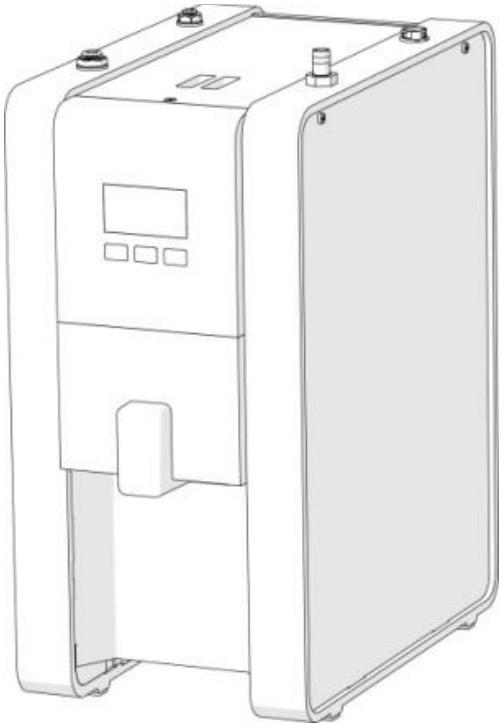
MIX Hot/Ambient Boiler & Font

SERVICE MANUAL

(P/N: 1001880SBX, 1001880SBX)



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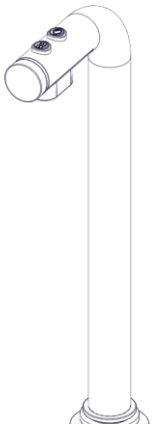

1001880SBX

Marco Beverage Systems Ltd. 63d Heather Road, Sandyford Industrial Estate, Dublin 18, Republic of Ireland	Ireland Tel: (01) 295 2674 Ireland Email: sales@marco.ie USA Tel: 206 641 7692 USA Email: ussales@marco.ie

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1. INTRODUCTION

The information provided in this manual is intended to assist in the installation and maintenance of the Marco Mix Boiler range. Please read the instructions carefully to prevent accidents and ensure an efficient installation.

This manual is not a substitute for any safety instructions or technical data affixed to the machine or its packaging. All information in this manual is current at the time of publication and is subject to change without notice.

Only technicians or service providers authorised by Marco should carry out installation and maintenance of these machines.

Marco accepts no responsibility for any damage or injury caused by incorrect or unreasonable installation and operation.

2. SAFETY INSTRUCTIONS

When using electrical appliances, basic safety precautions should always be followed to prevent the risk of fire, electric shock, burns, or other injuries or damages.

• Read all operating and safety instructions carefully.

• This appliance must be placed/installed on a horizontal flat stable surface.

• The ambient temperatures this appliance should operate within are 5 °C - 35 °C (41 °F - 95 °F).

• This appliance may be placed in self-service areas if attended to by trained personnel.

• Risk of flooding, the hose supplied with the boiler is non-toxic food quality tested to 190psi. However, a hose is not a permanent connection. It is, therefore, advisable to switch off boiler and close the stopcock valve when boiler is not in use, e.g. overnight etc.

• The utmost care has been taken in the manufacture and testing of this machine. Failure to install, maintain and / or operate this machine according to the manufacturer's instructions may result in conditions that can cause injury or damage to property. If in any doubt about the serviceability of the machine always contact the manufacturer or your own supplier for advice.

• This machine is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety.

• Children should be supervised to ensure that they do not play with the machine.

• In the event any wires are damaged, such wires can only be replaced by experts or professional after service staff from the manufacturer after service department or similar function departments.

• CAUTION - Risk of fire and electric shock. Only to be used with manufacturer's specified power cord set. Marco p/n 1501506 (USA),

• This appliance should not be installed in an area where a water jet could be used to clean it.

• Access to the service area of the appliance is restricted to persons having knowledge and practical experience of the appliance and the relevant safety and hygiene requirements.

3. SPECIFICATIONS

BOILER:

		3.1. MIX UC3 – 1001880SBZ
Performance	Immediate Draw Off (L) Total Hourly output (L/hr)	3L 28
Electrical	Mains Connection	Earthed Mains Plug to US 120V – NEMA 5-15
	Rating	@120v 1.45kW 12.15A
Plumbing	Fittings Required Pressure	9/16 – 24 UNEF (3/8 Compression Threads) food grade inlet hose supplied. 5-50 psi (35-345 kPa)
Dimensions	Height (mm) Width (mm) Depth (mm)	440 210 385

FONT:

		3.2. 1000884 - 2 Button Hot/Ambient 305mm
Dimensions	Height (mm) Width (mm) Depth (mm) Height to Output (mm)	334 38 132 305

4. INSTALLATION

4.1. Mix Boiler Installation

4.1.1. Electrical Installation:

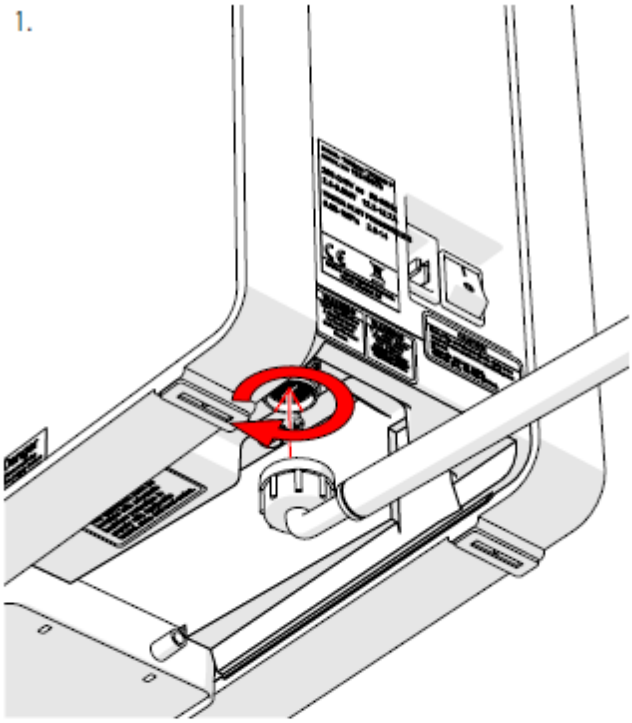
- Electrical specification: 1.45kW-120VAC-50/60Hz
- A moulded NEMA 5-15, 15A IEC power cord is provided. This should be plugged into the IEC connection on the rear of the boiler and plugged into a suitable power outlet.
- When installing the machine, always observe the local regulations and standards.

4.1.2. Plumbing Installation:

- Mains water pressure required (limits): 5-50psi (35-345kPa) 0.5 – 5.0 bar
- Fit a stop Valve on a cold-water line and attach a 9/16 – 24 UNEF (3/8 Compression Threads) fitting.
- Connect straight tailpiece of the hose to the stop valve fitting. Make sure that the pre-attached sealing washer is fitted.
- Turn on the water to flush any impurities, dust etc. from the inlet hose and water pipe. Allow several litres through.
- Connect right-angled tailpiece of the hose to the inlet valve of the boiler (3/4" BSP). Make sure the sealing washer is fitted here also.
- Turn on water and check for leaks.

4.2. Mix Boiler Installation (cont.)

1.



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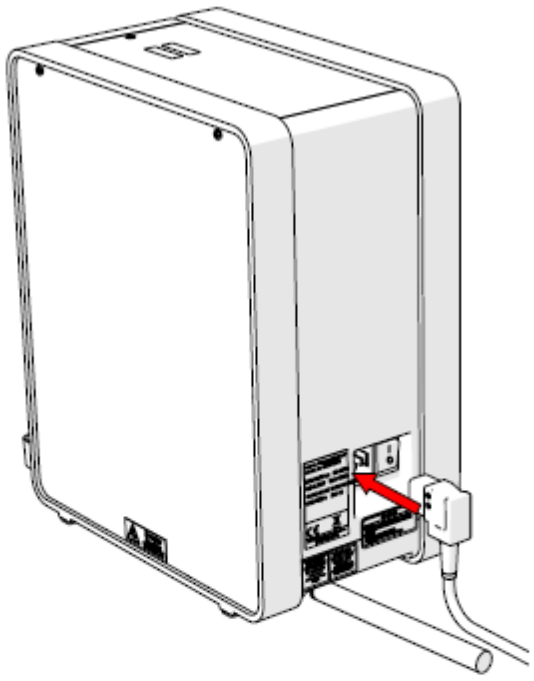

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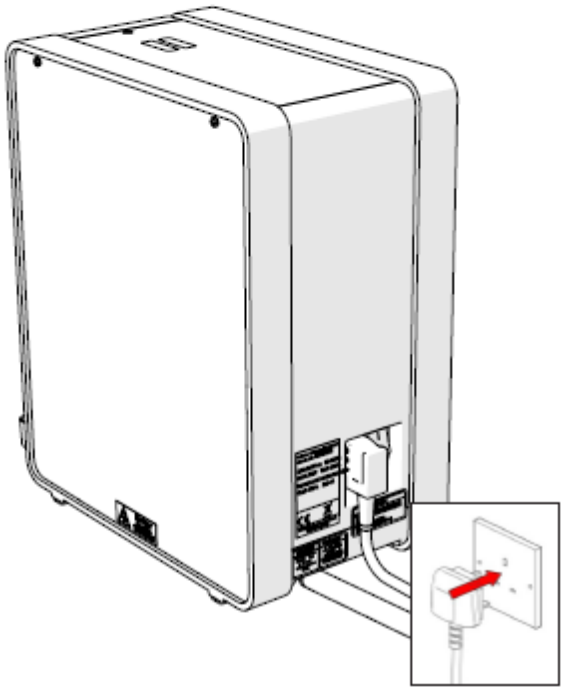

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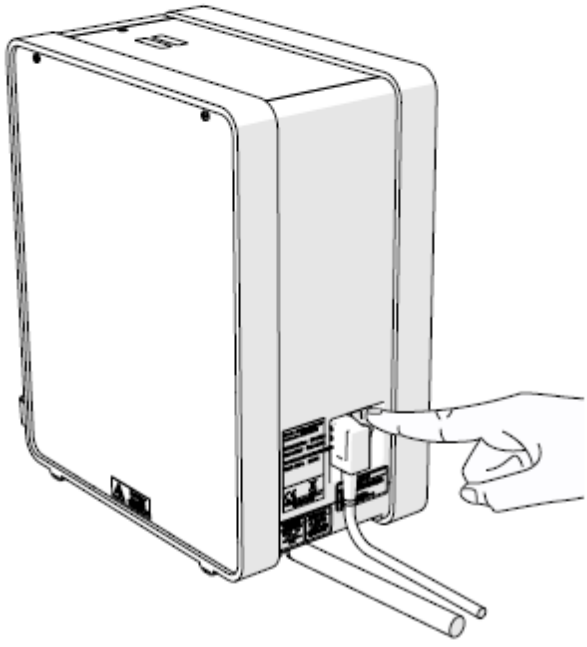
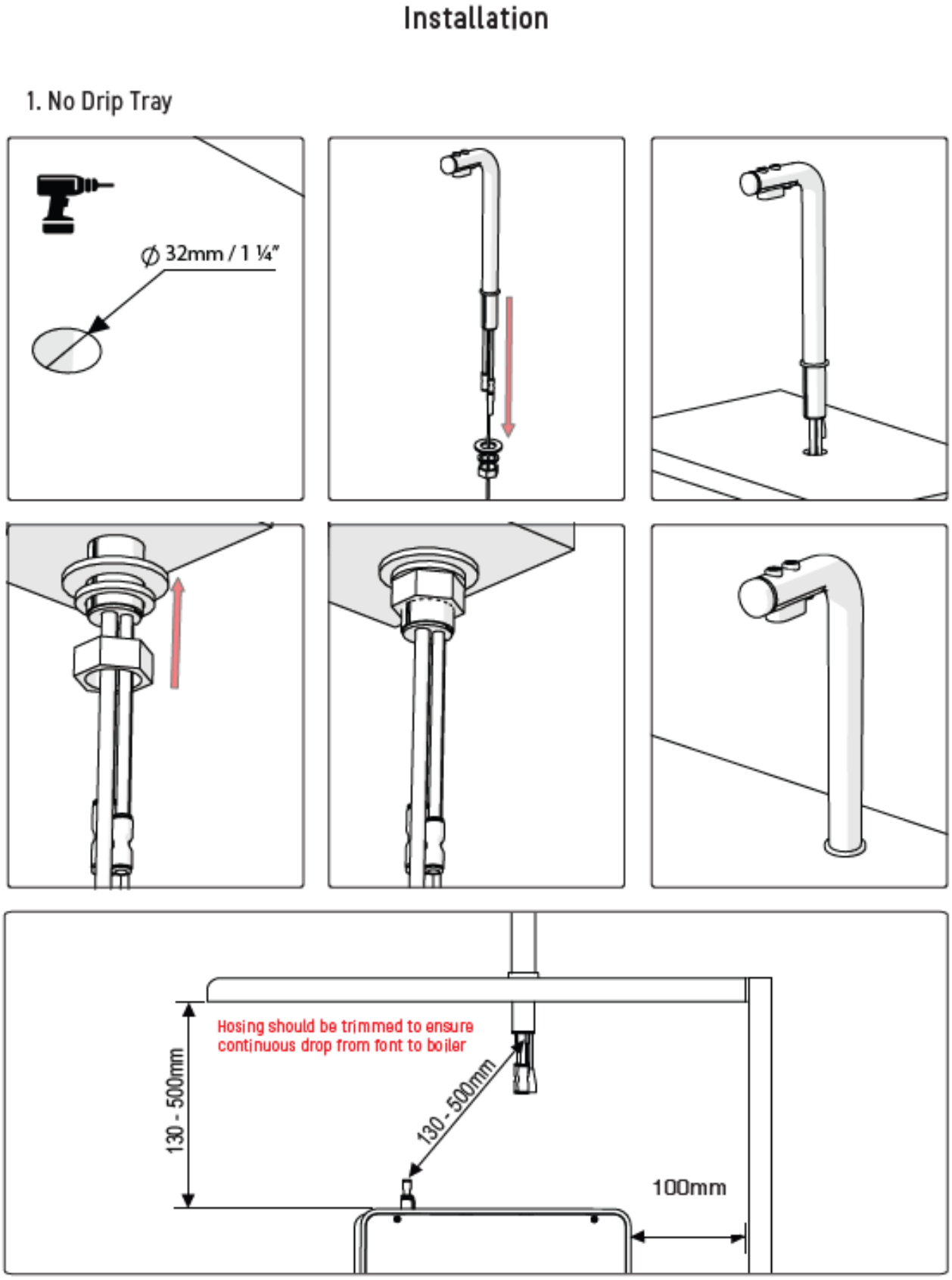


4.3. Mix Font Installation

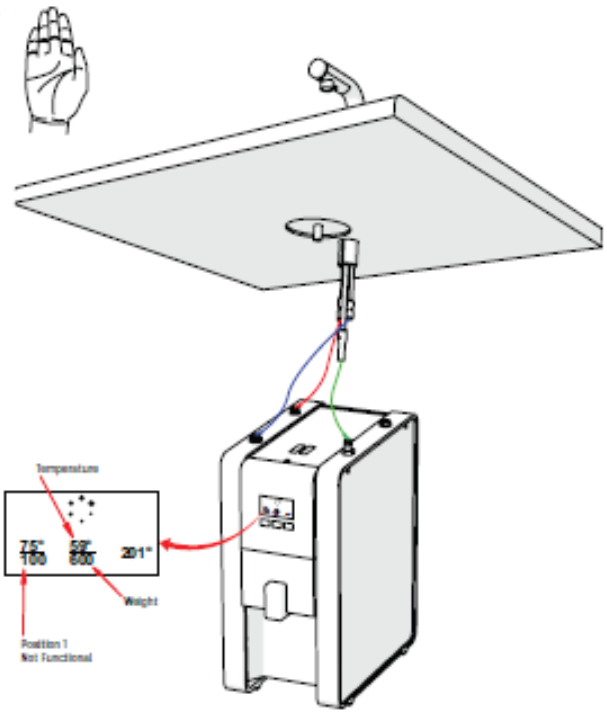


4.4. Mix Font Installation (cont.)

Under Counter Boiler

Operation: Under Counter

1.



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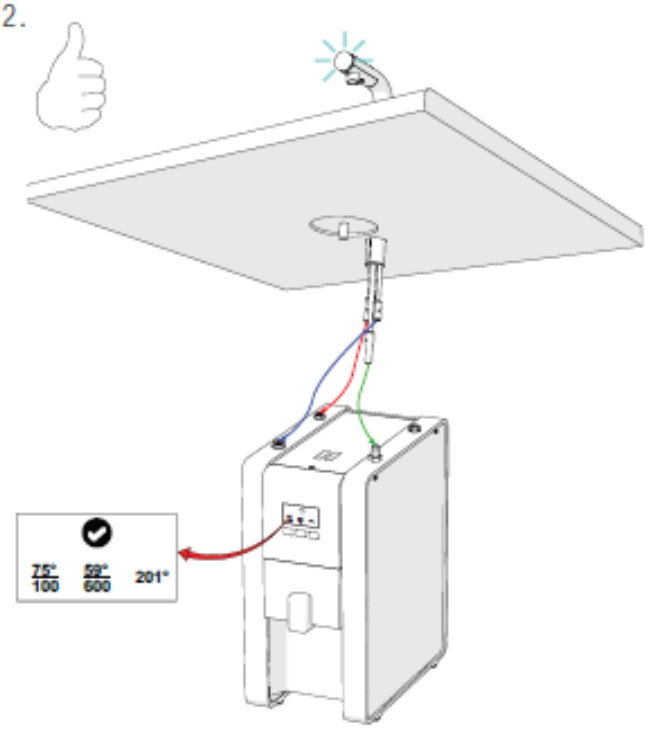

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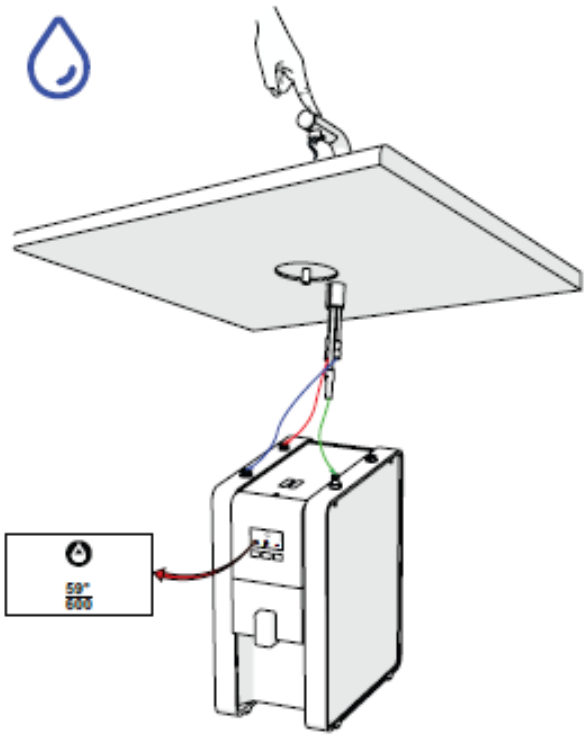

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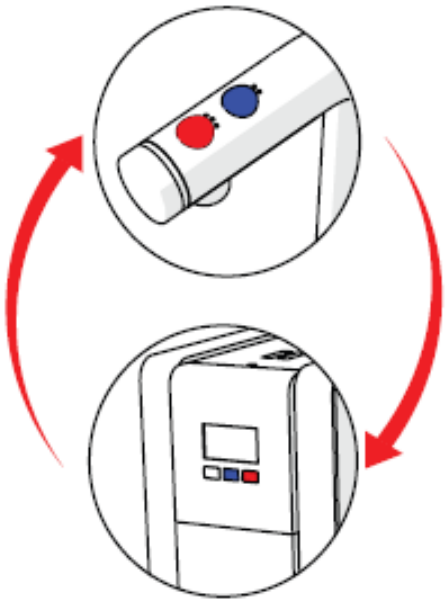
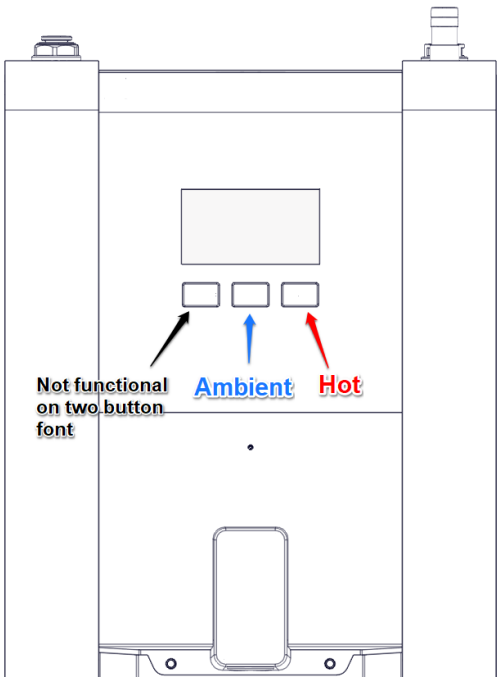


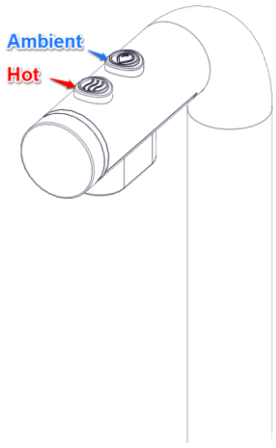
Boiler Button 1 – Not Functional
Boiler Button 2 – Ambient (Volume Dispense)
Boiler Button 3 – Hot 201F (Push & Hold Dispense)

5. BOILER SETUP

5.1. Pre-installed Settings and Pin Code

- The boiler comes pre-set and programming is not required.
- All user and service settings are locked by a pin code.
- To access the pin push all 3 buttons on the front of the boiler at the same time.
- Below are the preinstalled settings and code required to access further boiler and service menus.

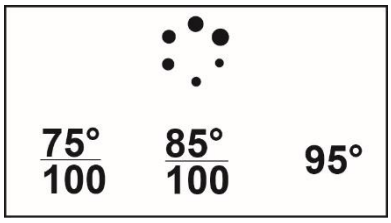




Hot	Ambient
Set to 200F	Set to lowest temperature 59F)
Push and hold to dispense	Volume dispense 600ml
User Pin = 2112	

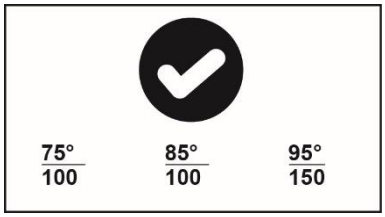
5.2. Operating Boiler for the First Time

- Check that all installation procedures have been carried out.
- Ensure water valve is on.
- Plug boiler into suitable socket.
- Turn on the power switch.
- The “wait” progress circle will be visible on the screen and the machine will fill to a safe level, above the elements, before heating.



Multi Temp versions

- The “Ready” tick with come up on screen when the machine is full and up to normal operating temperature – typically 6 mins for 3L and 16 mins for 8L versions respectively.
- The boiler is now ready for use – the display will show the Water Temperature and the “Ready” status tick.

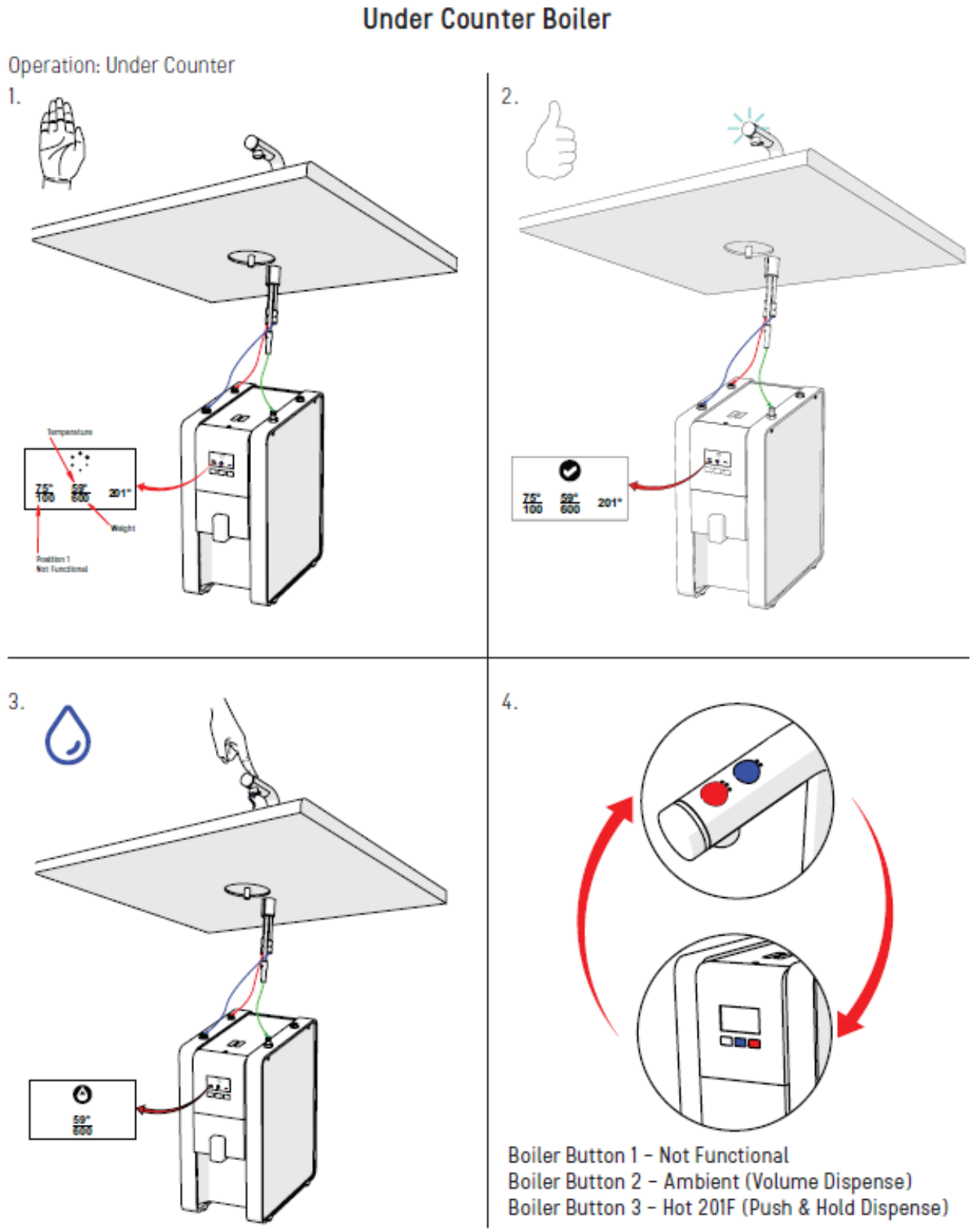


Multi Temp versions

- The Boiler may now be used to dispense hot water to the pre-set factory settings.
- NOTE: Because the boiler is electronically controlled no priming is necessary.
- The element cannot switch on until a safe level of water is reached.

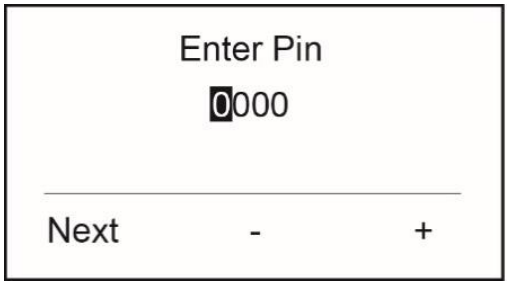
6. OVERVIEW & OPERATION

6.3 Boiler – Operation



6.1. Access Pin Lock Screen

- To access the pin push all 3 buttons on the front of the boiler at the same time.
- Use the plus button (button 3 on boiler) to increase the number value
- Use the Next button (button 1 on boiler) to move to the next digit.
- Enter code **2112** to access user and service settings

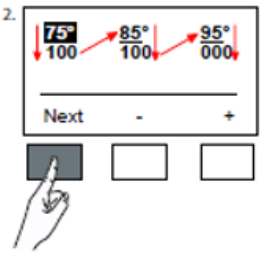


6.2. Boiler Temperature/Volume Setting

Programming: Under Counter

1.

2.



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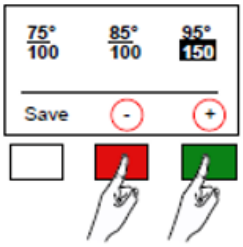

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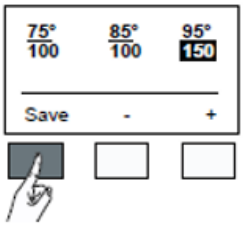

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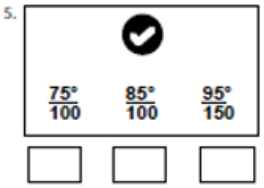
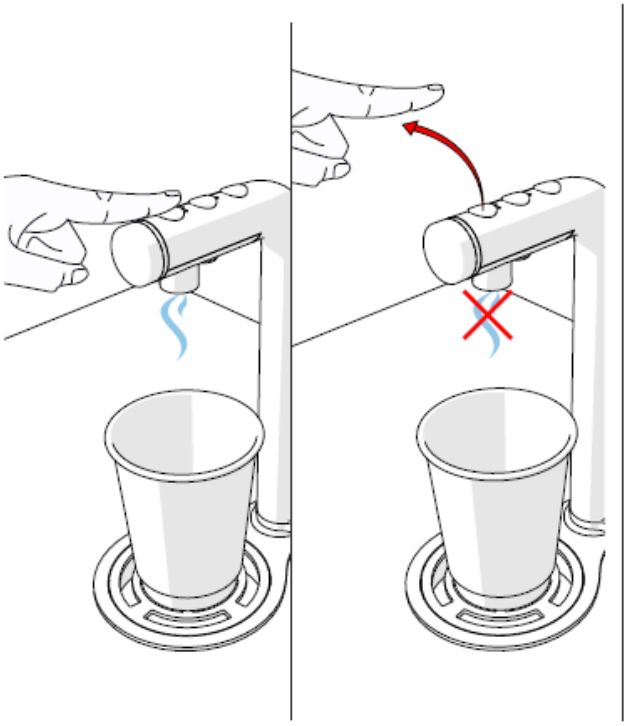
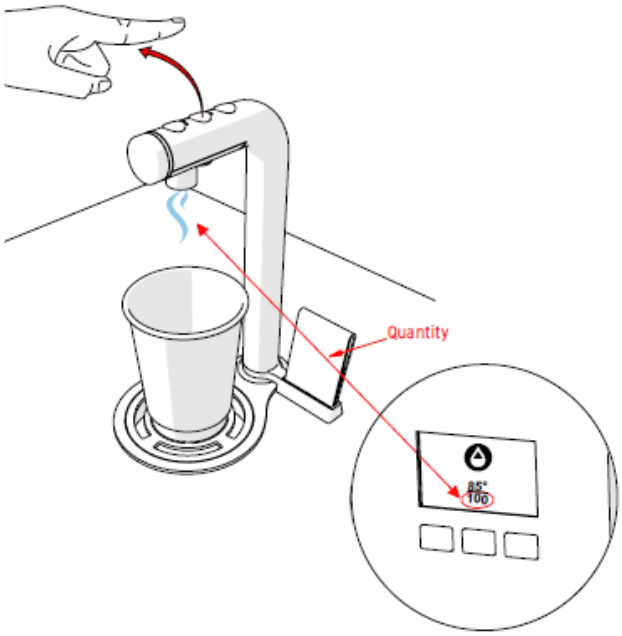


6.3. Mix Font – Operation

1. Push & Hold

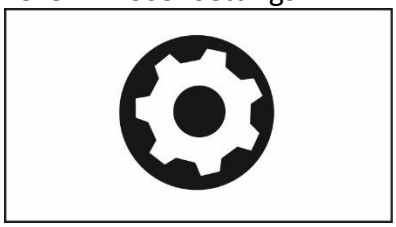
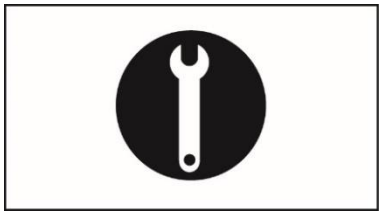
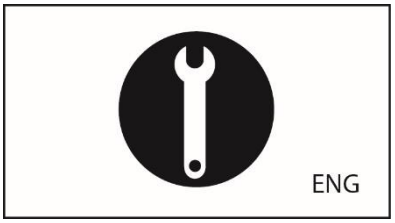


2. Push & Release



7. MENU NAVIGATION

There are 3 menu ‘levels’ to the Mix Boiler settings.

Level 1 – User Settings	Level 2 – Advanced Settings	Level 3 – Engineering Settings
		
Enter by pressing all 3 buttons simultaneously	Enter by pressing all 3 buttons simultaneously	Enter by pressing all 3 buttons simultaneously

7.1. User Settings

The screens displayed to the User depend on which machine type the software has been set to.

Multi-temp UC versions:

The Top row sets the desired dispense temperature of the corresponding button on the Boiler (or the Mix dispense font in the case of a UC version).

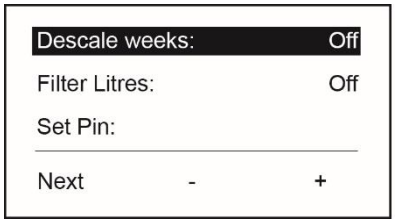
The second row shows the desired dispense volume – a volume of ‘000’ sets the dispense button to ‘Push & Hold’ mode.

Press **‘NEXT’** to cycle through each value shown on the screen.

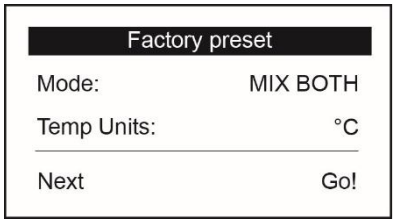
Press **+ or –** to adjust a value.

Press **SAVE** to store values and return to normal operation.

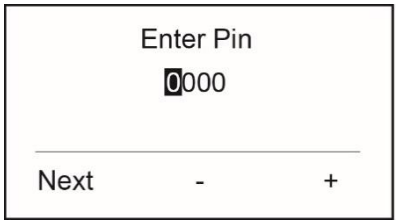
7.2. Advanced Settings (Hold all 3 buttons simultaneously for >3 <6 seconds)



Screen 1



Screen 2

Setting	Options
Descale Weeks	OFF, 1-60 weeks – When set to a week period, a message will appear on screen to descale after that time period has elapsed.
Filter Litres	OFF, 500 – 15000L – When set to a Litre amount, a message will appear on screen to replace the filter after that amount of water has been used.
Set Pin	The boiler is preset with a 4-digit pin = 2112 Setting the PIN to any number other than '0000' will restrict access to the User, Advanced and Engineering Level settings.  (Back door PIN in the event of forgotten PIN is: 1793)
Factory Preset	Resets a number of Engineering Level settings specific to a machine type. Allows selection of machine type from: TAP PB3 PB8 UC (3 button) UC (1 button)

<table>
<tr><td>Mode</td><td>Allows selection of mode types from:

<table>
<tr><th>Mode Type</th><th>T be used for:</th></tr>
<tr><td>UC COLD HOT</td><td rowspan="3">UC version connected to 2 & 3 button font</td></tr>
<tr><td>UC HOT COLD</td></tr>
<tr><td>UC MIX BOTH
(Starbucks Default)</td></tr>
<tr><td>UC SINGLE</td><td>UC version connected to a single button font</td></tr>
<tr><td>COLD HOT</td><td rowspan="3">PB version in Multi-temp operation</td></tr>
<tr><td>HOT COLD</td></tr>
<tr><td>MIX BOTH</td></tr>
<tr><td>SINGLE</td><td>PB version in single-temp operation</td></tr>
<tr><td>TAP</td><td>Tap versions</td></tr>
<tr><td>COLD 60S</td><td>for calibration and diagnostic purposes only</td></tr>
<tr><td>HOT 5S</td><td>for calibration and diagnostic purposes only</td></tr>
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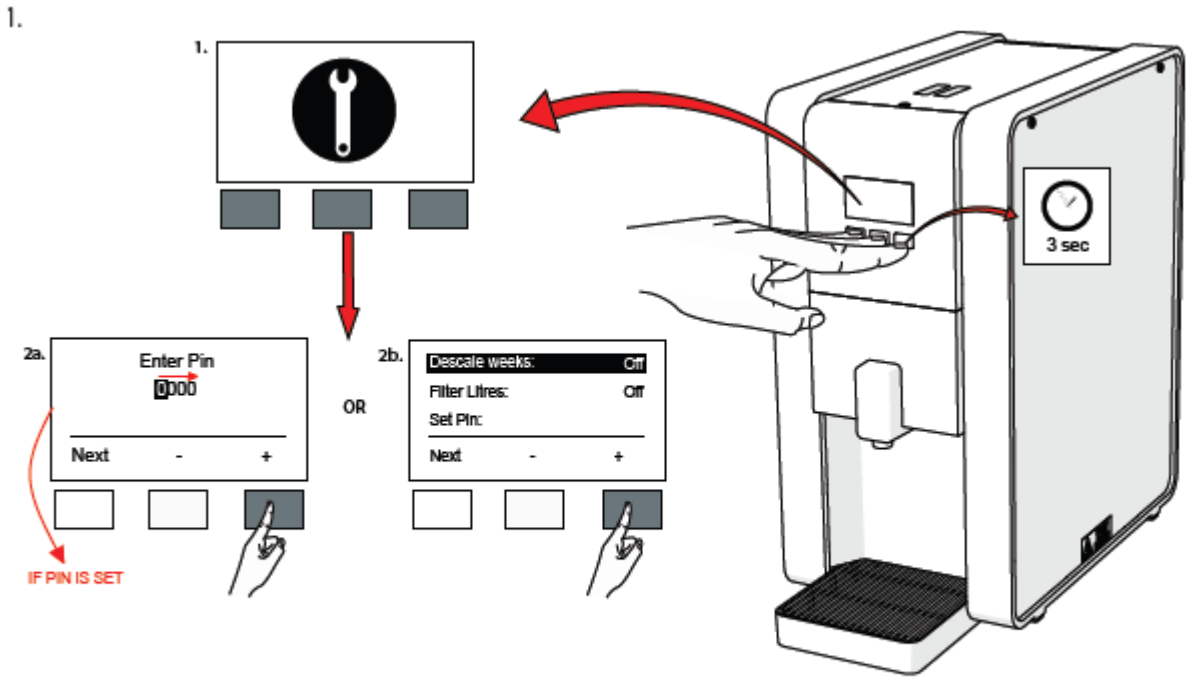
</td></tr>
<tr><td>Temp Units</td><td>^{o}C or ^{o}F</td></tr>
</table>

7.3. Advanced Settings (cont.)

1.



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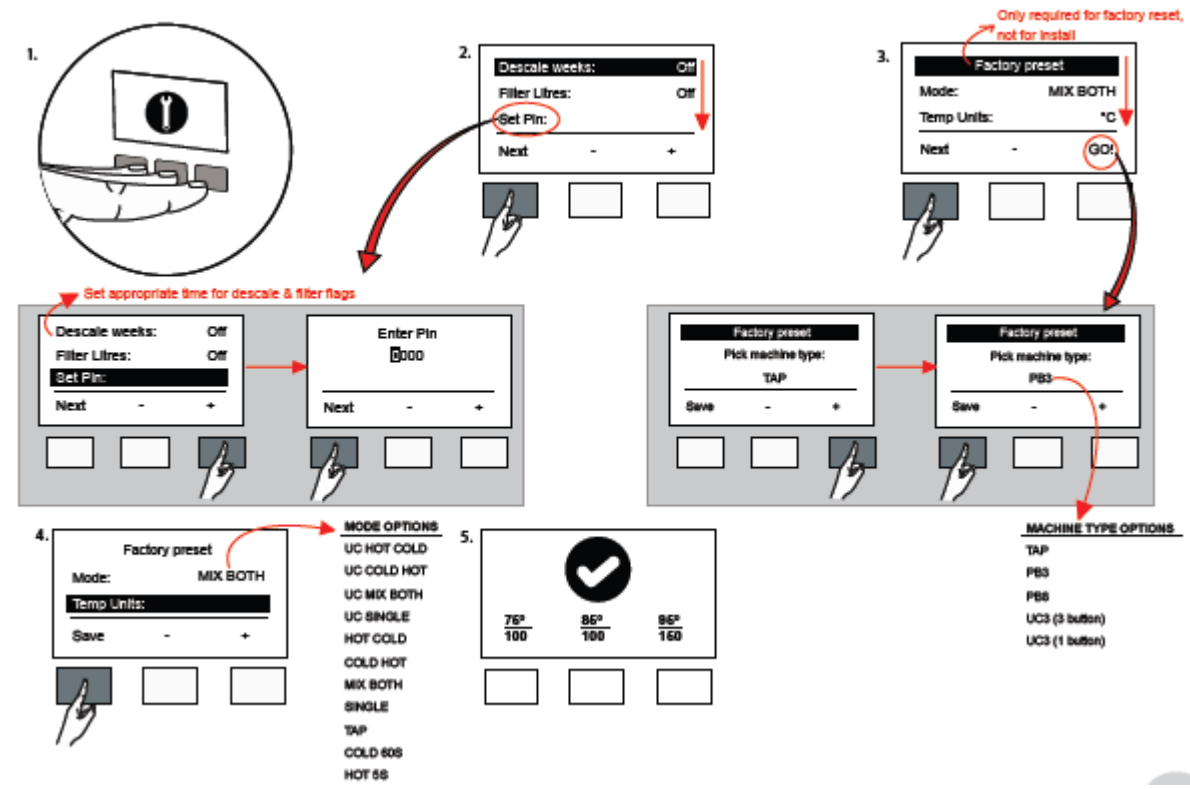
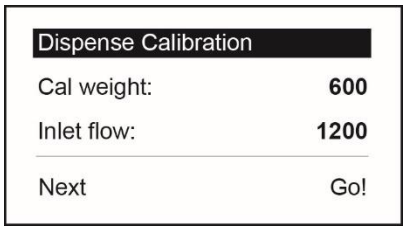


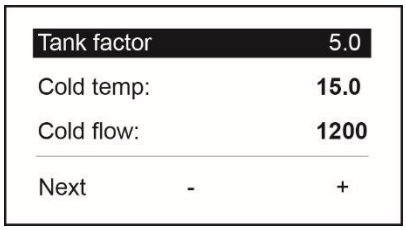
7.4. Engineering Settings (Hold all 3 buttons simultaneously for >6 seconds)

The options available in the Engineering settings are usually only required during factory assembly and are mainly related to the functionality of the multi-temp software control.

In the instance where some install locations differ wildly from normal (eg extremely hot or cold incoming mains water), or if a component such as a PCB or inlet solenoid has been changed, this set of options will allow for corrections to be made so that the control software functions properly.



Screen 1



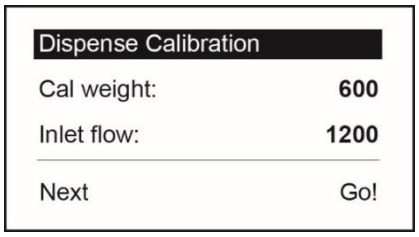
Screen 2

Setting	**Option**
Dispense Calibration	Pressing '**Go!**' – Initiates the calibration procedure for PB or UC versions.
Cal weight	User measured amount of water dispensed during calibration process. Default values (depend on machine type): PB3 = 600 PB8 = 1050 UC (3 button) = 600 UC (1 button) = 600
Inlet Flow	The software calculated amount of water through the inlet solenoid into the boiler tank during the calibration process. NOTE: should not be edited once calibration process completed. Default value = 1200

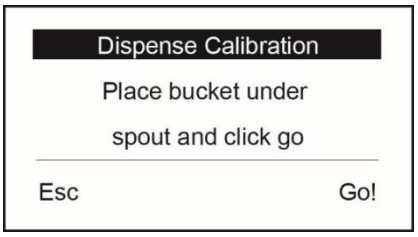
Tank Factor	Is a constant used in the software calculations related to the size of the tank and whether the water is pumped or fed by gravity – default settings are: Default values (depend on machine type): PB3 = 5.0 PB8 = 8.8 UC (3 button) = 1.5 UC (1 button) = 1.5
Cold Temp	The temperature of the incoming mains water supply as seen at the boiler. Default Value = 15.0
Cold Flow	The measured amount of water dispensed through the inlet solenoid fed to the cold water dispense nozzle in 60 seconds for PB or UC versions. Default value = 1200.

7.5. Dispense Calibration Procedure (in Engineering Settings)

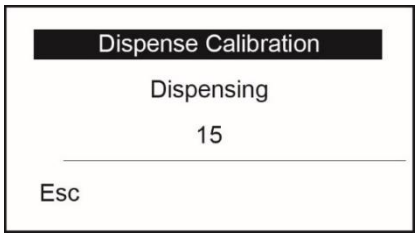
The Dispense Calibration procedure should only be run if the machine has had major component change, such as PCB or inlet solenoid that requires calibration settings to be re-done.



1. Default settings for a PB3. Press **Go!**

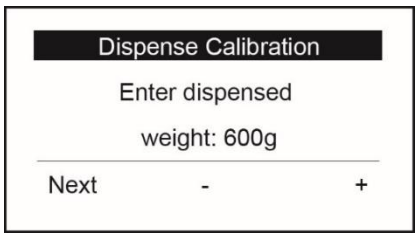


2. Place bucket. Press **Go!**

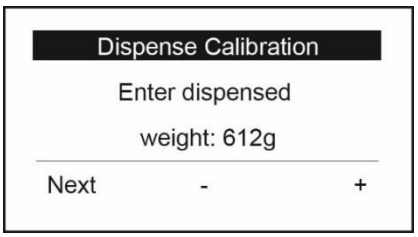


3. Machine will dispense for 15 seconds

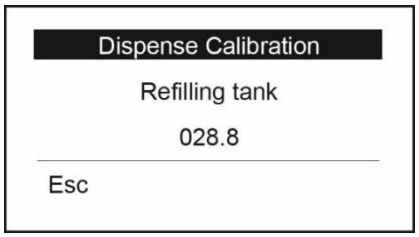
4. Weigh output



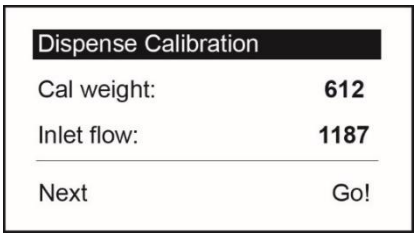
5. Screen will show the above



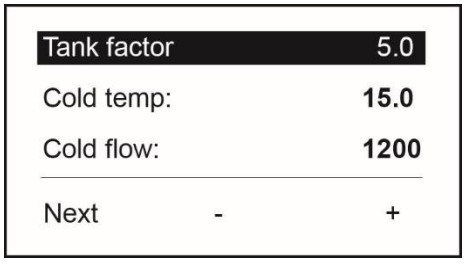
6. Enter Weight using +/-. Press **Next**



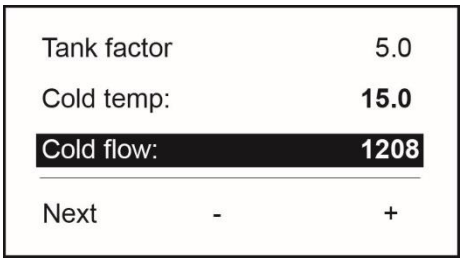
7. Machine will refill to the high level
Time to refill is displayed on screen.



8. Screen will show entered CAL WEIGHT and software calculated INLET FLOW. Press **Next**



9. The second Engineering settings screen will show the above.



10. If the COLD 60S mode test has been performed, This value can be entered here in COLD FLOW

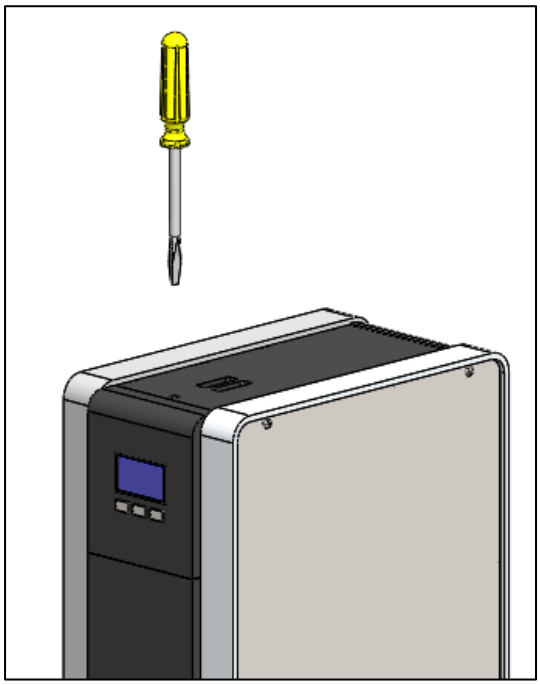
8. ROUTINE MAINTAINENCE/INTERNAL ACCESS

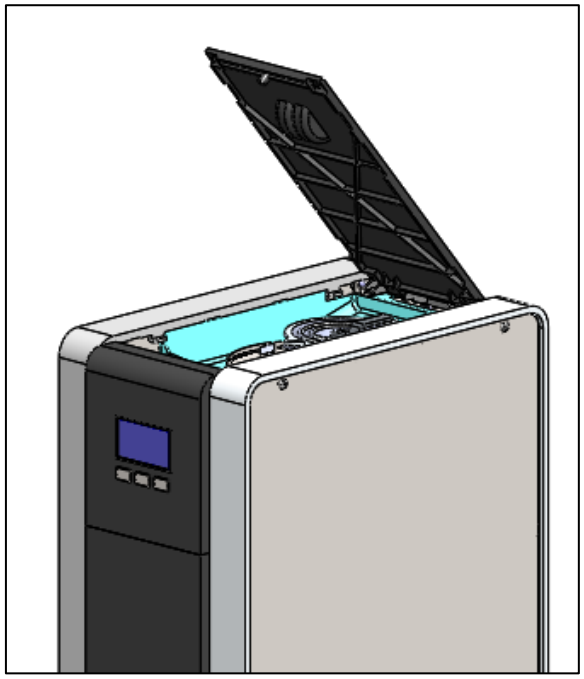
Maintenance should be carried out by Marco approved technicians only.

8.1. Top Lid Removal:

1. Remove the screw in the top lid with a suitable slotted screwdriver.

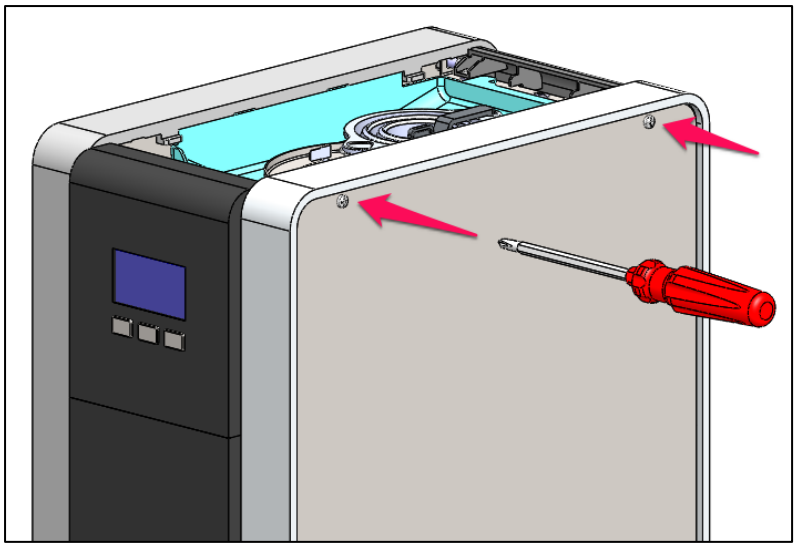
2. Rotate lid from the front edge upwards and remove.





8.2. Side Panel Removal:

For maintenance requiring deeper internal access, both side panels can be removed by using a suitable cross headed (phillips) screwdriver.



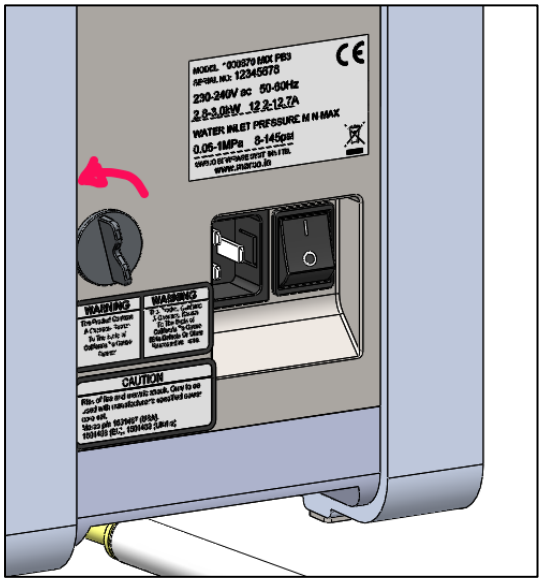
8.3. Draining the tank:

1. Turn off machine and disconnect from mains power.

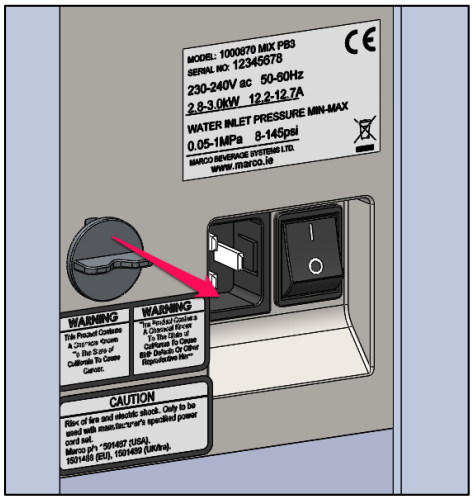
2. Allow to cool sufficiently to avoid burn risk.

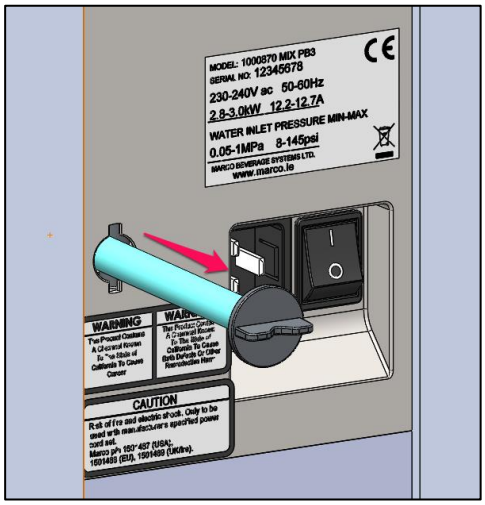
3. Place machine so that the rear of the machine is located next to a sink or a bucket large enough to hold the full contents of the tank.

4. Unclip drain hose plug from rear panel by rotating anti-clockwise 90º.



5. Gently pull silicone hose from the inside of the machine.





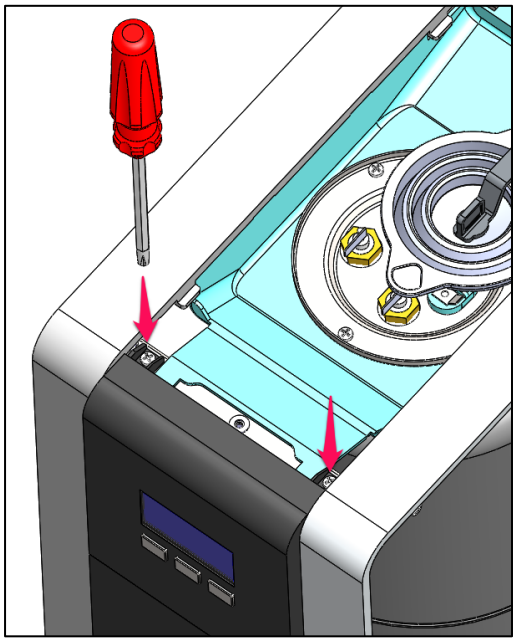
6. Remove drain plug from the end of the silicone hose and empty into sink or bucket.

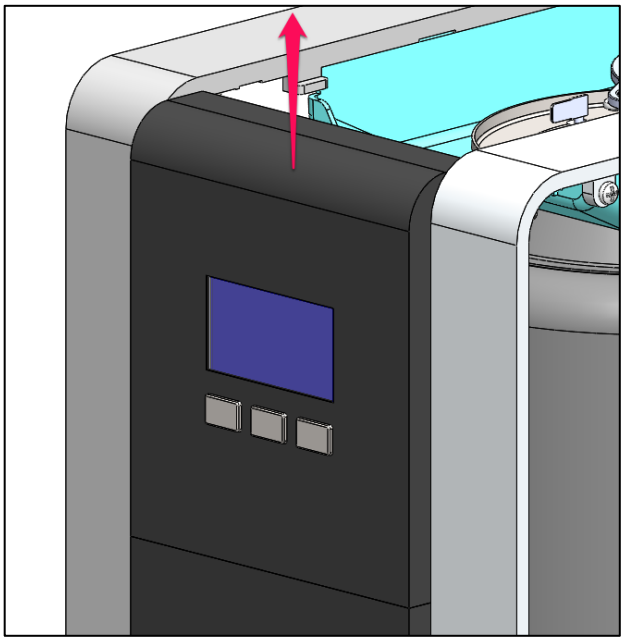
7. Replace drain plug fully into silicone hose and push silicone hose gently back into the machine.

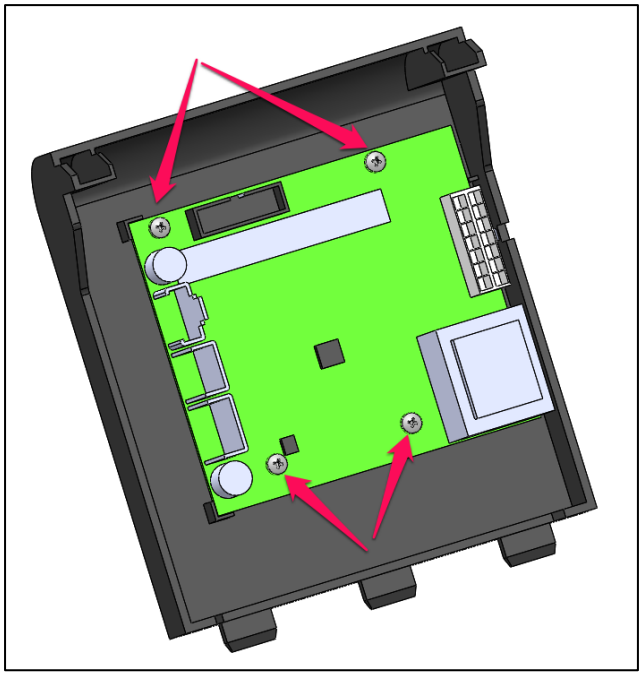
8. Re-clip the drain plug to the rear plastic enclosure panel by rotating 90º clockwise

8.4. PCB replacement:

1. Remove Top Lid & Side panels as per sections 8.1 and 8.2.
2. Disconnect all wiring connected to the PCB.
3. Remove two cross headed screws with a suitable screwdriver shown in the picture below.
4. Pull Upper front Fascia Panel upwards to remove from the machine.
5. Remove 4 screws to release PCB from Front Fascia panel.

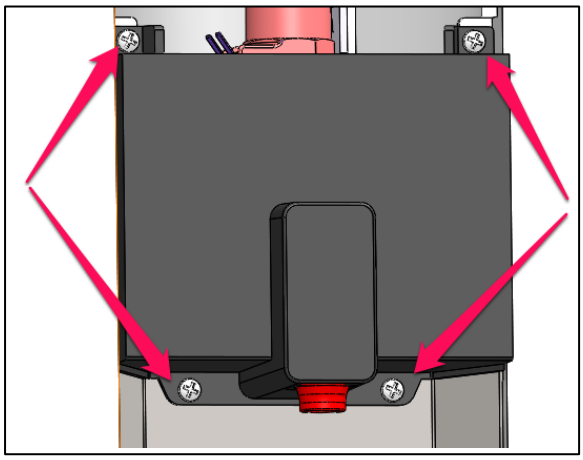






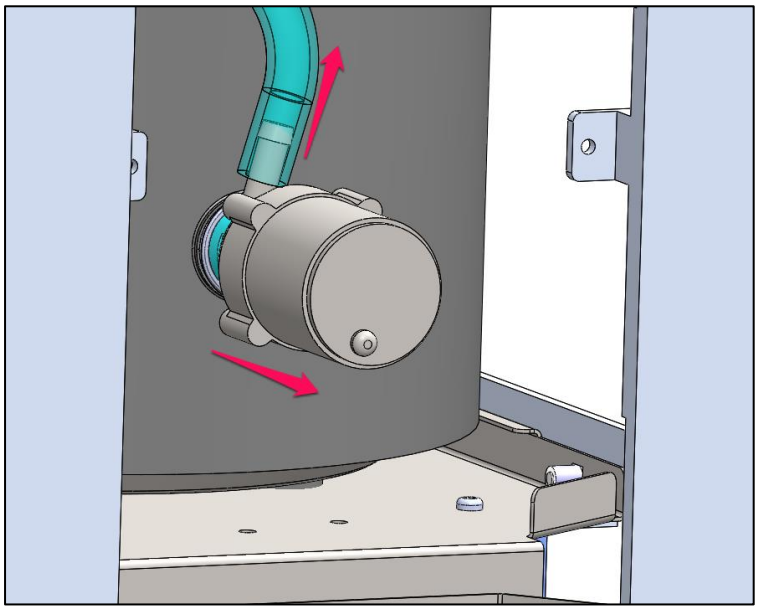
8.5. Pump replacement:

1. Remove Upper Fascia Panel as per section 8.4.
2. Undo 4 retaining screws as shown in picture below.
3. Then pull the plastic panel directly outwards from the machine.



To disconnect a pump in a UC version: (CAUTION - make sure tank is drained fully first as per section 8.3!)

1. Disconnect all wires connected to the pump
2. Pull the silicone hose off the outlet side of the pump.
3. Pull the pump out of the silicone mounting grommet.



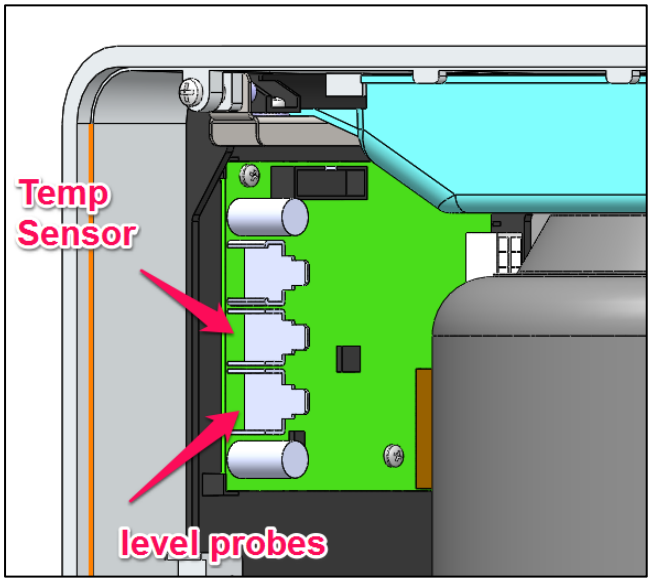
8.6. Tank Lid Sub-Assembly Removal

To remove the Tank Lid sub-assembly (with element, thermistor & level probes attached):

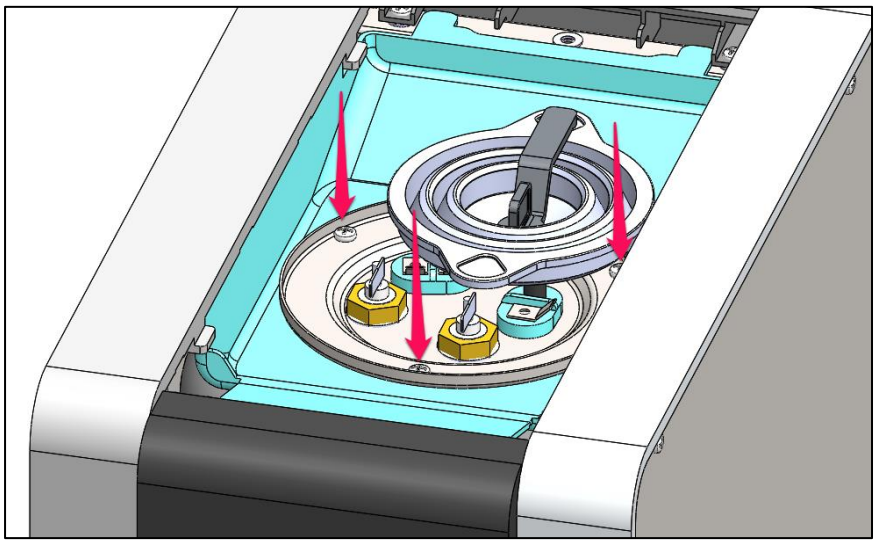
1. Disconnect machine from mains power and allow to cool!

2. Remove Outer Lid as per section 8.1 and **right-hand** side panel as per section 8.2.

3. Disconnect heating element wires as well as disconnecting the level probe connector and thermistor connectors at the PCB.

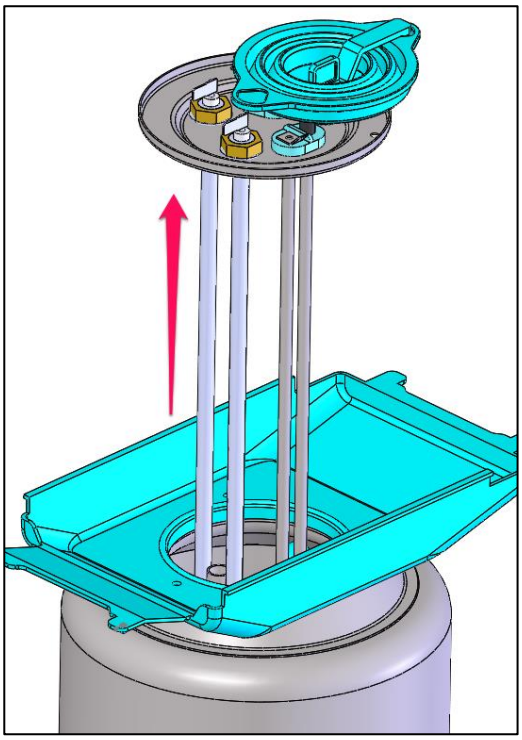


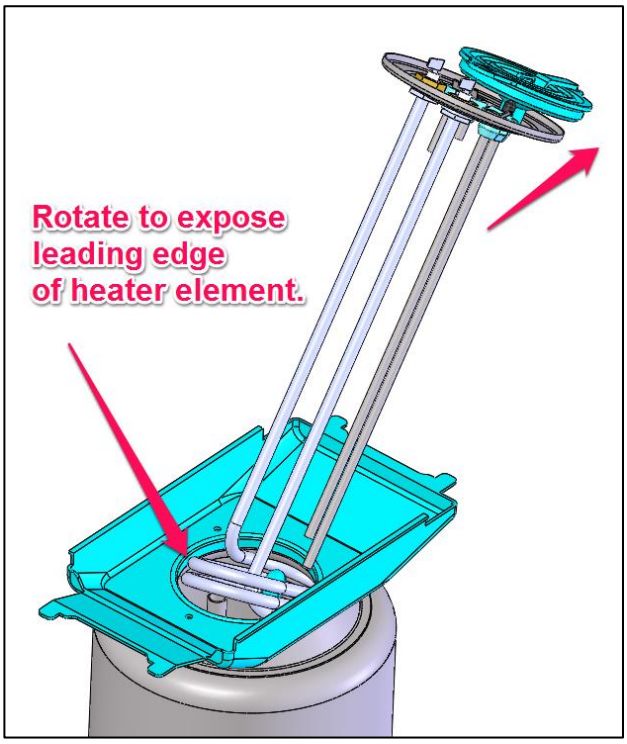
4. Undo the 3 Tank Lid retention screws located in the picture below. For the screw underneath the collapsible funnel simply push funnel gently out of the way to access the screw.



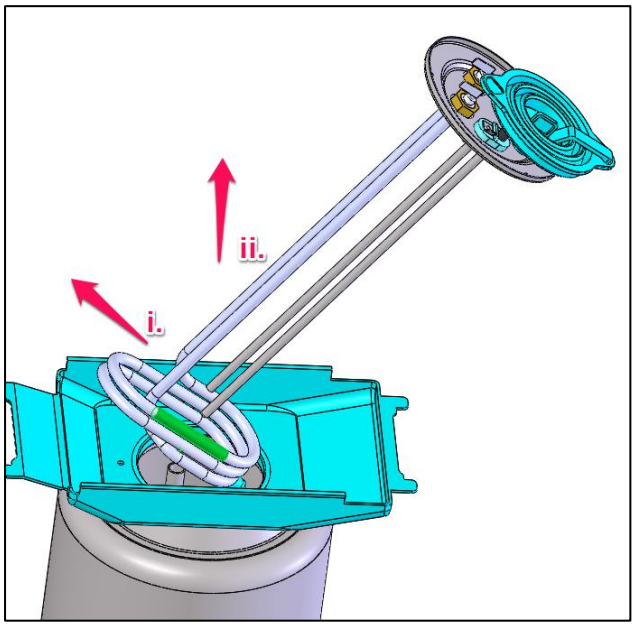
5. Gently pull the Tank Lid sub-assembly upwards initially – ensure wiring does not get caught as sub-assembly is pulled upwards.

6. Once the heater element is just over halfway out of the tank, start to angle the sub-assembly towards the rear of the machine, and begin to pull the forward bent section of the heating element out of the tank opening.





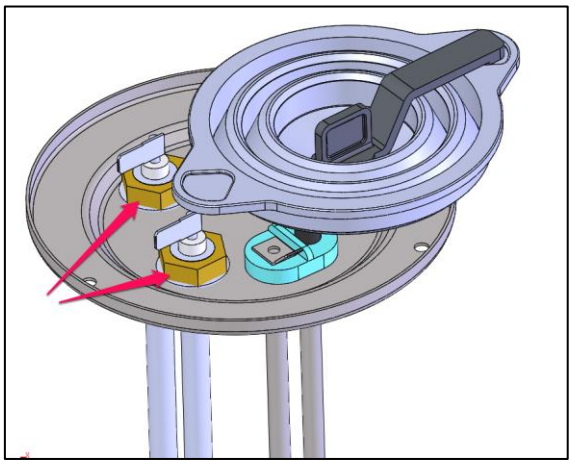
7. Finish removal by then sliding the sub-assembly forwards and upwards to disengage from Tank opening.



8.7. Heater Element Removal

1. Remove Tank Lid sub-assembly as per section 8.6

2. Undo the two 18mm lock nuts and slide the heater element tabs through the holes in the lid.

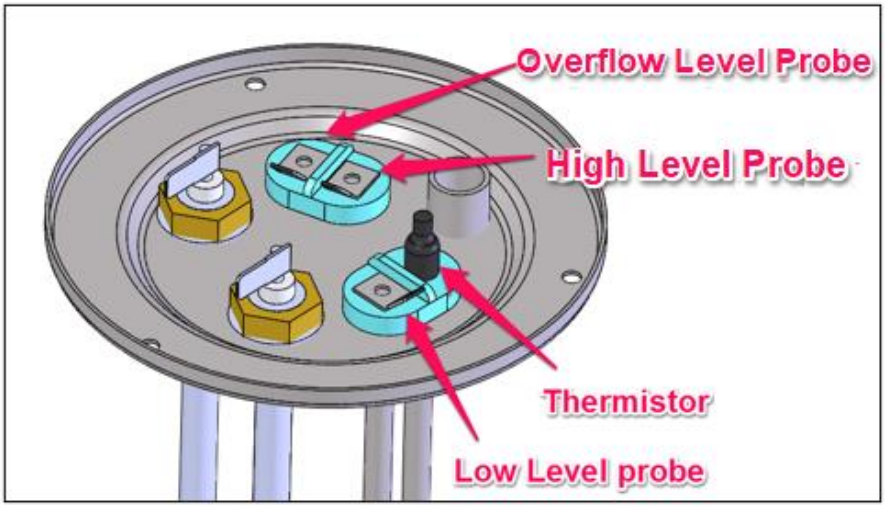


8.8. Thermistor & Level Probes - Cleaning & replacement

There are 3 probes (low level, high level and descale/overflow) on the Mix Boiler range. Each probe is 'push-fit' mounted into a silicone mounting grommet.

The low level and thermistor are paired together in one grommet and the high level and overflow level probes are paired together in the other.

The Tank lid sub-assembly does not need to be removed to access the level probes as they can be pulled from the silicone mounting grommet by the metal electrical tab – the descale funnel can be pushed gently out of the way to access. The thermistor can be pulled directly from the mounting grommet using a suitable set of pliers.



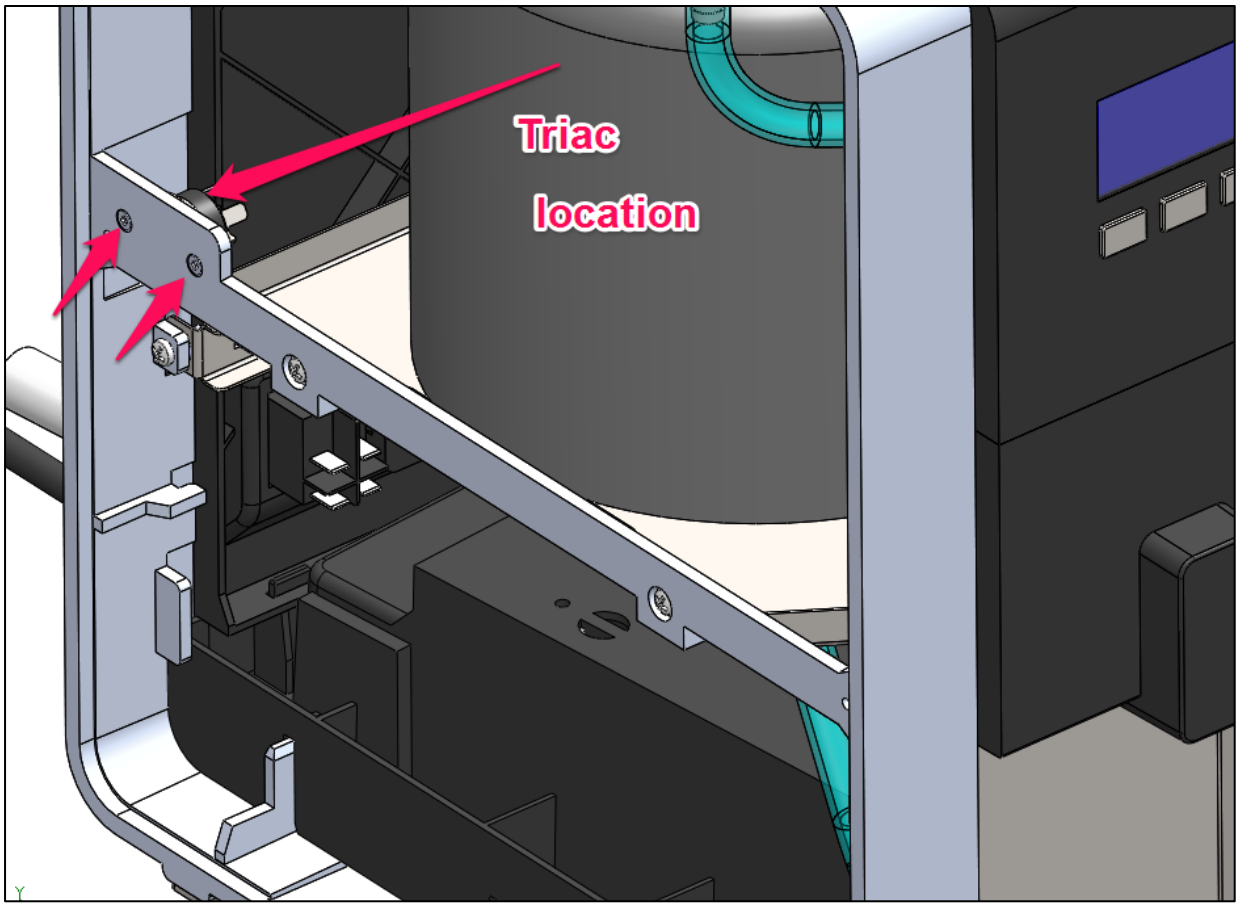
8.9. Triac Replacement

1. Disconnect the machine from mains power.

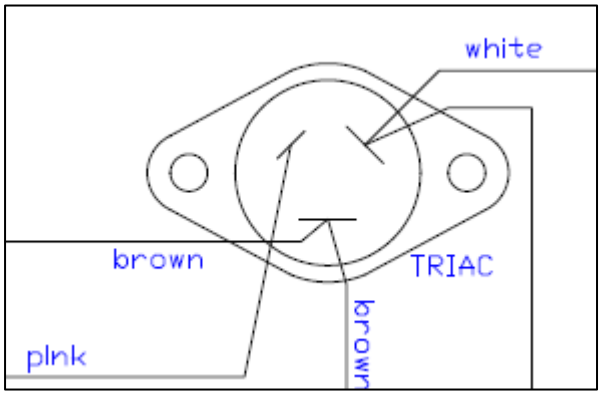
2. Remove the left hand side panel as per section 8.2.

3. Disconnect all wires to the Triac – **making note of the correct wiring terminal connections**

4. Undo two retaining screws as located in the picture below.



Correct triac wiring (as per wiring diagrams):

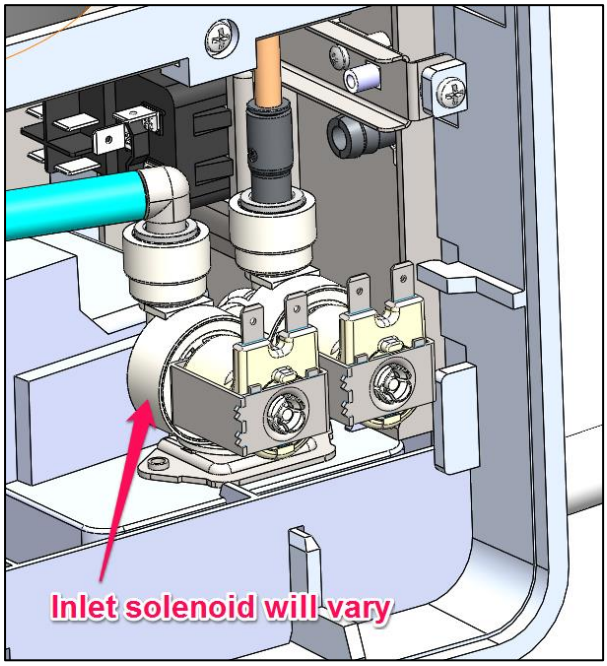


8.10. Inlet solenoid Replacement

1. Disconnect machine from mains power and allow to cool completely.

2. Drain tank fully as per section 8.3.

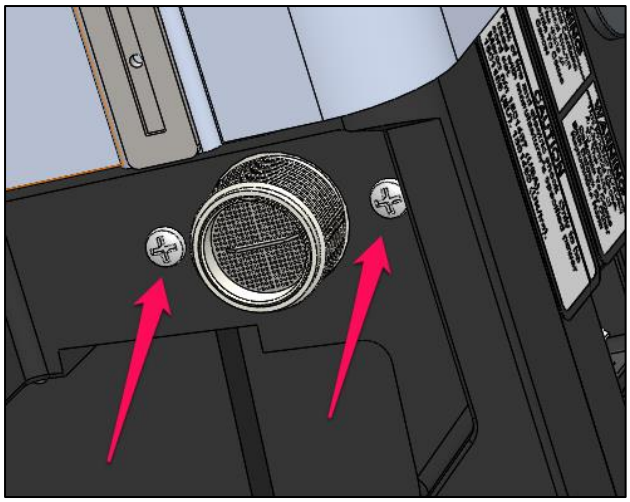
3. Remove right hand side panel as per section 8.2

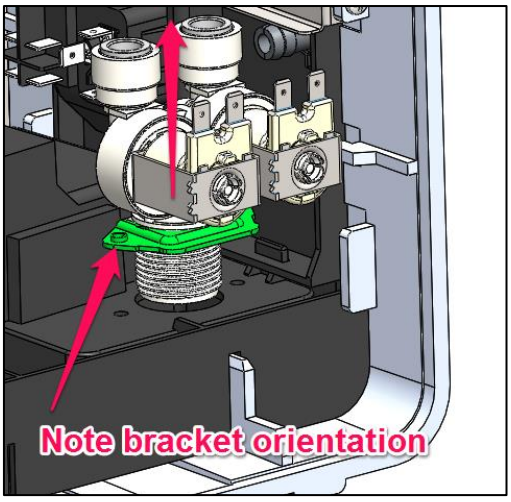


4. Disconnect all wires and hoses to the inlet solenoid.

5. Remove two solenoid retaining screws located on the base of the machine.

6. Remove solenoid by pulling upwards (**NOTE**: if replacing solenoid, observe the orientation of the mounting bracket of the solenoid being removed. If orientation is NOT correct the solenoid will not fit)

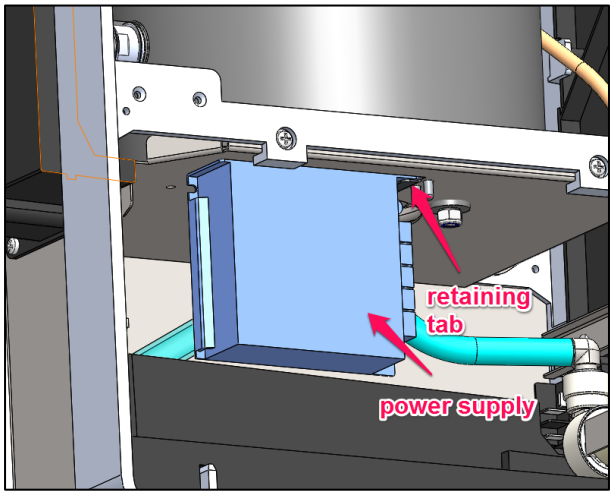


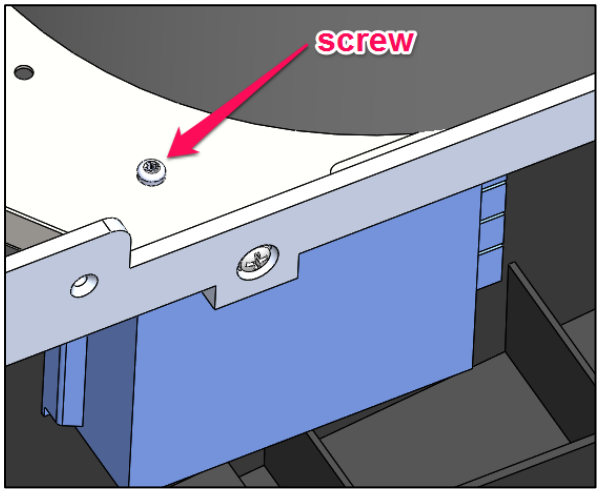


8.11. Pump Power Supply

The power supply for the pump is mounted underneath the Tank Support.

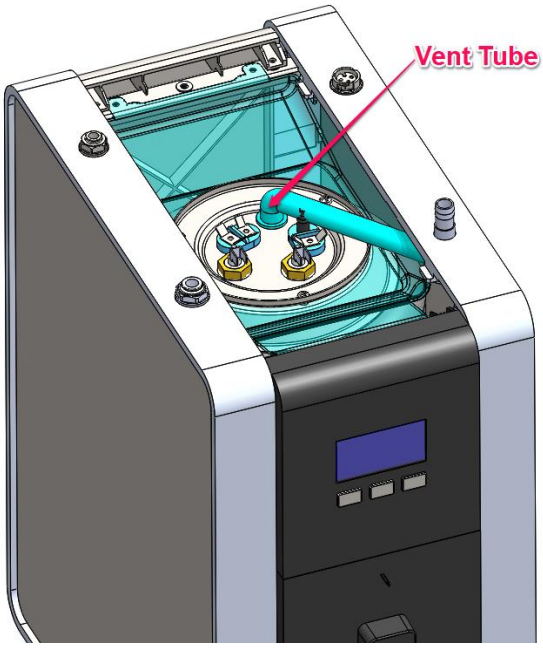
Power supply shown below is mounted with one retaining tab and one M3x6mm screw.



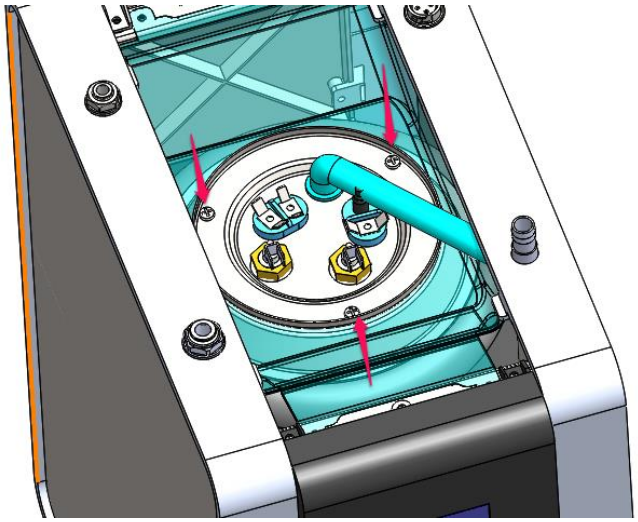


8.12. De-scaling the tank:

1. Disconnect machine from mains power supply and water supply.
2. Disconnect the font from the boiler.
3. Allow machine to cool.
4. Remove top lid as per section 8.1.
5. Drain off a sufficient amount water from the boiler that will be replaced by the descale solution, through the drain hose – see section 8.3.
6. Remove the vent tube from its location on the top of the tank.



7. Undo the 3 tank lid retention screws located in the picture below to prevent an air lock when pouring in the descale fluid.

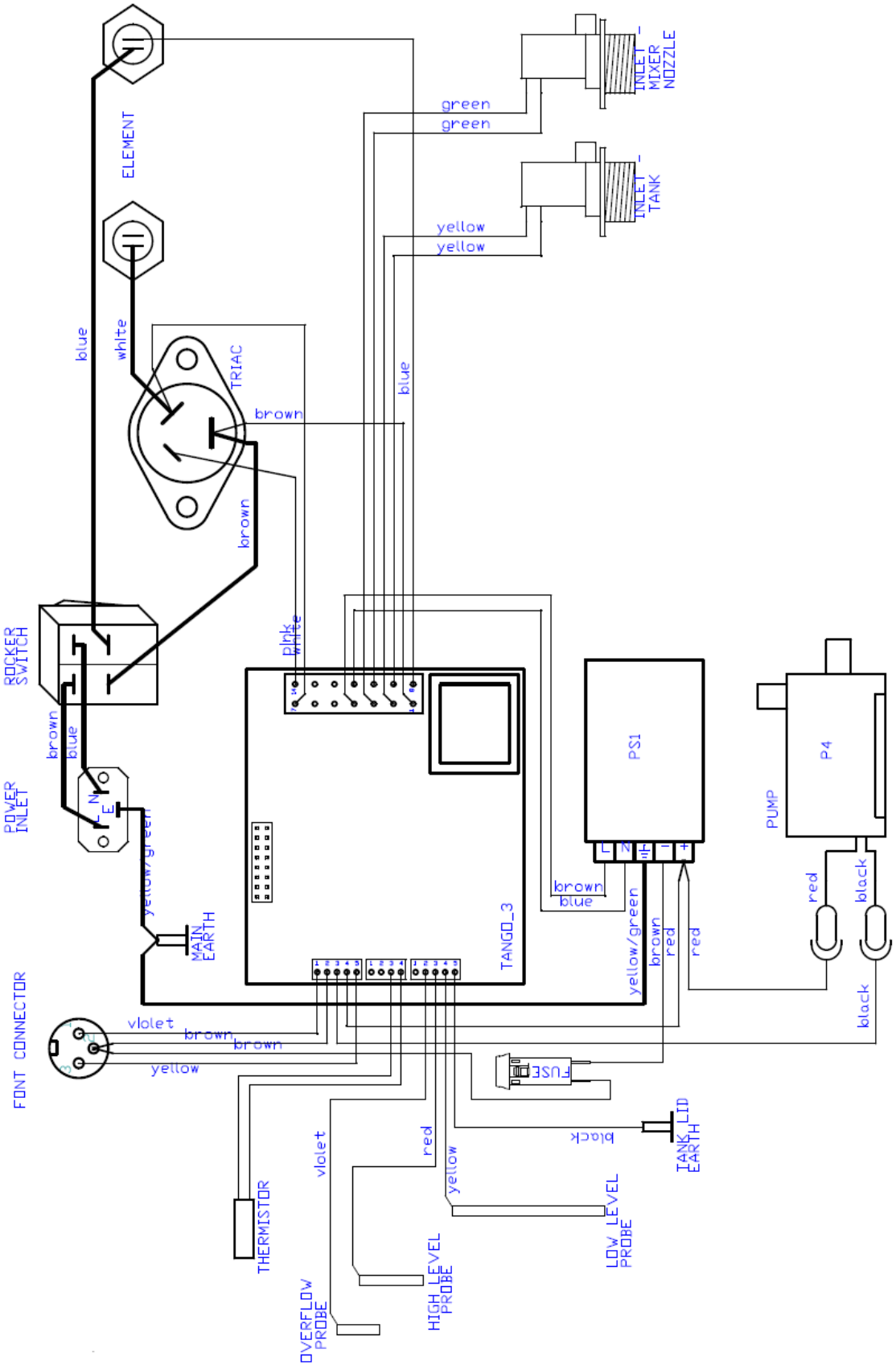


8. Pour in descale solution slowly through the vent on the top of the tank using a funnel. **If an air gap occurs lift the tank lid slightly to ensure the fluid flows into the tank, do not remove the tank lid.**
9. Allow descale solution to work for required time to dissolve scale – as per descale product instructions.
10. Flush tank thoroughly to flush out limescale and descale solution though the drain hose before re-use, at least 4 times.
11. If limescale build up is severe, the Tank Lid Sub-assembly may need to be removed and large deposits of scale removed by hand.
12. Replace all components, tank lid screws, vent tube and boiler lid, before reconnecting the font.

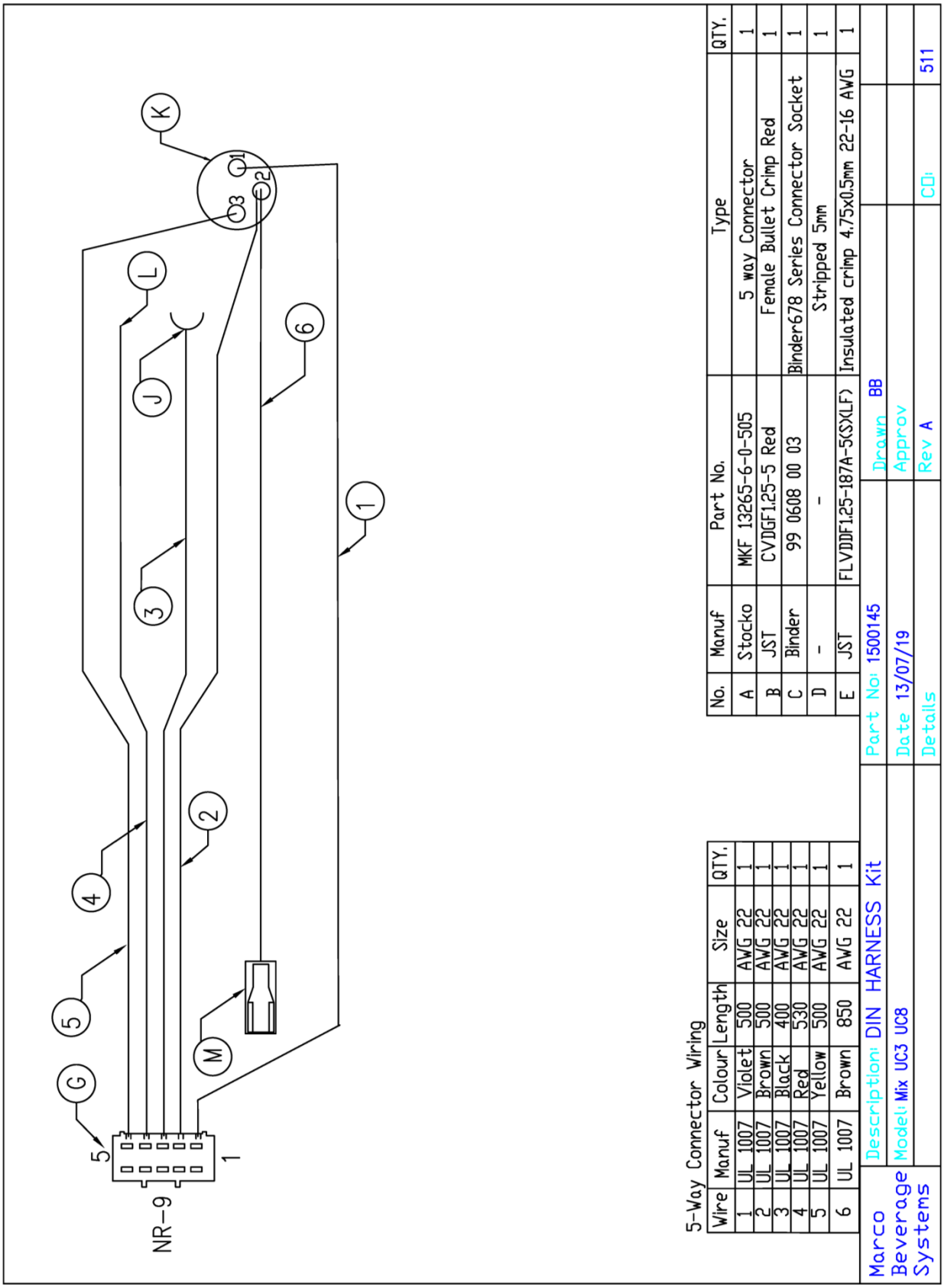
Reported issue	Component	Check
Not heating	Heating element PCB Triac	• Check resistance of heating element while machine is powered off. Good element will measure 18 to 22 Ohms, If ok, check • Check power from board to Triac. 230V supply. If no voltage within range/ replace PCB. If ok next • Replace Triac
Level probes Error.	Level probes	• Remove earth from Main PCB. If inlet solenoid opens and you hear water entering the tank, • Check for limescale. Power down unit and remove the tank lid to check for scale. If scale present, • Remove probes and clean with Scotch brite/ descale tank.
Not heating/ No water	PCB Inlet solenoid	• Check incoming water supply. If OK, go to below • Check voltage from PCB. If 230 v supply, PCB ok, replace solenoid • Good solenoid will measure between range 4-5k Ω with no power to unit
Not dispensing water	Dispense Solenoid PB version	• Check power supply from PCB/ 230V OK • If 230V supply from PCB replace dispense solenoid
Not dispensing water	Pump UC version PCB Power supply	• Check power from PCB. If 230 v, PCB ok, move to • Regulated power supply. Check output to pump. 24v DC. If outside the 24v, replace Power supply, if ok • Replace the pump.
Filter error	Filter	•Remove filter and check operation • Note, machine will operate without filter • If ok/ Replace filter

10. ELECTRICAL SCHEMATICS

10.1. Wiring Diagram - UC Versions



10.2. Mix UC3 UC8 DIN Wiring Harness (1500145)



5-Way Connector Wiring

Wire	Manuf	Colour	Length	Size	QTY.
1	UL 1007	Violet	500	AWG 22	1
2	UL 1007	Brown	500	AWG 22	1
3	UL 1007	Black	400	AWG 22	1
4	UL 1007	Red	530	AWG 22	1
5	UL 1007	Yellow	500	AWG 22	1
6	UL 1007	Brown	850	AWG 22	1

No.	Manuf	Part No.	Type	QTY.
A	Stocko	MKF 13265-6-0-505	5 way Connector	1
B	JST	CVDGF1.25-5 Red	Female Bullet Crimp Red	1
C	Binder	99 0608 00 03	Binder678 Series Connector Socket	1
D	-	-	Stripped 5mm	1
E	JST	FLVDDF1.25-187A-5(SXLF)	Insulated crimp 4.75x0.5mm 22-16 AWG	1

Marco Beverage Systems

Description: DIN HARNESS Kit

Model: Mix UC3 UC8

Part No: 1500145

Date 13/07/19

Details

Drawn BB

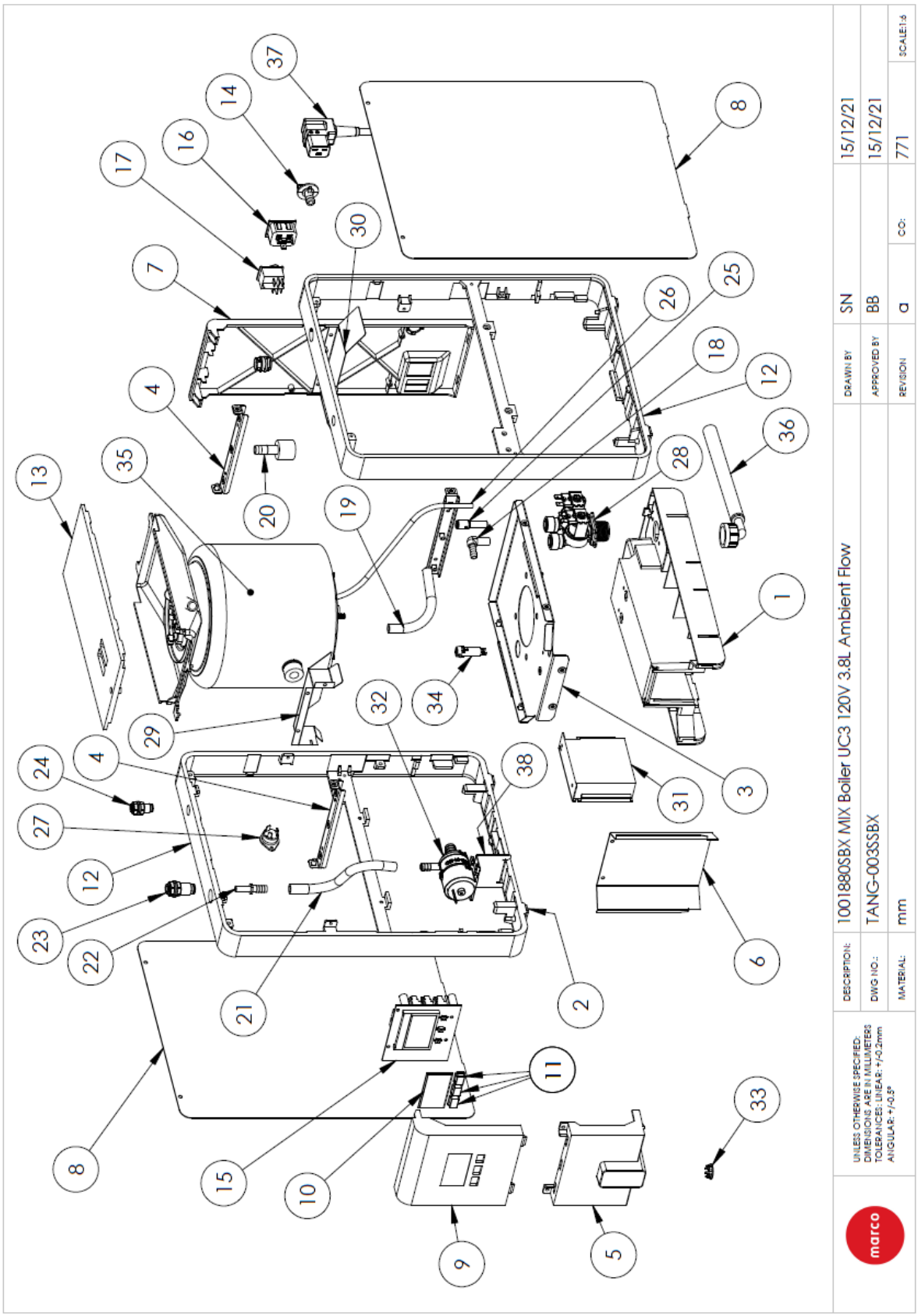
Approv

Rev A

CD: 511

11. PART DIAGRAMS & LISTS

11.1. Mix UC3 parts



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1860324	Mix Base - no Filter	1
2	1860307	Mix Rubber Foot	4
3	1860316	Mix Tank Support Assy	1
4	1860317	Mix Brace Assy	3
5	1860341	Mix Fascia Middle UC3	1
6	1860315	Mix Cup Well - No Filter	1
7	1860309	Mix Rear Panel PB3	1
8	1860318	Mix Side Panel PB3	2
9	1860304	Mix Fascia Upper	1
10	1860306	Mix Clear Screen	1
11	1860305	Mix Button	3
12	1860340	Mix Side UC3	2
13	1860302	Mix Top Lid	1
14	1860337	Mix Drain Plug	1
15	1600391	PCB Control Mix	1
16	1501156	Socket IEC C20	1
17	1501935	Dual Pole Rocker Switch	1
18	1400772	Elbow Barbed Connector - ATEB 0605	1
19	1800630	Silicone Hose 8mmID x 12mm OD	200mm
20	1402162	Tailpiece Hose Elbow 1/4" BSP Fem x 12mm	1
21	1800630	Silicone Hose 8mmID x 12mm OD	200mm
22	1400773	Barbed Connector - ATBC 0605	1
23	1400437	Bulkhead Connector 8mm (Legris)	1
24	1400436	Bulkhead Connector 1/4" (Legris)	1
25	1401658	Reducer Connector 3/8" - 1/4" - ARD 0406	1
26	1800637	Hose LDPE - 1/4"	350mm
27	1600455	Triac ST-BTA25	1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
28	1502199	Valve Inlet Solenoid Dual 110V (1.2/3.8 l/m) - 3/8" push fit **(Serial Numbers After 0322501041)**	1
29	1502199K	Starbucks Hot-Ambient Solenoid Valve Kit 120V **(Serial Numbers 0222500721- 0222501116 & 0322500681- 0322501041)**	1
30	1860342	Mix Deflector Shield - Front	1
31	1860343	Mix Deflector Shield - Rear	1
32	1601000	Power Supply 24V Dc	1
33	1501562	Pump Muller 24V Mini	1
34	1401449	Plug Blanking Metal - 7604	1
35	1501121	Fuse Holder Snap Fit	1
36	-	Mix Vacc Tank 3L Assembly	1
36	1800693	Hose Water Inlet 9/16"-24 UNE	1
37	1501506	Power Cord IEC C19 to NEMA 5-15, 15A/125V Rating 120V	1
38	1860348	Mix Pump Support Bracket	1
43	1800541	Clip Hose Plastic 11mm Type c	1
44	1800545	Clip Hose Plastic 13mm Type E	1

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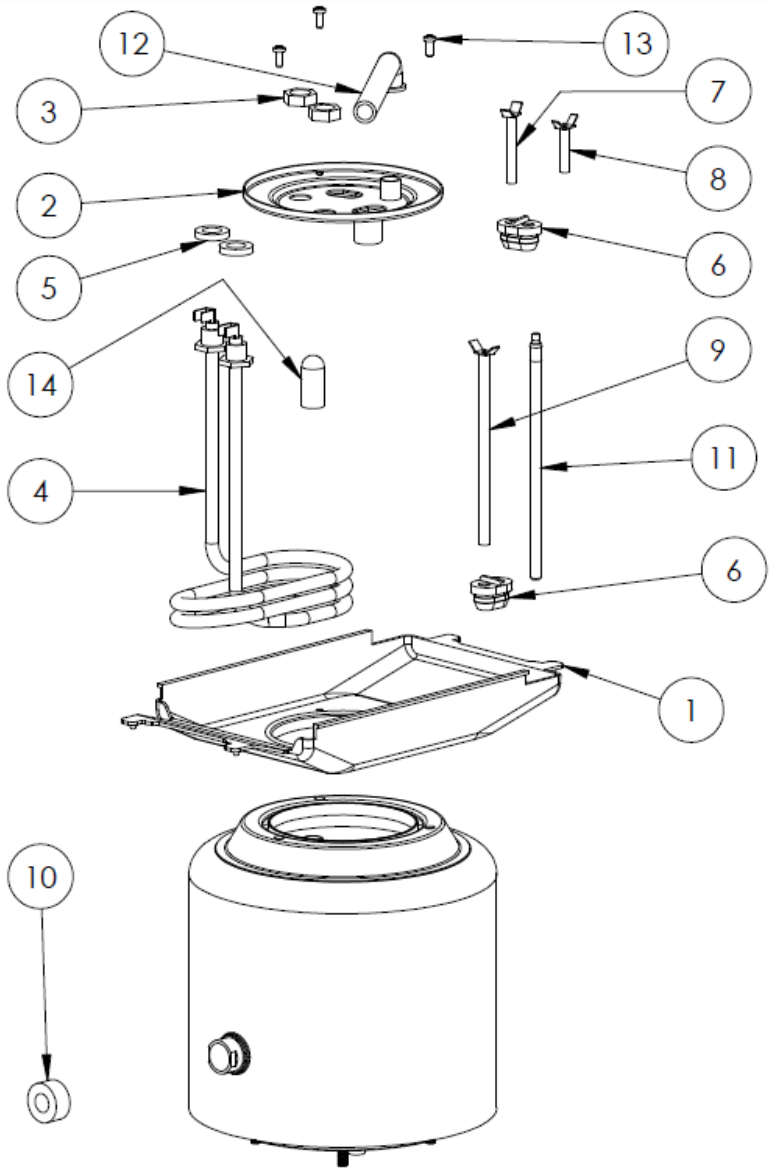
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES: LINEAR: +/-0.2mm
ANGULAR: +/-0.5°

DESCRIPTION:	1001880SBX MIX Boiler UC3 120V 3.8L Ambient Flow	DRAWN BY	SN		15/12/21	
DWG NO.:	TANG-003SSBX	APPROVED BY	BB		15/12/21	
MATERIAL:	mm	REVISION	a	CO:	771	SCALE:1:6

marco



marco	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES: LINEAR: +/-0.2mm ANGULAR: +/-0.5°	DESCRIPTION:	1001880SBX MIX Boiler UC3 120V 3.8L Ambient Flow	DRAWN BY	SN		15/12/21
		DWG NO.:	TANG-003SSBX	APPROVED BY	BB		15/12/21
		MATERIAL:	mm	REVISION	a	CO: 771	SCALE:1:6

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1860310	Mix Tank Gasket	1
2	1860319	Mix Vacuum Tank Lid	1
3	1401000	LOCKNUT 1/4" BSP BRASS	2
4	1500993	Mix Element 3L, 120V 1.5kW element	1
5	1801375	Silicone Washer 21x12x4mm	2
6	1860326	Mix Level Probe Grommet	2
7	2300455	Probe High Level - Mix	1
8	2300458	Probe Overflow - Mix	1
9	2300456	Probe Low Level 3L Tank - Mix	1
10	1502147	Solenoid Silicone Dispense Mount	1
11	1600693	Thermistor Assembly Mix 3L	1
12	1800695	Hose Vent Mix UC	1
13	1401760	Screw M4 X 10mm Pozi Pan S/S	3
14	1800668	Silicone Closure	1

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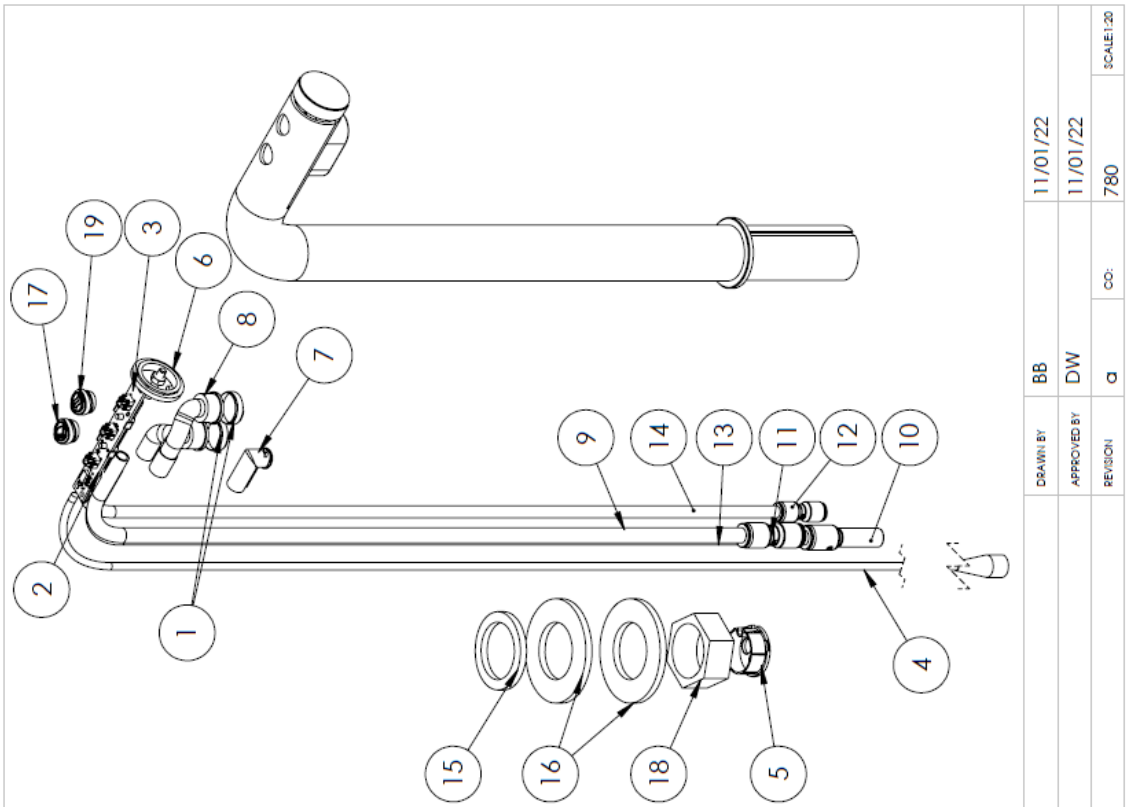
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES: LINEAR: +/-0.2mm
ANGULAR: +/-0.5°

DESCRIPTION:	1001880SBX MIX Boiler UC3 120V 3.8L Ambient Flow	DRAWN BY	SN		15/12/21	
DWG NO.:	TANG-003SSBX	APPROVED BY	BB		15/12/21	
MATERIAL:	mm	REVISION	a	CO:	771	SCALE:1:6

marco

11.2. Mix Font – 2 Button



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	2100011	Flow Straightner Mix Font	2
2	1600394	FRIIA 2 Button PCB	1
3	1860357	Mix Font PCB Mount	1
4	1501175	Harness Mix Font	1
5	1860356	Mix Font Base Cap	1
6	1860358	Mix Font LED Ring	1
7	1860360	Mix Font Vent Outlet	1
8	1860863	FRIIA Font Dispense Hose	1
9	1860386	FRIIA Font Hot Water Pipe	1
10	1401659	Reducer Connector 8mm - 10mm	1
11	1400819	Straight Union 8mm - 8mm	1
12	1400818	Straight Union 1/4" - 1/4"	1
13	1860388	FRIIA Font Vent Pipe	1
14	1860387	FRIIA Font Cold Water Pipe	1
15	1402398	Washer S/S 31x42x4mm	1
16	1402399	Washer S/S 31x56x4mm	2
17	1860404	FRIIA Ambient Button	1
18	1860411	Mix Font Clamping Nut	1
19	1860404	FRIIA Hot Button	1

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UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES: LINEAR: +/-0.2mm
ANGULAR: +/-0.5°

DESCRIPTION: Friia Font - 2 button HCS 305mm
DWG NO.: 1000884
MATERIAL: mm

DRAWN BY: BB — 11/01/22
APPROVED BY: DW — 11/01/22
REVISION: a
QO: 780
SCALE 1:20

12. 1502199K Starbucks Hot-Ambient Solenoid Valve Kit 120V

Introduction

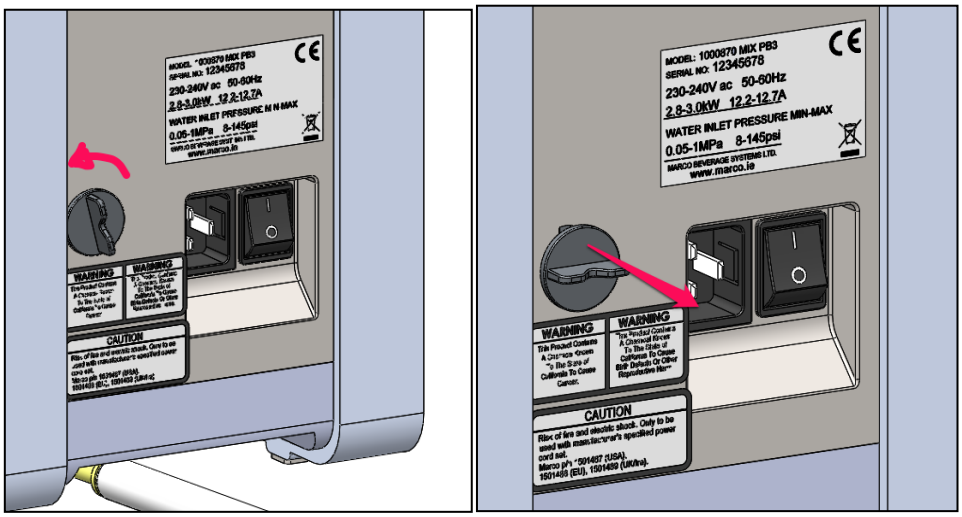
This spare parts kit outlines the steps required to replace and install the inlet water solenoid valve on a 1001880SBX -MIX Boiler UC3 120V 3.8L Ambient Flow for machines with the serial number range below.

PN	S/N	Qty.
5000884SBX	0222500721- 0222501116	396
5000884SBX	0322500681- 0322501041	361

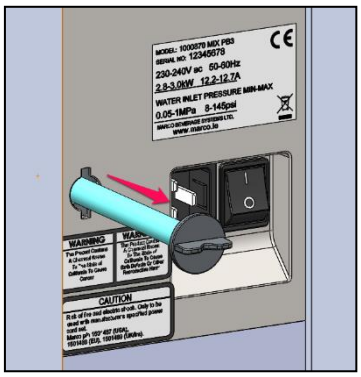
Instructions

Isolate and drain the machine

1. Turn off machine and disconnect from mains power.
2. Isolate and disconnect the mains water supply.
3. Allow to cool sufficiently to avoid burn risk.
4. Place machine so that the rear of the machine is located next to a sink or a bucket large enough to hold the full contents of the tank. Unclip drain hose plug from rear panel by rotating anti-clockwise 90°.



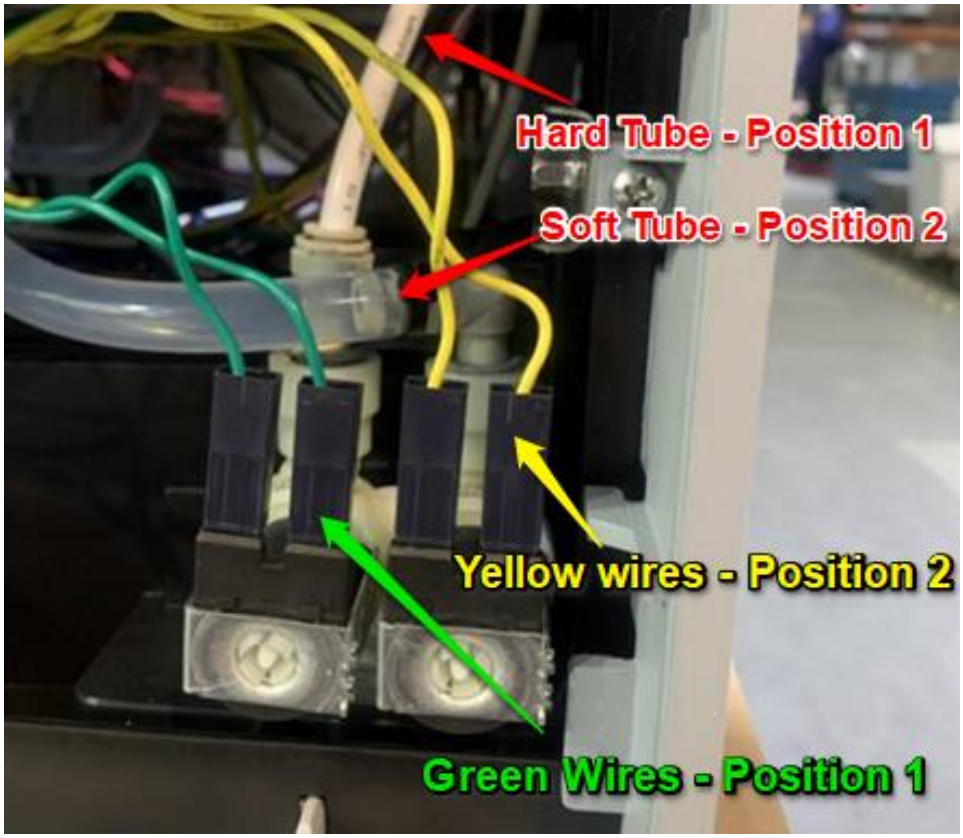
5. Gently pull silicone hose from the inside of the machine.



6. Remove drain plug from the end of the silicone hose and empty into sink or bucket.
7. Replace drain plug fully into silicone hose and push silicone hose gently back into the machine.
8. Re-clip the drain plug to the rear plastic enclosure panel by rotating 90^{o} clockwise.

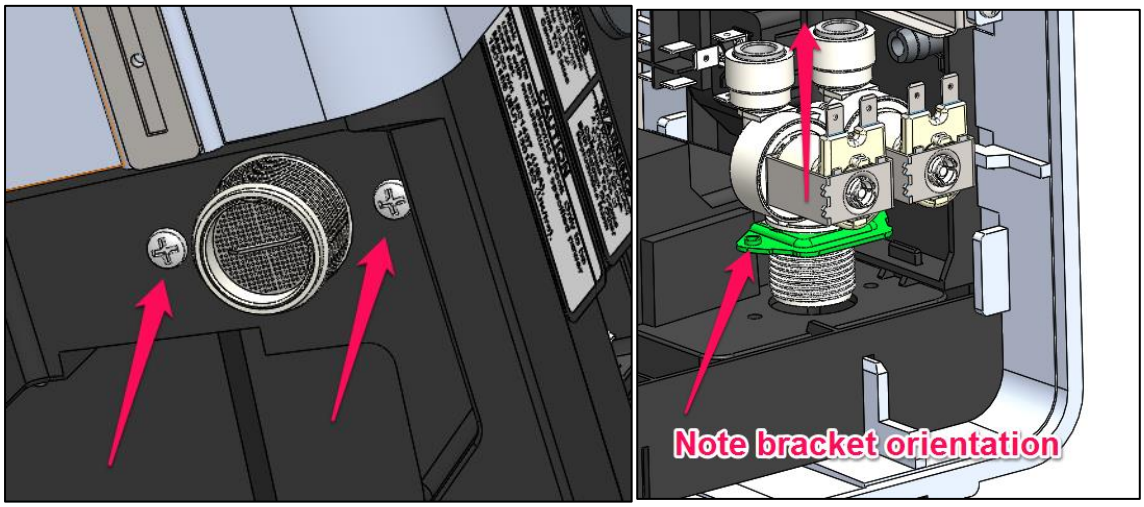
Remove the solenoid

1. Remove right hand side panel, note the position of the wiring and tubes on the solenoid. (When installing the new solenoid these will be reversed)



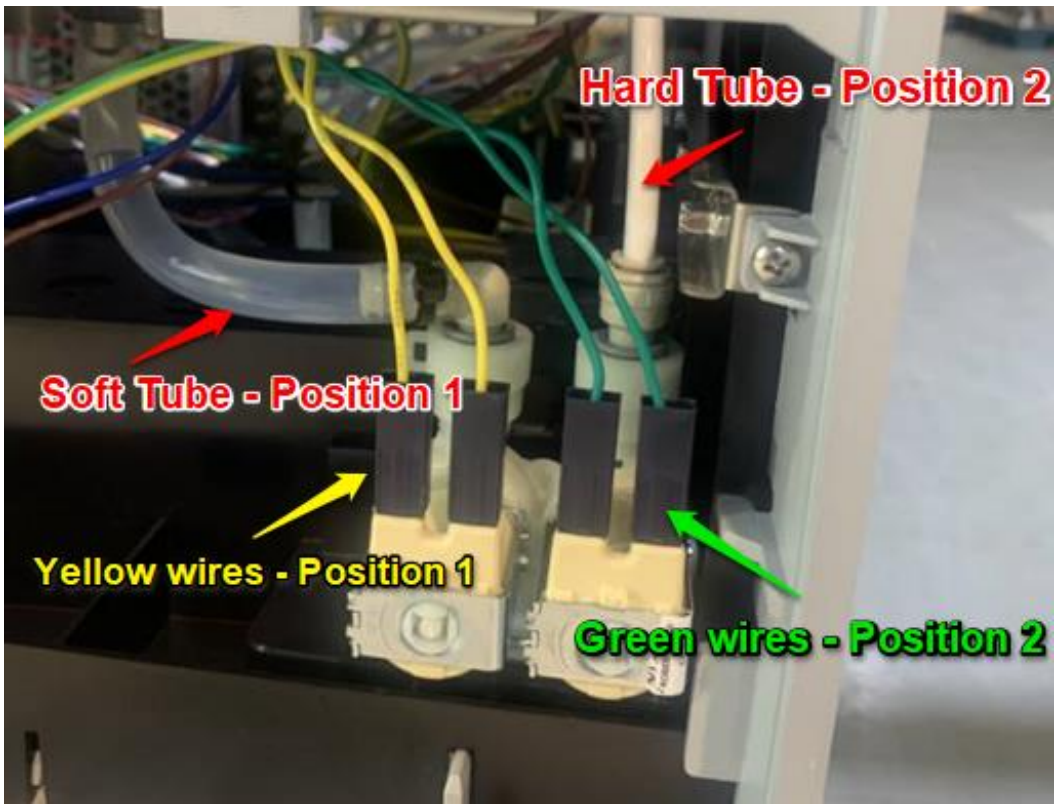
2. Disconnect all wires and hoses to the inlet solenoid.

3. Remove two solenoid retaining screws located on the base of the machine.
4. Remove the solenoid by pulling upwards (**NOTE**: if replacing solenoid, observe the orientation of the mounting bracket of the solenoid being removed. If orientation is NOT correct the solenoid will not fit)



Replace the solenoid with 1602199K

1. Mount the solenoid into the machine (reverse the above procedure) **do not connect the wires and tubes at this point.**
2. To install the wires and tubes please follow the image below, this is the reverse location of how it was previously installed.



3. Replace the side panel and install the machine following the installation instructions.

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