Mavam Espresso LLC

UCEM Install Guide V1.1

Install Guidelines

The Mavam Espresso Install checklist with the full requirements can be found here.

The following slides are intended to offer guidance for the installation process once the site has been prepared. These slides are intended to be used by certified, trained, professional technicians only.

Utilities

Electrical

- 220 Volt
- 30 Amp
- RL-30 Outlet
- Within 5ft or 1.5m of boiler box
- The L6-30 plug needed is not included with the machine

Plumbing

Water Supply

- Cold water
- Filtered water that meets Mavam water specs as found on the install checklist
- ⅜” angle stop within 4ft or 1.5m of boiler box placement

Drain

- Within 4’ of user interface and boiler box placement
- P-Trap
- Air Gap fitting on the top of the P-Trap to facilitate affixing flexible drain line from interface and drain line from expansion valves on the back of the boiler box

Preface

Every machine is extensively bench tested and calibrated before it leaves Mavam so there should not be any issues when installing the machine. That being said, there are occasionally issues that do occur during shipping. Please check the machine carefully when it arrives and once the install is complete to ensure there are no leaks and the machine will serve for many years to come.

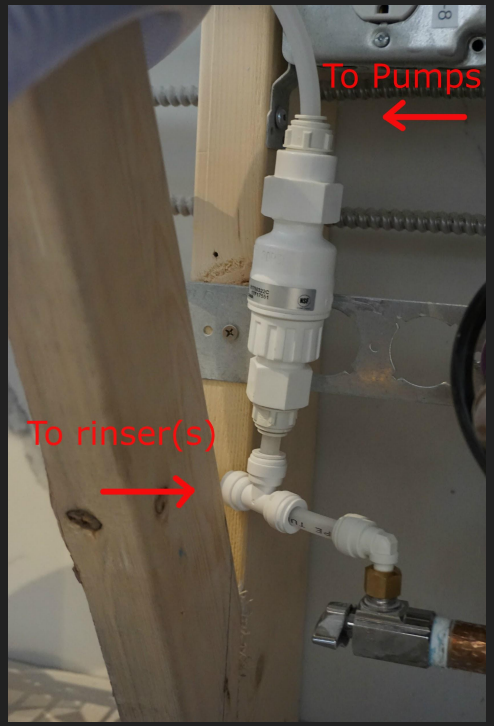
To begin installation we recommend *not* installing the user interface until the it's necessary. Leaving the interface out allows more room to work and more light to work with, leading to a quicker and easier install.

We begin by installing the water supply, then pumps and motors, then the boiler box and finally the user interface. Once the machine is fully installed it is powered up and heated with the top of the boiler box off to confirm there are no leaks. Once heated the boiler box is closed up, the machine is function tested and ready to work.

Installing water lines

The water supply for a Mavam espresso machine is split into two seperate feeds- one for the rinser(s) in the drain tray and one water supply line for the pumps. The feed line for the pumps gets a 30psi pressure regulator installed inline before the feed reaches either of the pumps.

We generally “tee off” the water line shortly after the angle stop and then run the two supply lines separately, and most directly, from there.



Plumbing in Pumps

The pumps should be placed in the general area of where the boiler box

After the water regulator is installed, the water line is split, using the included tee fittings, to supply each of the pumps. You'll find a quick connect fitting on each pump- that's the water in.

Installing Boiler Box

Unwrap the boiler box, remove the zip ties from the electrical cords and hoses on the rear and remove the screws that hold the cover on with a 3mm Allen wrench. Locate the boiler near where it’s final destination will be but leave it pulled out so there is room to work.

Lay out the electrical lines and braided hoses from the lower rear portion of the boiler unit to where you’ve placed your pumps.

Hooking Up Pumps

You'll find the electrical connection and the water supply line from the pumps to the machines are color coded. Match up the colors on the same pump. We suggest keeping the pumps in order (from left to right) for easy troubleshooting. Group one, the leftmost group, is blue. The next will be red and if equipped, the third pump will be white.

The pumps can be mounted if preferred. We do recommend placing the pumps and then adjusting the gauges so they can be easily seen, again for troubleshooting or adjustment purposes.

Your water supply is now all set and ready for operation. Push the boiler box into place and we'll continue to the next step.

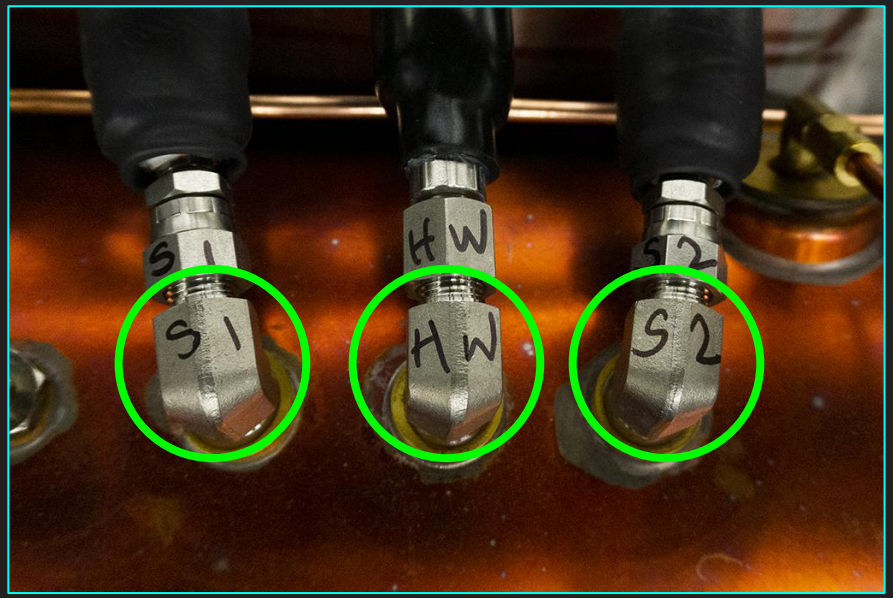
Hooking up Hoses

Next we'll hook up the hoses for the steam and hot water.

In the crate you'll find the hoses bundled. Unwrap and examine for markings. You'll find the hoses are marked S1, HW and S2.

Install through the holes in the rear of the boiler box with the wires toward the boiler. Carefully thread the hoses onto the corresponding fittings and tighten until they are stop at hand tight. Tighten about an ⅛ of a turn more and that's good.

We'll finish attaching those once the UI is dropped in.

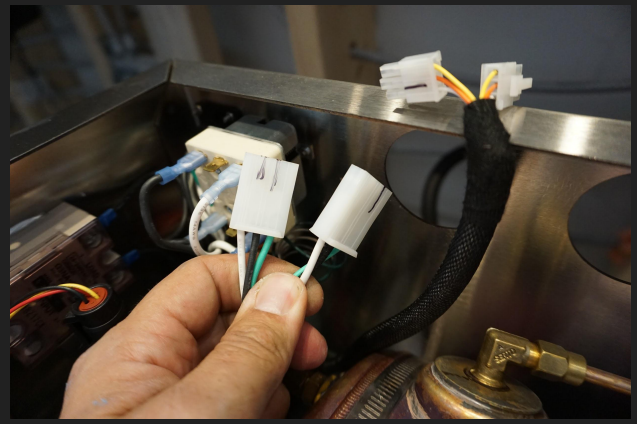


Hooking up Hoses

Now hook up the electrical connections from the hoses to the wiring harness. You may find the harness has fallen down between the boiler and the side of the box. Pull those into place and identify which connections go to which hose. Note- there are two connections per hose. The smaller of the two is the RTD and the larger connection is the high voltage for the heated hose.

NOTE- the hot water hose is not heated and there are no connections for it.

After the connections are made tuck the harness off to the left side of the boiler.



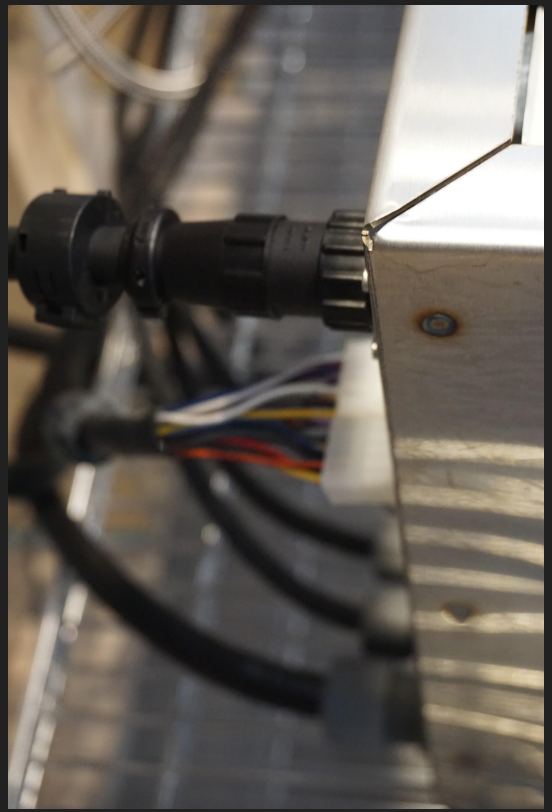
Interconnection Cables

Now install your high and low voltage interconnection cables.

The low voltage cable is not directional. Attach to the Molex connector on the rear and be sure it clips and locks onto the boiler box.

The high voltage cable is directional. Be sure to put the side of the connector with the pins onto the boiler box. The connector also has be installed in the correct timing. Once the cable is timed correctly, twist the locking collar.

Place both cables off to the side of the boiler to make it easy to hook them to the UI once it is placed in the counter.

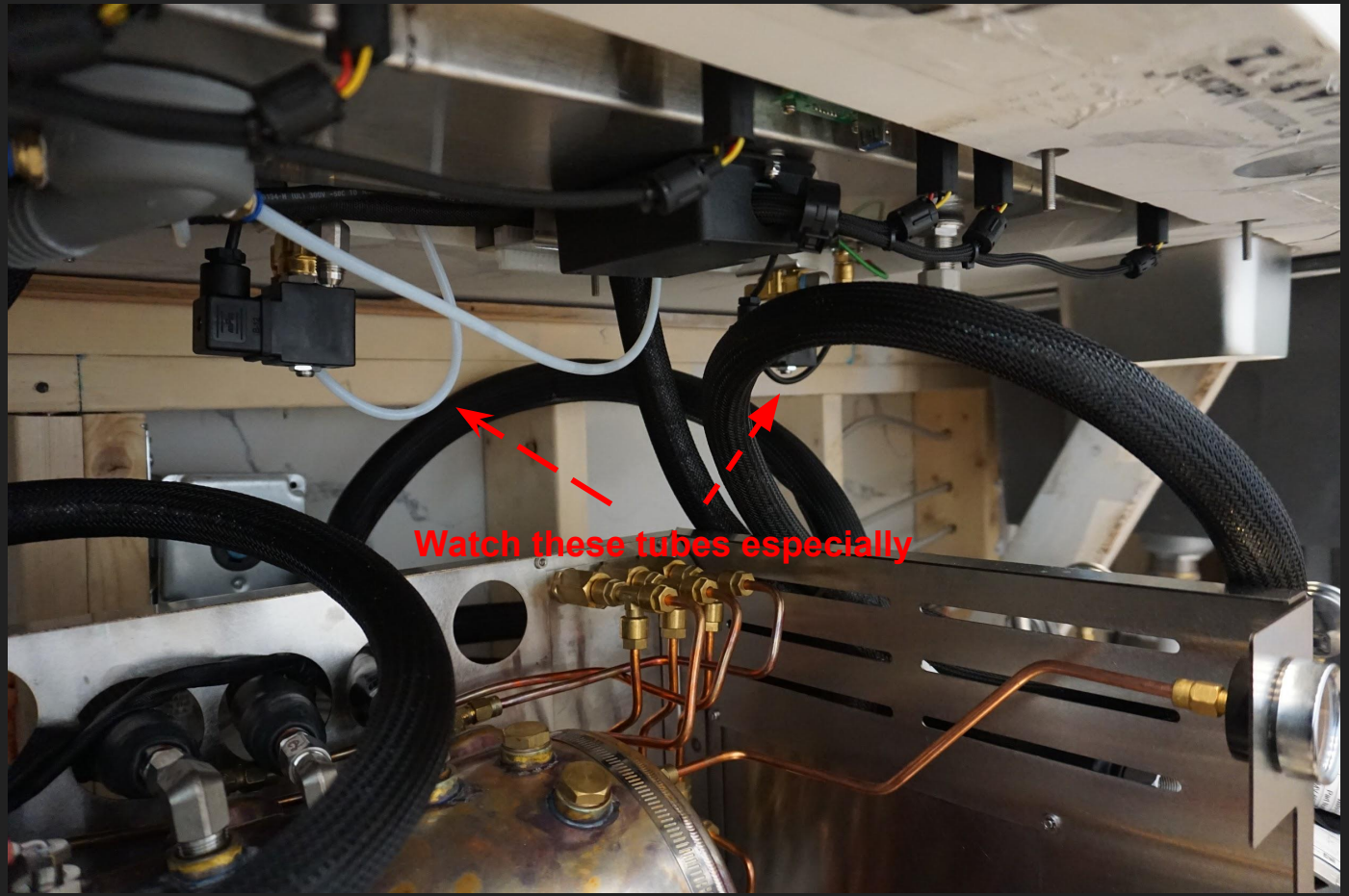


UI Installation

Now we'll install the UI in the counter top.

The UI ships in a cradle. Remove the cradle from the crate with the attached handles. Note that the UI is heavier on the side with the groups, so when lifting it out of the crate it's best to put a hand on the groups to help keep it balanced.

Lift the UI from the cradle by lifting it from the group heads. (Note the brew hoses are attached and will dangle as you lift the UI from the cradle.) Place the UI through the countertop being careful not to pinch any of the tubes or hoses as you lower the UI into place. Be especially careful of the back side, under the groups.


Watch these tubes especially

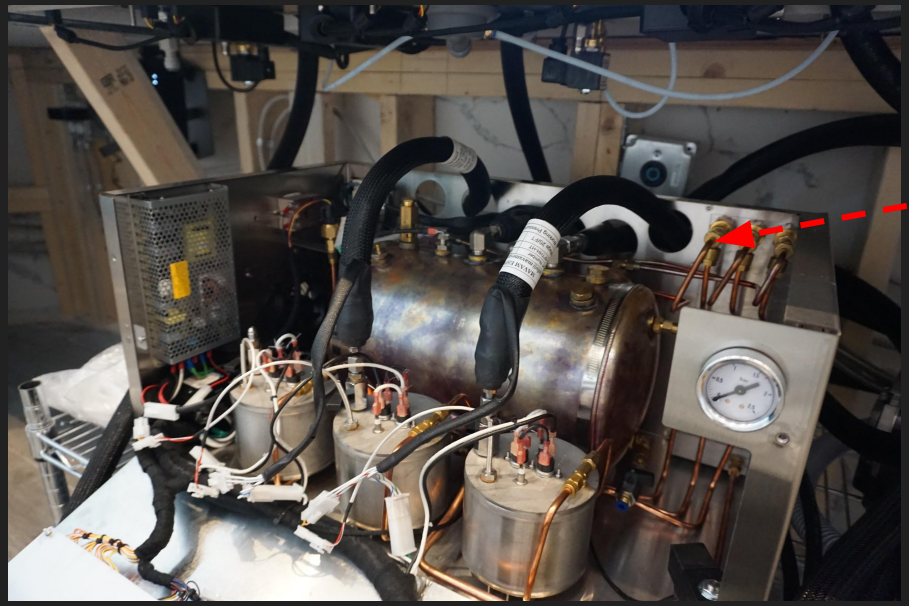
Brew Hoses

Connect the heated lines coming from the interface onto the brew boilers inside the boiler box. Feed the lines through the back of the box and carefully attach to the shut offs on the top of the brew boilers.

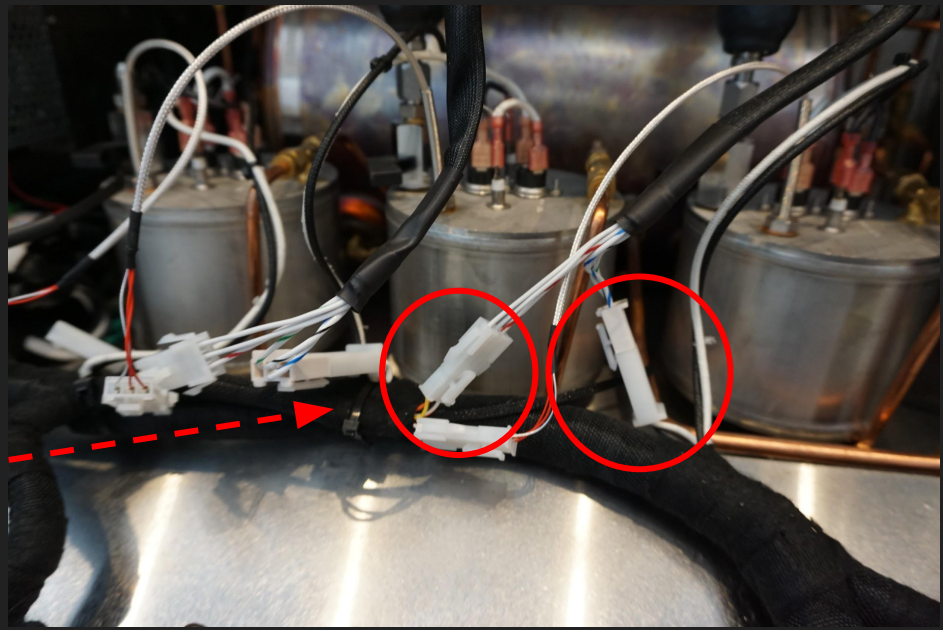
Each hose should connect to the boiler directly under the corresponding group: left hose to left boiler, center hose to center boiler and so on.

After the hoses are connected, be sure to connect the 2 electrical connections per hose to the harness. Just like the heated steam hoses there will be a small connector for the RTDs and a larger connector for the element in the hose.

Be sure the shut off is open at each brew boiler after attaching the hose.



Hoses connected to boilers- center to center, right to right.
Shut offs open.



Electrical connections made

Hoses and Cables

Attach the interconnection cables to the bottom of the interface in their respective outlets. You'll find them mounted to a bracket in the center, rear or the UI.

Now attach the steam and hot water hoses to the solenoid valves under the machine. Again, left hose to left solenoid, center to center and so on.

Drain

Run the drain hose from the drain elbow to your drain. Be sure to use the included hose clamp to keep the drain hose in place.

Rinser Installation

Now we'll plumb in the rinsers.

Run a poly line from the water supply without the pressure regulator. Run the line up to the interface and as snug as possible to the underside of the counter.

Install the included 90° fitting onto the bottom of the rinser and then install the tube into that 90.

On three group machines you'll use the tee fittings to supply the water to both rinser valves.

Start Up

Turn the water on at the wall and check for leaks.

Install the appropriate cord cap onto the power cord. Plug into outlet with a 30 amp breaker. Turn on the power switch on the left side of the boiler box.

The machine will turn on and the display should light up. The board will initialize and beep, and the machine should begin filling with water. Once the boiler is full, the blue LED on the top right side of the LED bank should turn on and the machine should begin to heat.

Once the machine is done heating again check for leaks, paying close attention to the steam and hot water hose connections.

All machines are calibrated at the factory and set for 200℉ for machines shipping to the US or 93℃ for machines shipped internationally

Refer to the User Manual for operating instructions.