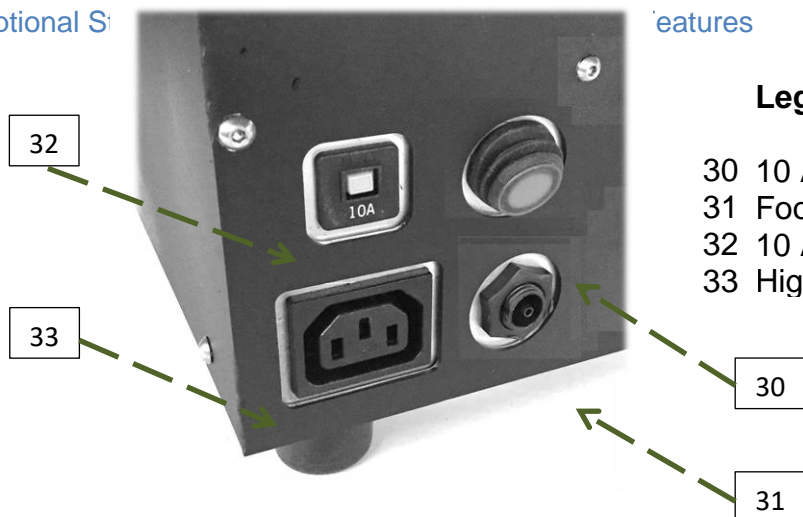


Legend

- 26 Cold Water In
- 27 Hot Water Out
- 28 Steam Out

Optional S

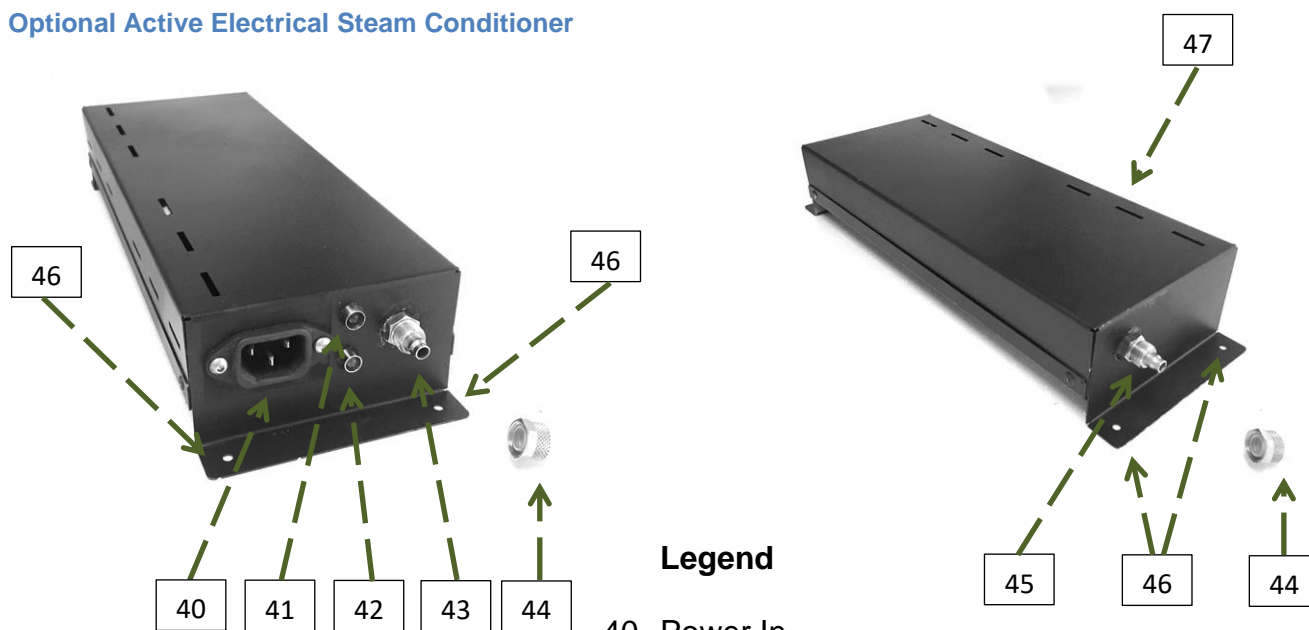
Features



Legend

- 30 10 Amp / 20 Amp Power Switch
- 31 Foot Pedal Switch Air Hose Input
- 32 10 Amp Fuse for Power Out Plug
- 33 High Voltage Power Out Plug

Optional Active Electrical Steam Conditioner



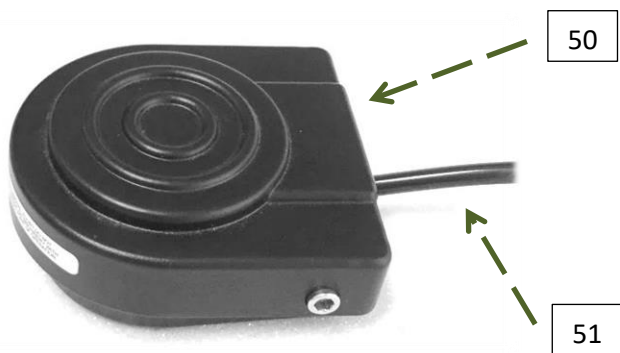
Legend

- 40 Power In
- 41 Live Power Indicator Green
- 42 Heating Indicator Red
- 43 Steam Inlet Fitting
- 44 Steam Fitting on PTFE Tube
- 45 Steam Outlet Fitting
- 46 Screw Holes for mounting under bench
- 47 Ventilation Holes

Dimensions

Height	5.8 cm
Length	32.5 cm
Width	11 cm
Weight	1.3 kg

Optional Foot Pedal Air Switch and Foot Pedal Guard



Legend

- 50 Foot Pedal for Air Switch
- 51 Air Tube to Electrical Air Switch

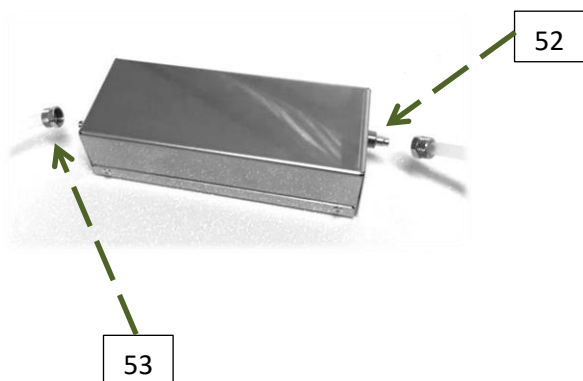
Dimensions

Height	3.5 cm
Length	8 cm
Width	7 cm
Weight	0.3 kg



Optional Foot Pedal Guard

Optional External Passive Non-Electrical Steam Conditioner



Legend Orientation

- 52 Steam Inlet Bottom
- 53 Steam Outlet Top

Dimensions

Height	3.5 cm
Length	21.5 cm
Width	5 cm
Weight	0.65 kg

Optional Quick Connect Steam Arms

Optional, quick connect, detachable steam arms allow the operator to quickly exchange steam arms

- with steam tips to suit different milks
- with steam tips to suit different sized pitchers / jugs
- with profiles to fit operators
- steam arms can be put in a dishwasher for daily cleaning

Optional Cold Water Dispense

The standard bench top STEAM unit dispenses hot water at about 65°C (150°F)

The optional cold water dispense model has an additional water dispense button for dispensing ambient temperature water.

Hot Water Temperature Adjustment

STEAM is calibrated to dispense hot water at about 65°C (150°F)

The hot water temperature adjustment knob is located on the base of the steam generator. It manually adjusts the amount of cold water to mix with boiling water from the steam generator. Rotating the knob clockwise makes the dispensed water hotter. Rotating the knob counter clockwise makes the dispensed water colder.

Optional Measured Volume Water Dispense

The STEAM dispenses water as long as the water dispense button [3] is pressed.

With the optional measured volume water dispense, momentarily pressing the water dispense button delivers a set volume water output.

Optional Cool Touch Steam Arms

The standard bench top STEAM unit is equipped with a regular steam arm that has a heat protection cover where the operator can hold it and manipulate it.

The optional cool touch steam arm is made of two concentric tubes where high temperature steam flows through the inner tube while the outer tube remains cool to the touch because of the thermal insulation.

General Description of the STEAM

The STEAM is a custom, hand built in Australia, steaming machine that consists of a below bench steam generator and a bench top beverage steaming unit.

The Steam can be used for steaming

- milk for coffee, hot chocolate etc
- hot fruit juice like apple and pear juice
- spiced mulled wine and mead
- instant soup
- exotic beverages like Italian denso thick hot chocolate and middle eastern rosewater denso
- beetroot latte, matcha latte, turmeric latte etc
- Greek / Turkish superfine ground coffee
- pre-heating cold ceramic cups

Optional models and features include

- o Foot pedal operation (standard configuration)
- o Right handed lever operation
- o Left handed lever operation
- o Amps : 240V 50Hz - 9, 13, 18 and 27A
220V 50Hz – 8, 12, 16 and 25A
110V 60Hz - 12 and 18A
- o Custom steam pressure (standard 1.9Bar)
- o Pressurestat or electronic pressure control
- o Active Electrical Steam Conditioning
- o Internal Passive Non-Electrical Steam Conditioning is installed standard with the foot pedal operation
STEAM
- o Custom color powder coating
- o Wood or colored acrylic trimmings
- o Cold water dispense
- o Measured volume water dispense
- o Cool touch steam arm
- o Water tank or mains water operation

The machine is composed of the following parts:

- o A steam generating water reservoir to produce steam and boiling water
- o Bench top units for steam, hot water and pitcher / jug rinsing
- o An exterior powder coated, stainless steel cover
- o Electronic controls
- o Low voltage switches
- o Safety systems

Steam Generator Reservoir

The steam generator reservoir is a cylindrical tank made of AISI 300 series stainless steel. Each unit is EU certified to a pressure of 6 Bar and is calibrated to operate at a pressure of 1.0 - 1.9 Bar.

The standard volume and power rating are:
5 litres and 4272 Watts

The cylindrical tank is heat insulated.

Powerful steam generating heating elements are installed on a side plate mounted on the tank. The heating elements allow the steam generator to reach operating pressure of 2 Bar in approximately 6 minutes at 18 Amps.

The steam generator reservoir has safety features and devices for protection, for hot water and steam and for the heating element.

Steam generation is accomplished through an immersion-type heating element.

- The operating pressure of about 2 Bar is controlled automatically through a pressure switch (or optional pressure transducer), adjusted to open the heating element electrical supply circuit at 2 Bar and close it at about 1.9 Bar or less.
- Steam pressure is displayed on a pressure gauge with a scale of 0 to 4 Bar.
- The Steam Generator is equipped with an expansion type mechanical valve safety device with counter-acting spring adjusted to 2.5 Bar.
- A hydraulic test at 4.5 Bar is performed on the steam generator reservoirs, at our factory.

Hot Water Mixer

The hot water mixer is made of AISI 300 series stainless steel valves that control the output water temperature.

Hot and cold water supplies are connected through valves which use mains water pressure and steam pressure when the valves are activated.

Covers

The exterior covers are powder coated heavy duty stainless steel.

- The covers have been the beautifully designed
- to provide awesome aesthetic design,
 - great ergonometics for the operator; and,
 - to reduce the chance of damage to a minimum.

Sound

The weighted sound pressure level of the STEAM is lower than 70 dBA.

No Water Pump

A water pump is NOT installed in the STEAM

- The Steam Generator uses mains water pressure to fill. Filling is controlled by an electronic level controller whenever the steam generating reservoir needs to be replenished.
- If mains water pressure drops below 2.5 Bar or the steam generator reservoir water level drops below the minimum level, the STEAM will shut down.

Steam and Water Tubes

The steam and water tubes between the under bench Steam Generator and the bench top steaming units are PTFE food grade and are rated at about 5 Bar pressure at 130°C. The Steam Generator operates at about 120°C.

Warning !

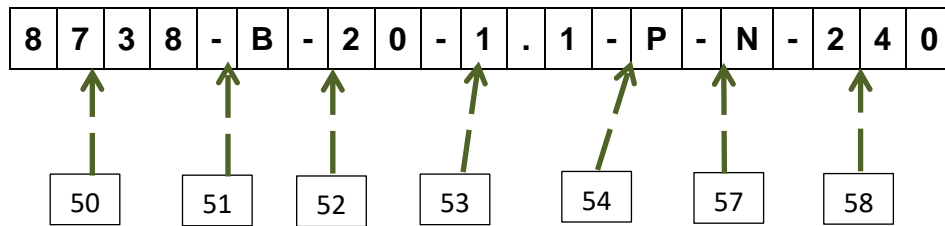
The STEAM should be switched OFF when unattended overnight.

This is a basic safety procedure for preventing steam damage should a PTFE connecting tube or Camozzi fitting fail.

Serial Number Formats

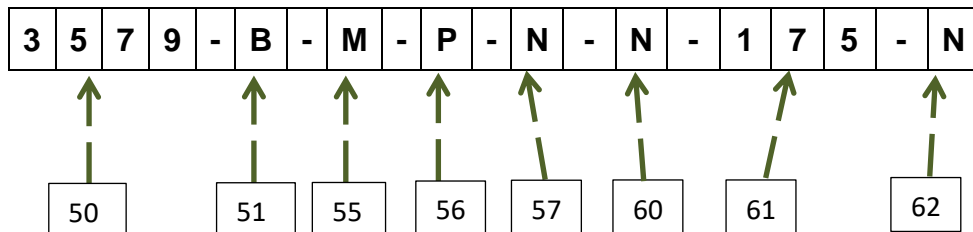
Under Bench Steam Generator

50	Serial number			
51	Operation	B=Button	F=Foot	H=Handle
52	Maximum Rated Amps	20		
53	Factory Set Steam Pressure Bar	e.g. 1.9		
54	Steam Control	P=Pressurestat	E=Electronic	
57	Voltage Power Out Socket	V=Voltage Out	N=Not Installed	
58	Rated Voltage	240V	220V	110V



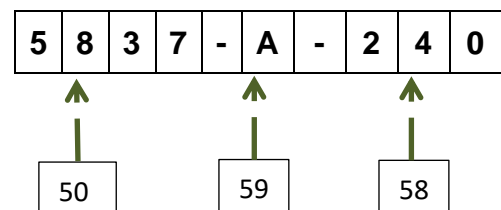
Bench Top STEAM

50	Serial Number				
51	Operation	B=Button	L=Left	R=Right	F=Foot
55	Type	M=Master	S=Slave		
56	Passive Steam Conditioner	P=Installed	N=Not Installed		
57	Detachable Steam Arm	D=Installed	N=Not Installed		
60	Cold Water Dispense	C=Installed	N=Not Installed		
61	Measured Volume Water Dispense	175ml	000=Not Installed		
62	Cool Touch Steam Arm	C=Installed	N=Not Installed		



Optional Active Electrical Steam Conditioner

50	Serial Number			
58	Rated Voltage	240V	220V	110V
59	Type	A=Active		



Power Ratings

Model	V / Hz	Rated Power	Rated Input (Amps)	Steam Generator Wattage	Total Wattage	Power Cord Size (mm ²) 3 Wires	
STEAM Steam Generator	AC 240Volts 50 Hz	2136 Watts	8.9 Amps	2136 Watts	2136 Watts	2.5 mm ² 27 Amps	
		3204 Watts	13.4 Amps	3204 Watts	3204 Watts		
		4272 Watts (Standard)	17.8 Amps	4272 Watts	4272 Watts		
			6370 Watts	26.7 Amps	6370 Watts	6370 Watts	

	AC 220Volts 50 Hz	1804 Watts	8.2 Amps	1650 Watts	1650 Watts		
		2706 Watts	12.3 Amps	2706 Watts	2706 Watts		
		3586 Watts	16.3 Amps	3586 Watts	3586 Watts		
		5390 Watts	24.5 Amps	5390 Watts	5390 Watts		

	AC 110Volts 60 Hz	1353 Watts	12.3 Amps	1353 Watts	1353 Watts		
		2024 Watts	18.4 Amps	2024 Watts	2024 Watts		

Power Cord		
3 Wires	1 x Blue 1 x Brown	Neutral Live / Phase

Model	V / Hz	Rated Power	Rated Input (Amps)	Steam Conditioner Wattage	Total Wattage	Power Cord Size 3 Wires (mm ²)
STEAM Active Electrical Steam Conditioner	AC 240Volts 50 Hz	1100 Watts	5 Amps	1100 Watts	1100 Watts	3-core IEC320 C14 (male) C13 (female) 0.75 mm ² 6 Amps
		1000 Watts	5 Amps	1000 Watts	1000 Watts	
		500 Watts	2.5 Amps	500 Watts	500 Watts	

Power Cord		
3 Wires	1 x Blue 1 x Brown 1 x Yellow and Green	Neutral Live / Phase Ground / Earth

Warning !

The STEAM and Steam Generator must not be used by

- children,
- mentally or physically challenged individuals; or,
- anyone lacking the necessary know-how,

unless supervised by specialised personnel.

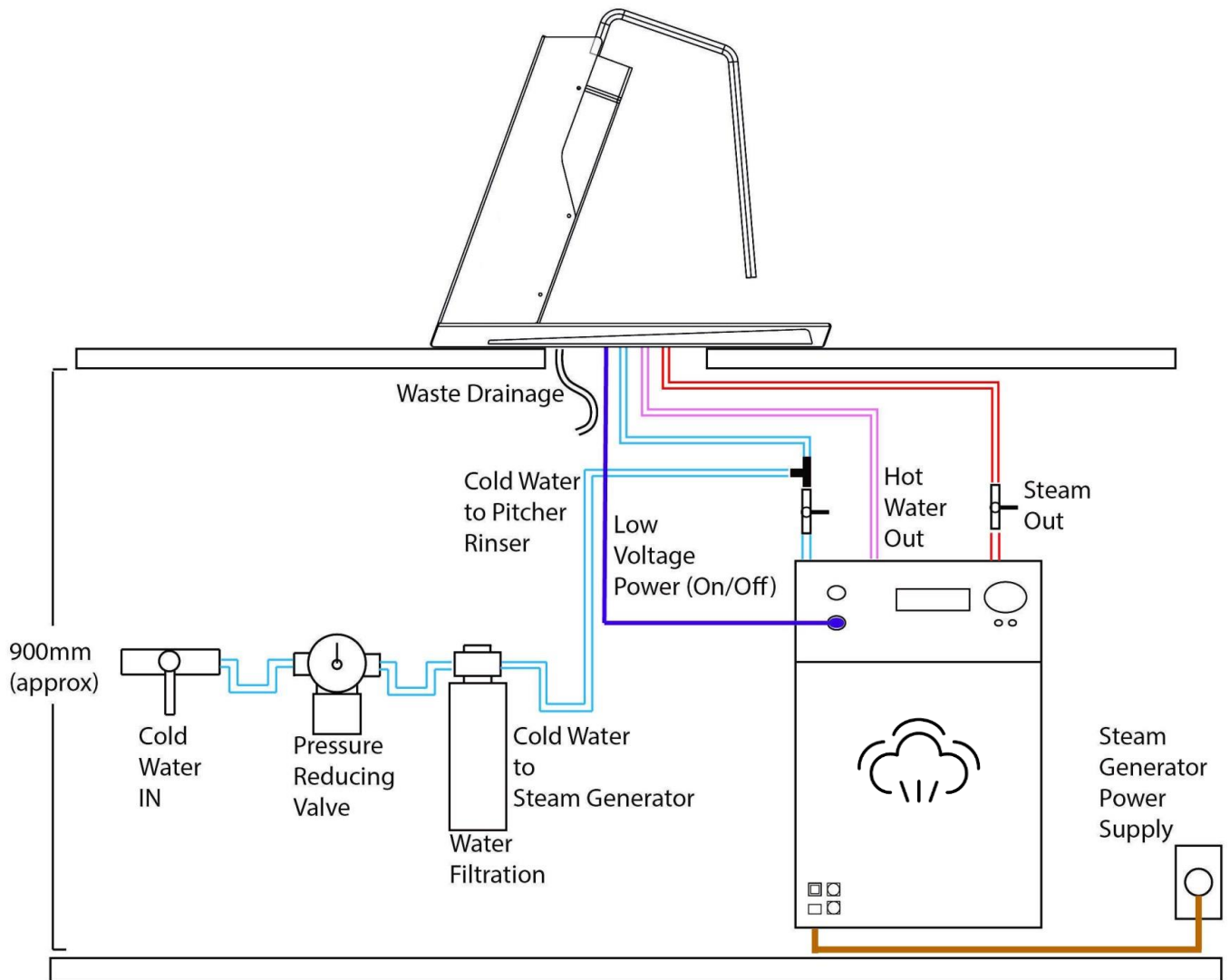
Warning !

The Steam Generator contains water at an elevated temperature.

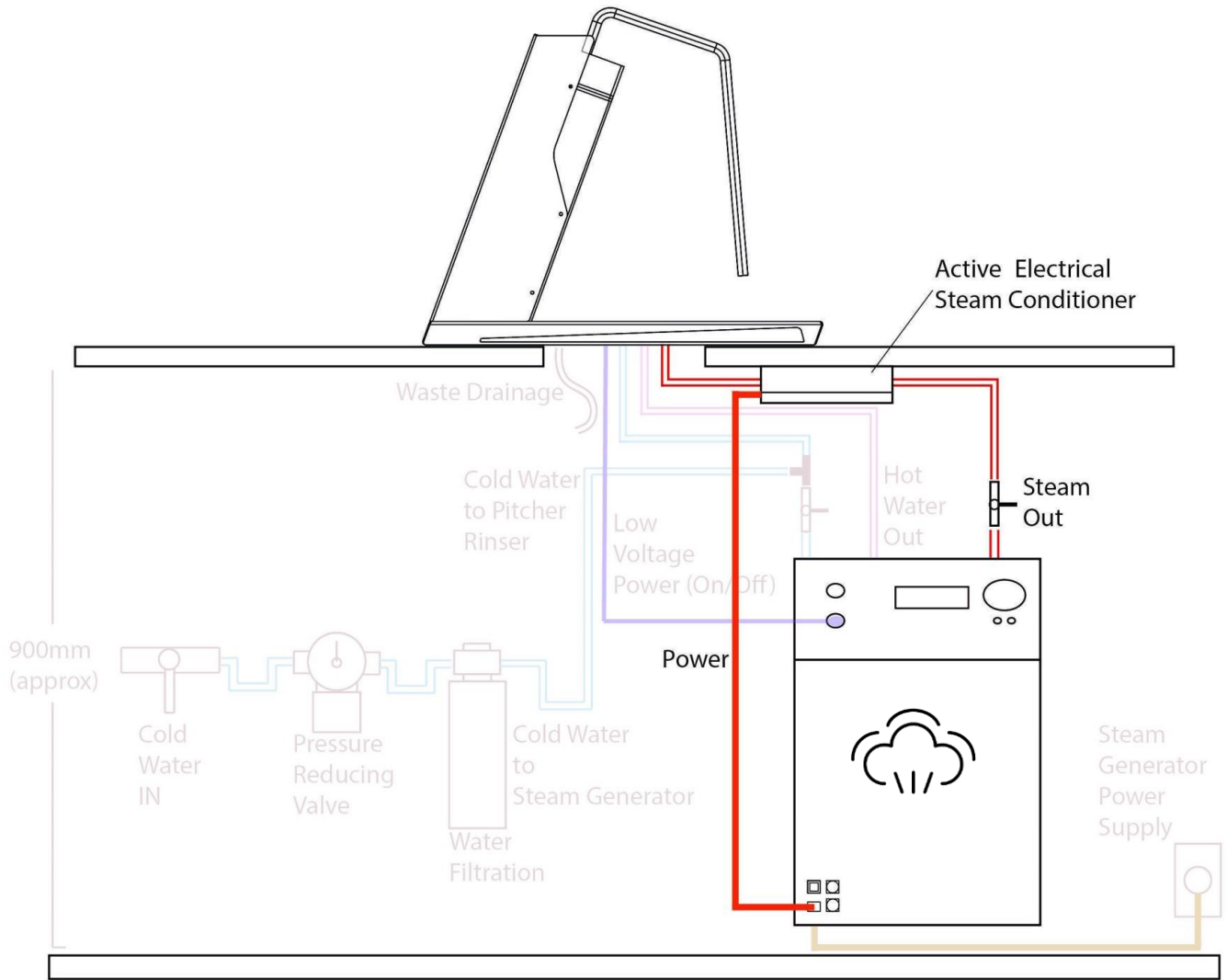
Water temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

Hot Water 149°F / 65°C
Steam Generator 260°F / 127°C

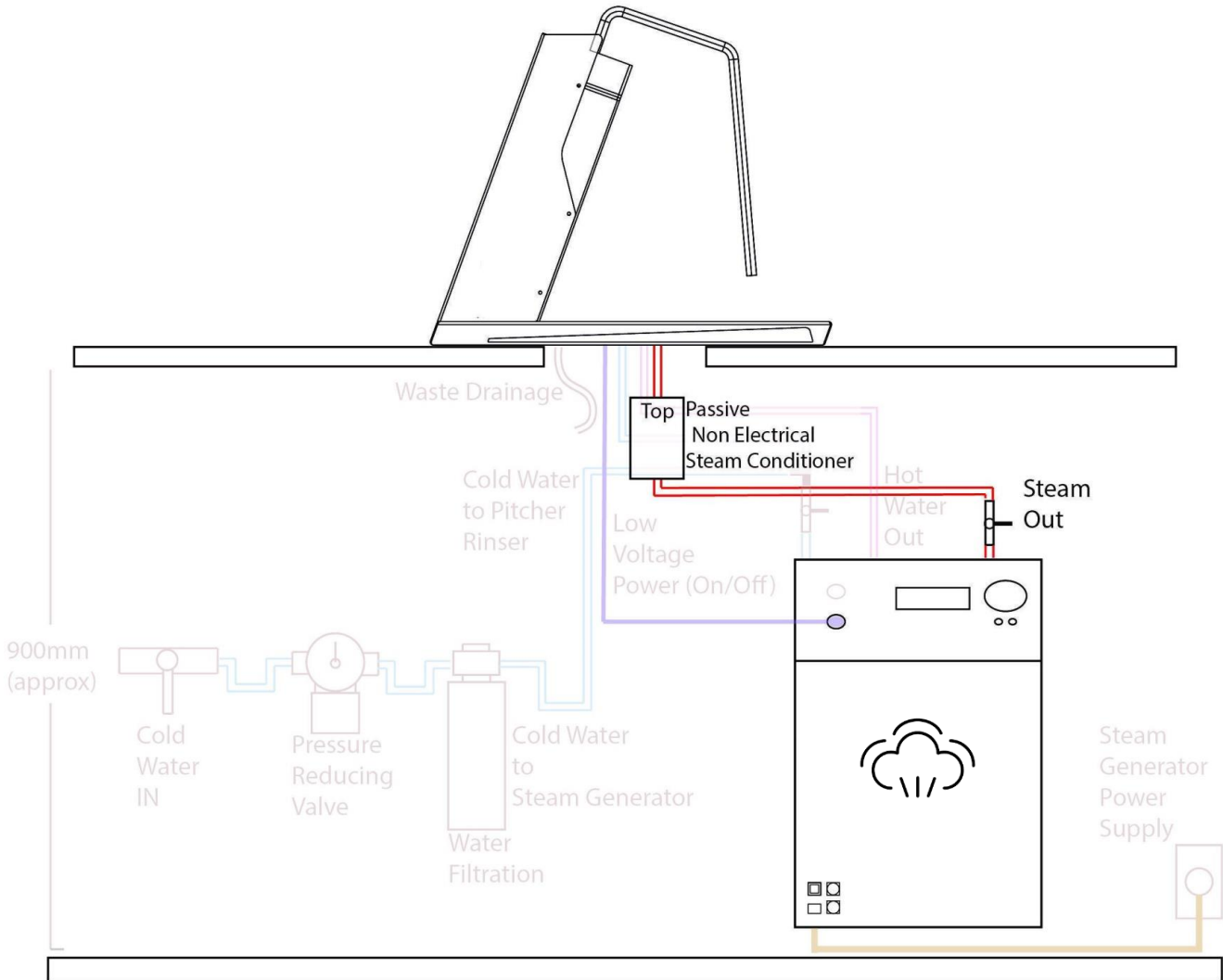
Basic Installation



Optional Active Electrical Steam Conditioner Installation



Optional External Passive Non-Electrical External Steam Conditioner Installation



Accessories

Warning !

At each installation, the STEAM and Steam Generator should be equipped with a new set of tubes and gaskets for plumbing.

Check the Accessories Package to make sure that all the accessories are included.

See Appendix V for Accessories included in the Accessories Package.

To proceed with installation, the following must be available:

- Pipes carrying drinking water with a 3/8" G (BSP) end connection.
- Electrical supply according to the specification of the machine purchased: 110/220/240/VAC - 50/60Hz electrical connection with a ground, earth leakage protected socket and approved circuit breaker.
- Indirect waste water drainage system.

Note

- The drinking water stopcock and the terminal switches for the electrical system need to be located in a convenient position for the operator to access them easily and quickly.
- The machine should be placed on a flat counter and must be located where the temperature is:
Minimum ambient temperature: 5°C (40°F)
Maximum ambient temperature: 32°C (90°F)
- If the machine has been temporarily located where the ambient temperature is less than 0°C (32°F), the machine must be located in a warmer environment in order to gradually defrost the hydraulic system prior to use.
- Water pressure supply must be between 4 and 8 Bar.

Water Supply Connection

Connect the inlet of the water filter / softener to the drinking water supply using one of the supplied stainless steel braided hoses.

Before connecting the STEAM to the filter / softener, flush the water supply line and the filtration system in order to clear any residual particles which could otherwise lodge in taps, valves and flow meters and prevent them from working properly.

- Connect the ½ inch BSP T fitting to the STEAM cold water inlet fitting [26].

Warning !

The water supply pressure must be between 2.5 and 8 Bar.

If sufficient mains water pressure is not available, we suggest using an alternative water supply system.

- Using one of the supplied stainless steel braided hoses, connect the water filter / softener outlet to the T fitting.
- Using the other supplied stainless steel braided hose, connect the STEAM pitcher / jug rinser water inlet [20] to the remaining outlet on the T fitting.

Electrical Connections

Power Supply Cord

This is the main power supply cable that provides high voltage power to the Steam Generator. There are different types of cable based upon the electrical requirements of the Steam Generator model purchased.

Active Electrical Steam Conditioner Power Cord

This power cord supplies power to the optional Active Electrical Steam Conditioner for remote bench top units. The Steam Generator will provide power to the Active Steam Conditioner when needed.

3-core 6 Amp IEC320 cable C13 (female) C14 (male)

Warning !

Hazardous voltage in the Steam Generator !

Disconnect from the power supply before servicing.

Warning !

The manufacturer declines any responsibility for any event leading to liability suits

- **whenever grounding has not been completed according to current local, national and international regulations and electrical codes; and/or,**
- **lack of properly connected electrical parts.**

Warning !

USA and Canada 110V rated Steam Generators only :

If the Steam Generator model is rated for 110V, do not connect to a circuit operating at more than 150V to ground.

Warning !

The Steam Generator produces heat and steam and is equipped with an internal fan to cool the electronics.

Locate the Steam Generator where there is sufficient ventilation to dissipate heat and steam venting.

Waste Water Drain Connection

The bench top STEAM drain is to be connected by means of the included reinforced plastic tubing.

Connect one end of the reinforced plastic tubing to the drain hose connection on the bottom of the STEAM bench top unit. Secure the drainage tube with the included hose clamp.

Connect the other end to a suitable waste water collection system. If such a system is not available, drained liquids may be collected in a suitable bucket and any necessary drain pipe extensions should be made using suitable PVC tubing and hose clamps.

Installing the Bench Top STEAM

Find a good position to mount the bench top STEAM.

Use the template Appendix II to cut the service holes through the bench top.

Drill holes for the M6 threaded rod that screws into each corner of the bench top STEAM.

Locate the STEAM above the locating holes.

In each corner, insert the M6 threaded rods through the bottom of the bench and screw them into the corner holes on the base of the STEAM. Place washers on the rods and screw on the wingnuts. Gently tighten the wingnuts to secure the STEAM to the bench top.

The M6 threaded rods may be trimmed to size.

Installing an Optional External Steam Conditioner

Active Electrical Steam Conditioner

The Active Electrical Steam Conditioner should be attached under the bench top, very close to the STEAM steam inlet [23]. The Active Electrical Steam Conditioner housing is equipped with four screw holes to attach the Steam Conditioner housing to the bench. The Steam Conditioner can be mounted either vertically or horizontally.

Note: The Steam Conditioner generates a lot of heat and should be mounted in a space that is sufficiently ventilated.

Note : The temperature inside the Steam Conditioner is in excess of 130°C (270°F). The heating chamber is insulated but the housing will get hot and the Camozzi tube connectors will be very hot.

External Passive Non-Electrical Steam Conditioner

Internal Passive Non-Electrical Steam Conditioners are installed as standard in foot pedal operated STEAM units.

The External Passive Non-Electrical Steam Conditioner should be attached directly below the STEAM steam inlet [23].

The External Passive Non-Electrical Steam Conditioner must be attached in a vertical orientation with the steam inlet at the bottom and the steam outlet at the top.

Note: The External Passive Non-Electrical Steam Conditioner will be hot and should be attached in a space that is sufficiently ventilated.

Warning !

The Steam Generator contains water at an elevated temperature.

Water temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

**Hot Water 149°F / 65°C
Steam Generator 260°F / 127°C**

Installing and Starting the Steam Generator and Bench Top STEAM for the First Time

Shut Off Water and Electrical Services to the Steam Generator

Switch off the mains electrical supply

Close all shutoff valves

- Mains water supply tap
- STEAM steam wand lever if installed [12]
- *If the Optional Foot Pedal Air Switch [50] is installed, ensure that it is off i.e. no weight on it*

Water and Steam Tube Connections

Connect both ends of all connecting tubes

- Connect the mains cold water supply outlet to filter and water softener inlet
- Connect the filter and water softener outlet to the Water In fitting [26]

If operating WITHOUT an optional Active Steam Conditioner,

- Connect the Steam Generator steam outlet [28] to the STEAM steam inlet [23]

If operating WITH an Optional Active Steam Conditioner,

- *Connect the Steam Generator steam outlet [28] to the Steam Conditioner steam inlet [43] or [52]*
- *Connect the Steam Conditioner steam Outlet [45] or [53] to the STEAM steam inlet [23]*
- Connect the Steam Generator hot water outlet [27] to the STEAM hot water inlet [22]

The tube that transfers steam from the Steam Generator to the Benchtop STEAM should be trimmed to be as short as is practical.

A short steam tube will minimize water condensation exiting the steam arm.

Warning !

The STEAM should be switched OFF when unattended overnight.

This is a basic safety procedure for preventing steam damage should a PTFE connecting tube or Camozzi fitting fail.

Warning !

Do not over tighten Camozzi fittings for PTFE tubing.

Over tightening Camozzi tube fittings will cause dangerous damage to the PTFE tubes.

A professional installer should tighten these fittings

- **Push the nut onto the PTFE tube**
- **Push the PTFE tube onto the barb**
- **While tightening the nut, keep pushing the tube onto the barb to ensure that it remains in position over the barb**
- **Tighten the nut hand tight**
- **Mark the nut and the fitting with a marker**
- **Rotate the nut about 2 turns tighter until the base of the nut just covers the thread on the fitting**

The steam PTFE tube is a wider diameter than the narrower hot water PTFE tube.

The correct tube will only fit on the matching fittings.

You may disassemble and reassemble Camozzi tube port connectors many times.

Make subsequent connections by slightly tightening with a wrench after snugging the nut by hand.

Electrical Connections

Plug the STEAM low voltage plug [25] into the Steam Generator socket [4]

Plug the Steam Generator into the Mains Power Supply

If installing the optional Active Electrical Steam Conditioner,

- *Plug IEC320 C14 (male) cable into Steam Generator power outlet [33]*
- *Plug IEC320 C13 (female) cable to Active Electrical Steam Conditioner power inlet [40]*

Open water inlet valve. Water will flow as soon as the water filter/softener valves are opened.

Warning !

Check for water leaks.

If there are any water leaks, shut off the mains water supply and tighten fittings.

Filling the Steam Generator with Water

Once the installation procedures have been completed, it is necessary to fill the steam generator reservoir with water.

Complete the following procedure to properly fill the steam generator reservoir:

Switch the ON/OFF low voltage power switch to ON

- Located on the above bench top STEAM *master* unit [1]

Note: If sufficient mains water supply pressure is not detected (minimum 2 Bar), the Steam Generator will shut down when the boiler does not refill.

If cold water pressure is detected, the automatic steam generator reservoir level function will be switched on, activating the auto-fill solenoid valve. This will fill the steam generator reservoir to a predetermined level and will shut off when full.

Note: Air inside the steam generator reservoir may build up pressure which may be detected through the pressure gauge.

Once the steam generator reservoir is filled above the minimum water level, the heating elements will automatically turn on and the red Steam Generator heating indicator lamp [6] will light up.

Watch the Steam Generator steam pressure gauge [8]

Check for steam leaks. If there are any steam leaks, turn off the STEAM with button [1], release pressure in the steam generator using the Steam Override button [88] and tighten fittings.

The installation is now complete and the Steam Generator will heat to full operating temperature and pressure.

Note: The Steam Generator is equipped with a safety anti-suction valve just below the top ventilation grille.

During heat up, the anti-suction valve will vent a small amount of steam through the top ventilation grille until pressure in the Steam Generator is sufficient to close the valve off.

Steam Generator Heat Up to Operating Pressure

Approximate heat up times

Power	Amps	Approximate Heat Up Time
6.37kW	24.5 Amps	4 minutes
4.27kW	17.8 Amps	6 minutes
2.14kW	8.9 Amps	12 minutes

The steam generator pressure is visible on the pressure gauge [8]

When the Steam Generator reaches operating pressure, the Steam Generator heating indicator lamp [6] will switch off.

Warning !

The STEAM should be switched OFF when unattended overnight.

This is a basic safety procedure for preventing steam damage should a PTFE connecting tube or Camozzi fitting fail.

Electronic Temperature Controller

Instructions for Use

The **red** coloured LED numbers display the measured temperature

The **blue** coloured LED numbers display the Target temperature to end steaming.

There will be a small temperature overshoot after steaming ends.

Set the Target Temperature

Press the + Set button and the blue Target temperature digital display will flash.

Press the + and – buttons to adjust the Target temperature.

After 3 seconds of inactivity, the display will automatically return to its Working state.

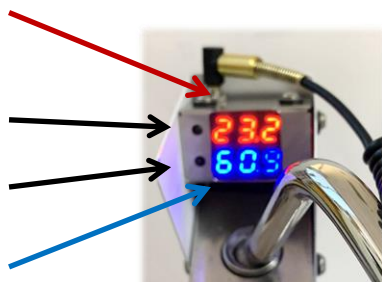
Pressing the Start Steaming button or foot pedal, activates the steaming process controlled by the temperature controller. The steaming process is automatically terminated when the Target temperature is reached and the steam solenoid valve activation relay is automatically disconnected.

Actual temperature
Red

Set + button

°C/°F - button

Target temperature
Blue



Operating the STEAM

The STEAM is a formidable appliance for steaming beverages and delivering hot water.

Steaming Milk and Other Liquids

Dip the steam wand [9] that is connected to the steam valve, into the liquid to be heated.

- If a steam lever is installed, rotate it forward until steam is released at the end of the wand.
- *If the optional foot pedal is installed, use the foot pedal to start the flow of steam.*

Steam will flow through the steam wand, heat the liquid and raise its temperature.

Use the STEAM steam wand lever [12] or the *Optional Foot Pedal for Air Switch [50]* to open the steam outlet valve.

Rotate the steam lever or *step on the optional foot pedal* to begin the steaming process and release steam through the steam arm.

As soon as you start to rotate the steam lever or *activate the optional foot switch*, steam will exit the steam arm. By adjusting the steam wand lever, it is possible to vary the steam pressure from the steam tip.

A small pitcher / jug may require less steam pressure than a large pitcher / jug. The steam pressure from a foot pedal operated STEAM is fixed and cannot be varied – steam is either on or off. If multiple STEAM units are being operated off a single Steam Generator, steam tips with outlet holes suited for different pitcher / jug sizes may be fitted to the bench top units.

Steam your milk in a steaming pitcher / jug through the manipulation of the steam pressure and pitcher / jug to your taste.

To successfully foam milk, follow these steps:

- Place a partly filled milk foaming pitcher / jug under the steam wand. Open the steam valve and bring the temperature of the milk to around 65-70°C (149-158°F).
- Lower the pitcher / jug so that the wand tip is just below the surface of the milk; at this point, move the pitcher / jug gently up and down just enough to dip the nozzle end in and out of the milk until you get the right amount of foam.

The STEAM is equipped with an anti-suction device that should prevent liquids being sucked back into the Steam Generator.

In order to prevent heated liquid from being sucked back into the Steam Generator, it is recommended that the steam valve and steam wand be purged by opening the valve for a few seconds to allow steam to escape from the end of the steam wand. Failure to do so can cause heated liquid to be transferred from the pitcher / jug to the steam generator reservoir (due to a vacuum created by cooling parts). This condition is undesirable and can contaminate the steam generator reservoir.

After steaming, it is good practice to

- Purge the steam arm
- Clean the steam arm with a wet cleaning cloth

After using the foamed milk, it is good practice to

- Rinse and cool the steaming pitcher / jug on the pitcher / jug rinser

Bench Top Pitcher / Jug Rinser

Invert the empty milk pitcher / jug over the pitcher / jug rinser disk [13] and press down on the disk.

Cold water will spray upward and rinse the used milk pitcher / jug.

Waste water will drain away through the STEAM bench top drainage tray.

Warning !

Do not remove the milk pitcher / jug until the steam flow has stopped.

To avoid severe burns, do not allow any liquid to overflow.

The Steam Generator contains steam and water at elevated temperatures.

Water and milk temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

Dispensing Hot Water

By using the Hot Water Dispense Switch, [3] hot water will be dispensed through the water nozzle [11].

The temperature of the water has been set by the manufacturer at about 65°C.

Hot water will be dispensed as long as the Hot Water switch is activated.

The water outlet nozzle should be cleaned periodically with a damp cloth.

Warning !

The Steam Generator contains water at an elevated temperature.

Water temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

Hot Water	149°F / 65°C
Steam Generator	260°F / 127°C

Note: The Hot Water outlet is set by the manufacturer to deliver hot water at about 65°C, perfect for long black coffees.

If inlet cold water pressure drops due to a clogged water filter or some other cause, the hot water temperature may escalate dramatically if there is insufficient cold water to mix with the boiling water out of the Steam Generator.

The Steam Generator water mixer is equipped with

- an inlet cold water pressure sensor that will shut down the Steam Generator including boiling water dispense if the inlet cold water pressure drops below 2 Bar
- a safety thermostat that will shut off the boiling water outlet if the outlet water temperature exceeds 75°C (170°F). At this point only cold water will flow and hot water dispensing will recommence after the water mixer temperature falls below 75°C.

Dispensing Cold Water

By using the Cold Water Dispense Switch, [89] cold water will be dispensed through the water nozzle [11].

Water Filter and Water Softener

Please see the documentation accompanying your water filter and water softener for proper operating and cleaning instructions.

Digital Display Operation

See Appendix I

Temperature Override Switch

The Temperature Controller automatically turns off the steam through the steam arm when the target temperature is achieved.

If a higher temperature is desired, the Temperature Controller Override Switch [88] will deliver steam through the steam arm even if the temperature of the probe exceeds the target temperature.

Steam is delivered through the steam arm while the Temperature Controller Override switch is pressed.

Steam is shut off when the Temperature Controller Override switch is released and control of the steam then passes back to the Temperature Controller..

Example : Some beverages like Italian style thick hot chocolate require the liquid to be brought to boiling point for the liquid to thicken.



Warning

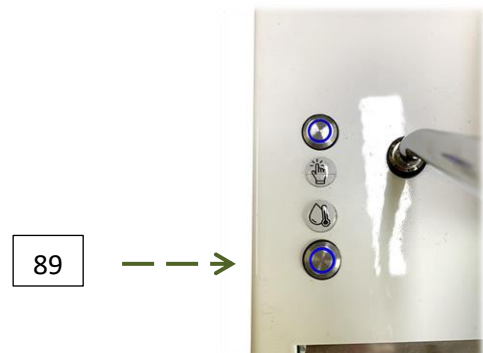
The Steam Generator contains water at an elevated temperature.

Water temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

Hot Water 149°F / 65°C
Steam Generator 260°F / 127°C

Cold Water Dispense Switch

Cold water can be dispensed from the Water Dispense tube by pressing and holding the Cold Water Dispense Switch [89].



Preventative Maintenance and Weekly Cleaning

Warning !

The STEAM and Steam Generator must be installed so that qualified technical personnel can easily access them for eventual maintenance.

Warning !

The STEAM and Steam Generator must not be dipped in nor splashed with water while cleaning.

Please follow the cleaning instructions below very carefully.

Refreshing the Water in the Steam Generator Reservoir

If not regularly refreshed with fresh water, a steam generator reservoir will tend to concentrate salts and the water will become stale.

Drawing hot water daily from the hot water spout will refresh water in the steam generator reservoir with good, fresh water.

We recommend drawing at least two litres of hot water from the hot water outlet each day.

Warning !

The Steam Generator has a Drainage Nut under its base for draining the steam generator reservoir.

This nut should NEVER be loosened or removed by any person other than a SUITABLY QUALIFIED PROFESSIONAL.

Before loosening the Steam Generator Drainage Nut, the Steam Generator must be COMPLETELY COLD.

Warning

The Steam Generator contains water at an elevated temperature.

Water temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

Hot Water 149°F / 65°C
Steam Generator 260°F / 127°C

Cleaning

Cleaning the Drainage Tray and Drainage Tray Cover

Remove the perforated drainage tray cover daily and clean.

Inspect the drain tray and wash away any leftover debris.

Cleaning the Body

Switch off and unplug the Steam Generator. Allow the Steam Generator to cool down completely.

Wipe surfaces with a soft, non-abrasive cloth, moist with water and a mild detergent.

Do not use any alcohol or solvents whatsoever on painted, powder coated or decorative parts to avoid damage.

Cleaning the hot water and steam nozzles

Steam nozzles must be cleaned immediately after use with a damp cloth and by purging with a short burst of steam to prevent the formation of deposits inside the nozzles. Deposits inside the nozzles and steam wand tube may alter the flavor of liquids to be steamed and heated.

The hot water nozzle must be cleaned periodically with a damp cloth.

Water Filter and Water Softener

Please see the documentation accompanying your water filter and water softener for proper operating and cleaning instructions.

De-Commissioning and Disposal

Switch Off and Cool Down

Start by switching the low voltage power switch [1] to the OFF position.

Allow the Steam Generator to completely cool down to ambient temperature so that there is no steam pressure in the Steam Generator. Pressure can be released through the steam arm by operating the Temperature Controller Override switch.

Disconnect from the Power Outlet

Disconnect the STEAM from the electrical network by switching off the associated circuit breaker or circuit protection device. Remove the power supply cord from the power connection. Remove any power cord from the Steam Generator power outlet socket.

Disconnecting from the Water System

Shut off the water supply by closing the specific valve located upstream of the water filter and water softener inlet. Disconnect the water pipe at the water filter and water softener inlet. Remove the hoses connecting the Steam Generator to the STEAM. Remove the reinforced plastic tubing on the drain connection.

At this point, the bench top STEAM may be removed from the counter being very careful not to drop it or crush your fingers.

Note: The Steam Generator is heavy and will weigh about 26kg with water. Lift it carefully.

The STEAM is made out of various materials and therefore, if not intended for further service, it should be delivered to a recycling centre which will select materials to be recycled or discarded.

Current regulations make it illegal to discard the STEAM by leaving it on public grounds or on any private property.

Environmental Protection Warning



Old electrical equipment is made of valuable materials and it is not normal domestic waste! We ask that our clients contribute to the protection of the environment and natural resources by delivering this equipment to a recycling centre.

Turning the STEAM On and Off

Turning the STEAM On

The following is the procedure for turning on the Steam Generator and the bench top STEAM.

Please follow the procedures carefully to avoid any damage.

- Push the bench top STEAM switch [1] to the ON position.
- The STEAM is now ON and the indicator lamps will light for steam generator reservoir filling and heating.

Turning the STEAM Off

The following is the procedure for turning off the Steam Generator and STEAM.

Push the bench top STEAM switch [1] to the OFF position

Important !

The STEAM and Steam Generator has one low voltage ON/OFF switch [1]

The low voltage ON/OFF switch [1] does NOT turn off

- **the internal Steam Generator low voltage 12V and 24V transformers,**
- **the foot pedal steam valve if installed**
- **the Temperature Controller Override switch [88]; and,**
- **the Steam Generator cooling fan.**

Switching off or disconnecting mains power turns off ALL components of the STEAM and Steam Generator.

Switching off with switch [1] disconnects all high voltage components but leaves the low voltage components (including the foot pedal steam valve if installed) and temperature controller override switch [88] active.

Warning !

Hazardous voltage in the Steam Generator !

Disconnect from power supply before servicing.

Fault Symptoms, Possible Causes and Solutions

Symptom	Possible Cause	Possible Solution
STEAM will not power up	Main power switch is off	Switch on Mains Power
	No cold water pressure	Open cold water tap Check water filter and water softener for blockages
	STEAM low voltage plug is not plugged in	Connect low voltage STEAM plug
	Power switch on the bench top STEAM is OFF	Switch on the bench top power switch [1]
	Internal high current fuse has triggered	Return unit to authorized service centre for service
	Internal low current fuse has triggered	Return unit to authorized service centre for service
Steam Generator water fill problems	Water is depositing scale / non-conductive materials on water level probes	Use a good water filter and water conditioner that does not add scale to the water Return unit to authorized service centre for service
		Plug power cable into the Steam Generator
Active Electrical Steam Conditioner will not Heat up	Green power indicator lamp does not light up	Plug power cable into the Active Electrical Steam Conditioner
	Red indicator lamp does not light up when starting	No steam pressure from the Steam Generator Start Steam Generator
		Over Temperature manual reset fuse in the Active Electrical Steam Conditioner has tripped Return unit to authorized service centre for service
		Steam Generator power out fuse has tripped Reset fuse [32]
Hot Water will not Dispense	STEAM is not switched on	Switch on the bench top switch [1] The 'mains power connected' pilot light [2] will light green
	The steam Generator has not built up Pressure	Check Steam Generator pressure gauge
	Hot water has exceeded 75°C at the outlet	Allow colder water to flow until the water mixer cools down and hot water resumes dispensing Adjust the cold water mixer knob to make the dispensed water cooler

Warranty

If you ever have any problems with the STEAM you purchased, we are here to help.

If you purchased your STEAM through a reseller please contact them first to allow them to take care of their customers.

The STEAM carries a 12-month parts and labor warranty when purchased directly from STEAM.international

While we want to make sure you are a satisfied customer, there are some parts and situations that the warranty does not cover

- Normal wear parts: These include gaskets and moving parts
- Problems caused by water damage and poor water quality including scaling. Using water outside STEAM.international specifications is a common reason for machine failure. Make sure you use a good water filter
- Products where the serial number has been damaged or removed
- Operation of product outside the considerations recommended in this user manual
- Any product that has been damaged as a result of installation, accident, abuse, misuse, lack of reasonable and necessary cleaning or maintenance, neglect, mishandling, damage during shipment, line power surges or any external causes
- Modification or service by anyone other than a STEAM.international authorized service person.
- Shipping costs to ship product back to STEAM.international for an exchange, return or service.
- Express shipping costs of parts to a customer for self-repair.

Contact Us

Australia

STEAM.international Pty Ltd

ACN 622806071

17-21 George Street
Blackburn VIC 3130
AUSTRALIA

Land Line +61 3 9894-0444
Australia 24/7 +61 419 COFFEE

FREEcall Australia 1-800-COFFEE
Global FREEcall USA and UK + 800 ESPRESSO

info@STEAM.international

www.STEAM.international



www.STEAM.international

International Distributors

North America

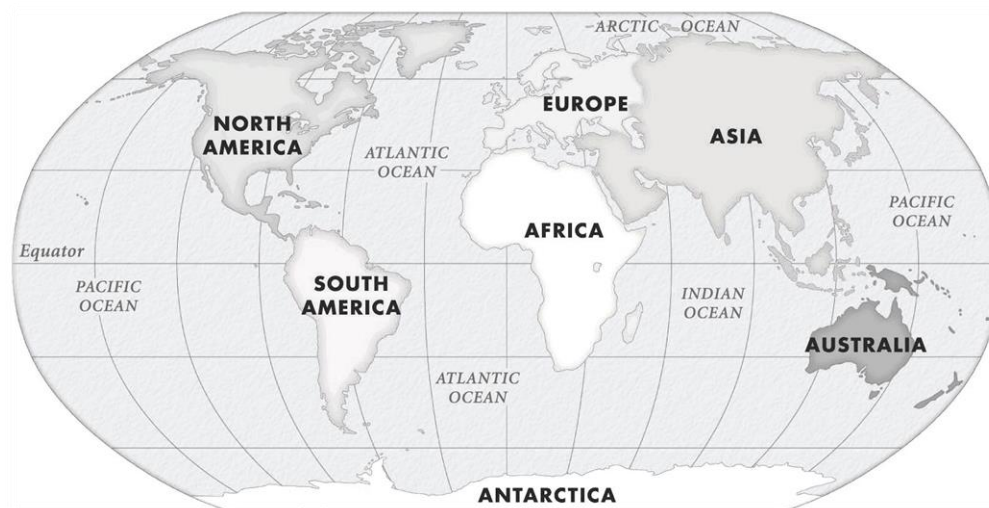
South America

Europe

Africa

Asia

Oceania



Appendix I : Digital Display Multifunction Meter

Functions

Electrical parameter measurement

- Voltage
- Current
- Active Power
- Energy

The Run Time function records

- accumulated operating time

Reset

- Energy; and,
- Run Time

Backlight

Key Function

- UP** 1. In the Normal display state, short pressing the **UP** key will reverse the display sequentially
Time, Power, Energy, Current, Voltage
2. Short pressing the **UP** key will exit the Reset State when the display is in the Reset state
- DOWN** 1. In the Normal display state, short pressing the **DOWN** key will display sequentially
Voltage, Current, Energy, Power, Time
2. Short pressing the **DOWN** key will exit the Reset state when the display is in the Reset state
- SET** In the Energy or Time Display state, press for three seconds to enter the Energy or Time Reset state
- OK** 1. In the Normal display state, short press the **OK** key to turn the Backlight On or Off
2. In Energy or Time Reset state, press the **OK** key to reset Energy or Time data and quit the Reset state

Function setting

Reset Cumulative Time and Energy data

1. In the Normal display state, short press the **UP** or **DOWN** key to switch to the Cumulative Time or Energy data display

2. Long press the **SET** key for three seconds until the flashing screen appears then release the **SET** key

Press the **OK** key to clear the Cumulative Time or Energy data. The LCD screen will return to the Cumulative Time or Energy display. If you want to cancel the Reset action, press the **UP** or **DOWN** key to exit the Reset state and return to the Normal display.

Backlight Function

After powering up, the backlight automatically turns On.

In the Normal display state, short pressing the **OK** key will turn the backlight On or Off.

Backlight memory will restore the last Backlight On or Off state.

Menu Display

1. After powering up, the Display will light up. Short pressing the **UP** key will reverse the Display sequentially
Time, Power, Energy, Current, Voltage.
Short pressing the **DOWN** key will display sequentially
Voltage, Current, Energy, Power, Time
2. The Display memory function will restore the last Display state.

Digital Display Multifunction Meter Operating Ranges

- Working Voltage: 80 to 270 VAC
- Test Voltage: 80 to 270 VAC
- Amps and Power Measurement: Up to 100 Amps / 22 kW
- Operating Frequency: 45 to 65 Hz
- Measurement Accuracy: 1.0 %

Appendix II : Template for Holes to Secure a STEAM to a Bench Top

Instructions for Bench Top Preparation to Install a STEAM

A drill template for cutting bench top holes to mount the STEAM is included in Accessories.

Place an actual size drill template onto the bench in the correct orientation to find a good location for the bench top STEAM.

Mark the centre points for holes to be cut and drilled. If fixing to a stone bench top, we recommend one centre bolt hole at each end. If fixing to a stainless steel bench top, we recommend two corner bolt holes at each end.

Cut and drill holes through the bench top to the sizes indicated on the template

Bolt Holes

10mm diameter holes

Services

50mm diameter hole

Waste Drainage

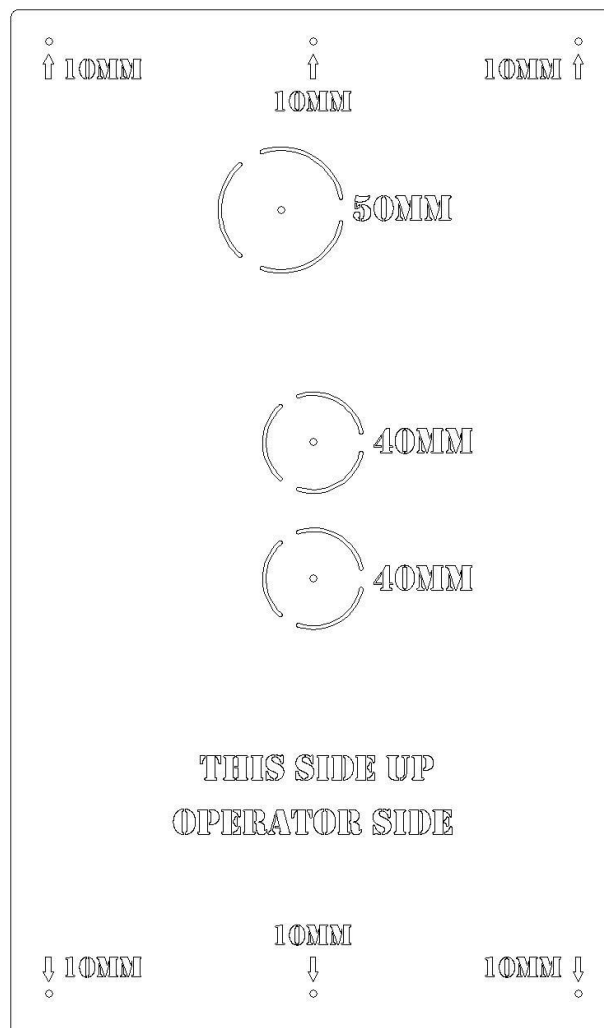
40mm diameter hole

Pitcher / Jug Rinser

40mm diameter hole

Bolt Holes

10mm diameter holes



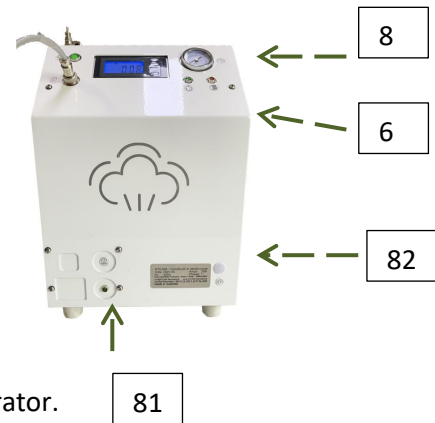
Link to the
Link to the latest
version of this
Drill Template



Instructions for use

Photocopy and magnify the drill template image so that the vertical distance between the top and bottom edge holes is 385mm

Appendix III : Water Pressure Indicator LED



The STEAM checks incoming cold water pressure inside the Steam Generator.

The Water Pressure Indicator LED [81] will light Green when incoming cold water pressure is good and over 2 bar pressure.

If water pressure inside the Steam Generator falls below 2 Bar pressure, the Water Pressure Indicator LED will light Red.

The STEAM will continue to operate normally if there is a temporary drop in inlet cold water pressure for example if a nearby tap is opened or a nearby dishwasher draws water.

If the water pressure falls below 2 Bar for an extended period of time, the Steam Generator reservoir will not refill and the Steam Generator heaters will not turn on once the Steam Generator reservoir water level falls below the minimum water level.

The temperature of the Hot Water Dispense is determined by the amount of inlet cold water mixing with boiling water out of the Steam Generator. If cold water pressure drops, the dispensed hot water will be hotter.

Appendix IV : Steam Pressure Adjustment

The steam pressure of the STEAM can be adjusted by an authorised technician through the Steam Pressure Adjustment hole [82].

To adjust the steam pressure

- Remove the plastic cap on the Steam Pressure Adjustment Hole
- Insert a large flat bladed screw driver
- Turn the screwdriver clockwise for less pressure and anticlockwise for more pressure
- Check the pressure on the Steam Generator manometer [8] when the red 'heating' LED [6] turns off
- Replace the plastic cap on the Steam Pressure Adjustment Hole

Recommendation: Pressure should be adjusted slowly by rotating the screwdriver only one quarter turn at a time.

Appendix V : Emptying the Steam Generator Reservoir

Warning !

The Steam Generator has a Drainage Nut under its base for draining the steam generator reservoir.

This nut should NEVER be loosened or removed by any person other than a SUITABLY QUALIFIED PROFESSIONAL.

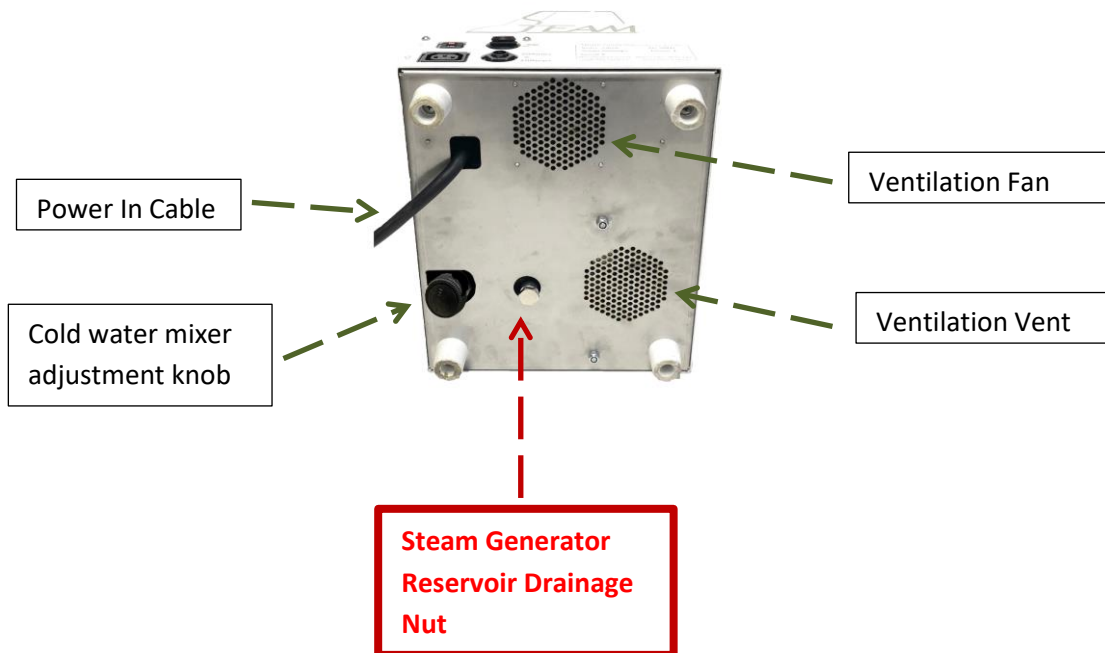
Before loosening the Steam Generator Drainage Nut, the Steam Generator must be COMPLETELY COLD.

Warning !

The Steam Generator contains water at an elevated temperature.

Water temperature over 125°F / 52°C can instantly cause severe burns or death from scalding.

Hot Water 149°F / 65°C
Steam Generator 260°F / 127°C



Optional Components

Active Electrical Steam Conditioner

Test Date QA Specialist

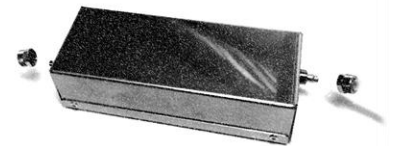
Set Temperature : 130°C		
Over Temperature : 170°C		
All Indicator Lights		
Electrical Earth Test		
No Steam Leakage		
Danger Hot Sticker		
Danger Live Steam Sticker		
Danger Electricity Sticker		
New to Service Sticker		



External Passive Non-Electrical Steam Conditioner

Test Date QA Specialist

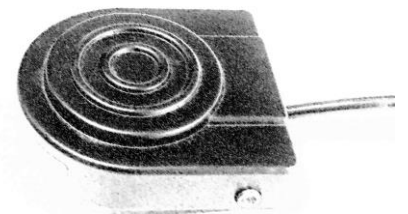
Steam Leakage		
Danger Hot Sticker		
Danger Live Steam Sticker		



Foot Pedal

Test Date QA Specialist

No Steam Leakage from Steam Wand		
No Steam Leakage from Steam Conditioner if Installed		
Test Switch is Momentary and Not Locking		
Danger Steam Marking		
Warning ! Marking		



Appendix VII : Installation Accessories

Standard Accessories

Description	Quantity	Connect From	Connect To
Operating Manual	1		
Actual Size Template for Cutting Bench Top Holes	1		
Braided Water Connector ½" F x ½" F B.S.P.	1000mm 1	Filter / Softener Out	Water Inlet T
Braided Water Connector ½" F x ½" F B.S.P.	1000mm 1	Water Inlet T	STEAM
Plastic Reinforced Waste Hose	1800mm 1	Drainage Tray Waste	Drainage/Bucket
Stainless Steel Hose Clamp 11 – 25mm	1	Hose End on Drainage Tray	
T Fitting ½" M x ½" M x ½" M B.S.P.	1	Braided Water Inlet Connector	<ul style="list-style-type: none"> ○ Steam Generator Cold Water Inlet Fitting ○ Braided Water Connector to STEAM Pitcher / Jug Rinser
Stainless Steel Wingnut M6	4	Stainless Steel Threaded Rod	
Stainless Steel Washer M6	4	Insert between the wing nut and the underside of the bench	
Stainless Steel Threaded Rod 80mm M6	4	Anchor Points Underneath the STEAM	
PTFE Tube 8mm diameter 750mm <i>Option: Longer length</i>	1	STEAM steam inlet	Steam Generator steam outlet
PTFE Tube 6mm diameter 750mm <i>Option: Longer length</i>	1	STEAM hot water inlet	Steam Generator hot water outlet
Heat Insulation Tube 20mm OD 10mm ID 500mm	1	STEAM steam outlet fitting	Bench top steam inlet fitting
	1	STEAM water outlet fitting	Bench top water inlet fitting

Optional Active Electrical Steam Conditioner Accessories

Steam Conditioner in housing 1

3-core standard 6 Amp IEC320 C13 (F) C14 (M) cable 1
if the Steam Conditioner is Active Electrical

Not included if the Steam Conditioner is External Passive Non-Electrical

Appendix VIII : Warranty

Online Warranty Registration

<http://www.STEAM.international/Warranty-Registration/>



Warranty Against Defects

STEAM.international (**SI**) P/L and its successors and assigns provides the following limited warranty against defects to:

("the Customer")

If you feel your issue should be covered by warranty, please contact STEAM.international

We will help you assess if your issue is covered by our warranty and advise you of the actions required to make a warranty claim.

To process a warranty claim, we will require your date of purchase, seller invoice number and serial number when you contact us.

You will need to have registered your warranty online at <http://www.STEAM.international/warranty-registration/> and you can look up your registration details.

1 What this Warranty Covers

1.1 This warranty covers non-consumable parts, provided the STEAM is installed according to the specifications in this manual. Labor costs are not included. The warranty does not include breakdowns due to incorrect operation or inadequate cleaning ("**Defect**"). Consumable parts are not covered by this warranty.

2 How SI will Honor the Warranty

- 2.1 **SI** will replace the faulty part, including freight or postage to the Customer.
- 2.2 The customer is responsible for the costs of any work required to fix the Defect.

3 How to make a Warranty Claim

- 3.1 To make a warranty claim, the Customer will need to:
 - (a) Complete a Warranty Claim Form and, if requested, provide the faulty part to **SI** for inspection; and
 - (b) provide proof of purchase; and
 - (c) email photographs of the Defect if requested
- 3.2 The claim and faulty part may be mailed to **SI**
- 3.3 The Warranty Claim Form to be used is on the next page in this manual.

4 Warranty Period

- 4.1 The **SI** warranty is for a period of twelve (12) months from the date of the sale invoice from **SI**.
- 4.2 If a Defect does not appear in the faulty part during the twelve months above, **SI** will have no liability to the Customer under this Defect Warranty and the Customer releases **SI** from all claims for loss or damage in any way connected with the STEAM from that date.

5 Who is Responsible for Costs

- 5.1 **SI** will pay the costs of shipping any replacement parts.
- 5.2 Works required to fix the Defect will be at the Customer's cost, including the return of the faulty part to **SI**.

6 What will Void a Warranty

- 6.1 The following will void the warranty;
 - (a) modifications to and/or customisation of the STEAM performed after receipt of the STEAM;
 - (b) non-authorized tampering with the STEAM;
 - (c) the use of non-genuine parts;
 - (d) non-adherence to the recommendations in this manual;
 - (e) a poor quality incoming water supply
 - (f) no or poor quality filtration installed at any time;
 - (g) damage to the STEAM as a result of mishandling, accident, abuse, incorrect installation, misuse, lack of reasonable or necessary maintenance, neglect, voltage spikes, power surges or external causes.

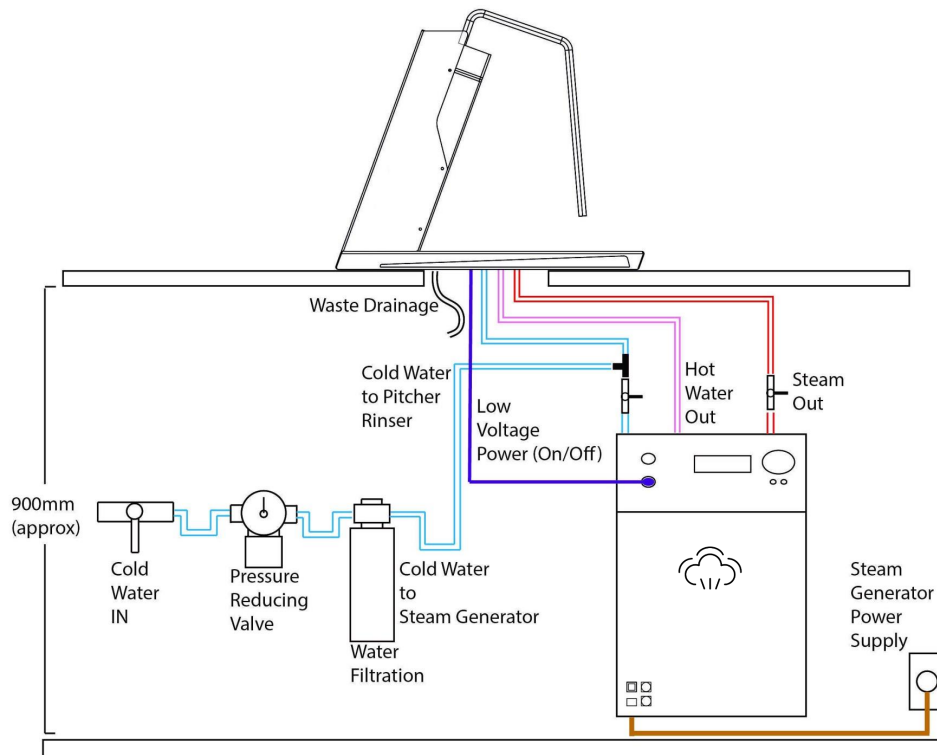
7 Your Rights

- 7.1 This Warranty is in addition to any other rights of the Customer in relation to the STEAM.
- 7.2 **SI**'s STEAM comes with guarantees that cannot be excluded under Australian Consumer Law.

If a warranty claim is made, **SI** has the right to inspect or request details on the quality of the incoming water supply anytime.

Appendix IX : Pre-Installation

Diagram



Plumber, Electrician, Architect, Designer

The STEAM requires services beneath the bench.

You need to provide a service area, electrical supply, waste outlet and water supply with filtration as described below

Service Area - Designer and Architect

- A dry, well ventilated bench space, which is between 900mm and 1200mm high, with 150mm clearance around the STEAM to allow for maintenance and cleaning
- A working area is required next to the STEAM
- A dedicated space under the bench measuring at least 450mm W, 450mm H and 300mm D for the water filter and Steam Generator NOT behind a fridge or wall.
- Holes matching the Bench Top Holes Template for connecting tubes and low voltage wires. Holes must be drilled prior to the installation.

Water Supply - Plumber

- There must be a dedicated cold water outlet that is easily accessible. Water to the Steam Generator must be of a hardness greater than 90ppm (9^{°f} / 5^{°d}) and less than 150ppm (15^{°f} / 8.4^{°d}), pH should be between 6.5 and 8.5 and the quantity of chlorides less than 50mg/l
- Pressure between 3 and 8 Bar (typically via a ½" BSP male stopcock) to a 350 kPa pressure limiting valve
- The water supply should enter the service area low on either side and near to the back surface within 1 metre of the Steam Generator

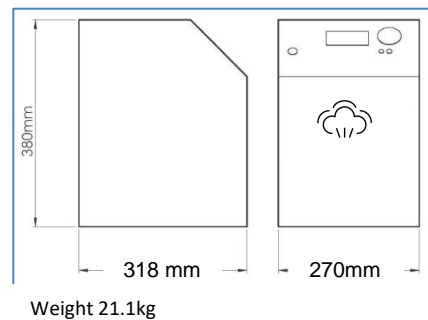
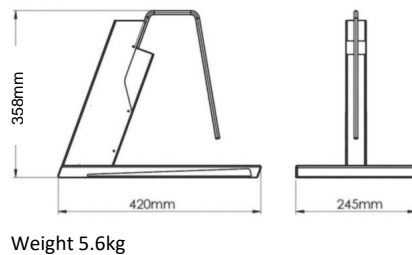
Electrical Supply - Electrician

- The electrical requirement is a stable single-phase voltage supply (to match the compliance plate 110/220/240V) with current protection ratings as per the Steam Generator compliance plate.
- **Steam Generators are supplied without a plug on the power cord.** Fixed wiring is recommended. Connecting a plug for the electrical supply to the Steam Generator is the responsibility of the installer when the machine is in its final position and safety measures have been taken according to its location.
- The Steam Generator is provided with a 1 m lead exiting the Steam Generator from the front left-hand side. The location of electrical supply should take this into account.
- New Steam Generators will have a **New to Service** tag on the power cord.
- **New Steam Generators supplied by STEAM.international P/L will NOT be tested to AS/NZ 3760 standards.** To be compliant with AS/NZS 3760 all equipment should be tested and tagged by a qualified person when the equipment is installed at its final destination.
- All portable electrical equipment should be re-tested and tagged regularly to ensure continued safe operation.

Waste Water Outlet

- A 40mm diameter drain pipe with trap is required
- A drain hose to connect the STEAM to the trap is provided as an accessory with the STEAM

Dimensions and Specifications



Model	Width	Depth	Height	Weight	Voltage	Current Protection Rating*
Bench Top STEAM	245 mm	420 mm	358 mm	5.6 kg	Low Voltage	N/A
Steam Generator	270 mm	318 mm	380 mm	21.1 kg		
	2 kW				110/220/240V	10 Amps
	3 kW				see compliance plate	15 Amps
	4 kW					20 Amps
	6 kW					30 Amps

* Recommended Current Protection Rating as per electrical regulations

For any queries please contact our Customer Care team at Support@STEAM.international

Appendix X : Electronic Temperature Controller

Specifications

Temperature Measurement Range	-50°C to 110° C
Resolution Ratio	-9.9°C to 99.9°C at 0.1°C
Measurement Accuracy	0.1°C
Control Accuracy	0.1°C
Return Difference Accuracy	0.1°C
Refresh Rate	0.5 Sec
High-temperature Protection	0 to 110°C
Input Voltage	12V DC
Measurement Input	NTC 10K 0. 5% sensor
Relay Contact Rating	20A 24V DC
Environmental Requirements	
Temperature Requirement	-10°C to 60°C
Humidity Requirement	20% to 85%
Power Consumption	static current ≤ 35mA pickup current ≤ 65mA
Power Requirement	12V DC 200mA

Digital Display

Digital Display LLL = Sensor faulty
 HHH = Temperature higher than the measuring range and the relay will automatically open
 - - - = High-temperature protection

Instructions for Use

The **red** coloured LED numbers display the measured temperature
 The **blue** coloured LED numbers display the Target temperature to end steaming.
 There will be a small temperature overshoot after steaming ends.

Set the Target Temperature

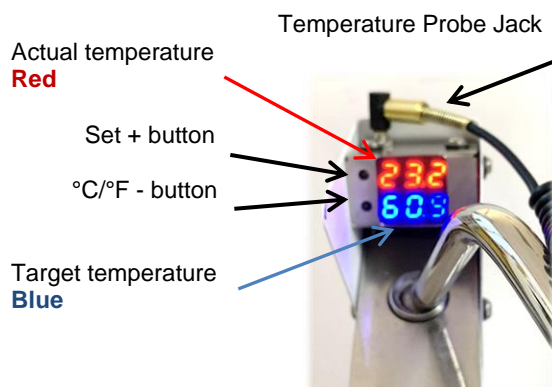
Press the + Set button and the blue Target temperature digital display will flash.
 Press the + and – buttons to adjust the Target temperature.
 After 3 seconds of inactivity, the display will automatically return to its Working state.

Pressing the Start Steaming button or foot pedal, activates the steaming process controlled by the temperature controller. The steaming process is automatically terminated when the Target temperature is reached and the steam solenoid valve activation relay is automatically disconnected.

Toggle between Centigrade and Fahrenheit

Press the – button to toggle between Centigrade and Fahrenheit.

Front of Temperature Controller



Rear of Temperature Controller

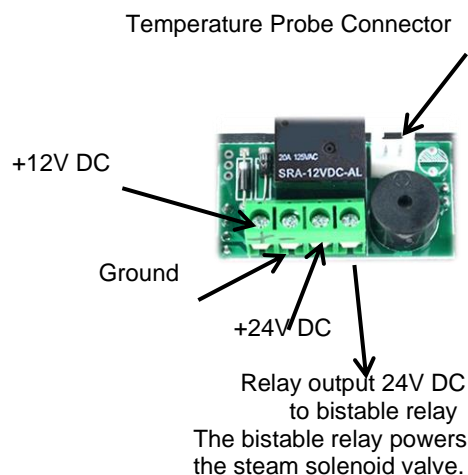


Table of Parameters

Setting	Description	Setting Options / Range	Required Settings for the STEAM
P0	Heating or Cooling mode	H or C	H
P1	Temperature difference trigger	0.1 to 30	2
P2	Set limit maximum	+110	110
P3	Set limit minimum	-50	-50
P4	Temperature correction	-15 to 15	0 Calibrate when replacing the sensor
P5	Start delay (seconds)	0 to 10	0
P6	High temperature alarm	-50 to 110	OFF
P7	Celsius / Fahrenheit	CS or FH	CS
P8	Factory Reset	ON or OFF	OFF

Setting Parameters

Press and hold the + Set button for 5 seconds to enter the Settings menu and view the parameters.

Pressing the + Set button again will move to view the next parameter.

Pressing and holding both the + and – buttons at the same time will enable parameter setting. The lower, blue value will begin to flash.

Pressing + or – button will adjust the Setting.

Pressing and holding both the + and – buttons at the same time will lock in the parameter Setting.

After locking in the setting, pressing the + button will move to view the next parameter.

Alternatively, after the parameter has been adjusted, the display screen will exit the parameters menu and return to the main display after a few seconds. The adjusted parameter setting will be remembered.

On and Off

When the temperature controller is powered up, it will automatically be turned On.

Pressing and holding the – button will switch the temperature controller Off.

If 12V DC is applied to the controller and the controller is in the Off state, pressing and holding the – button will switch the controller On.

