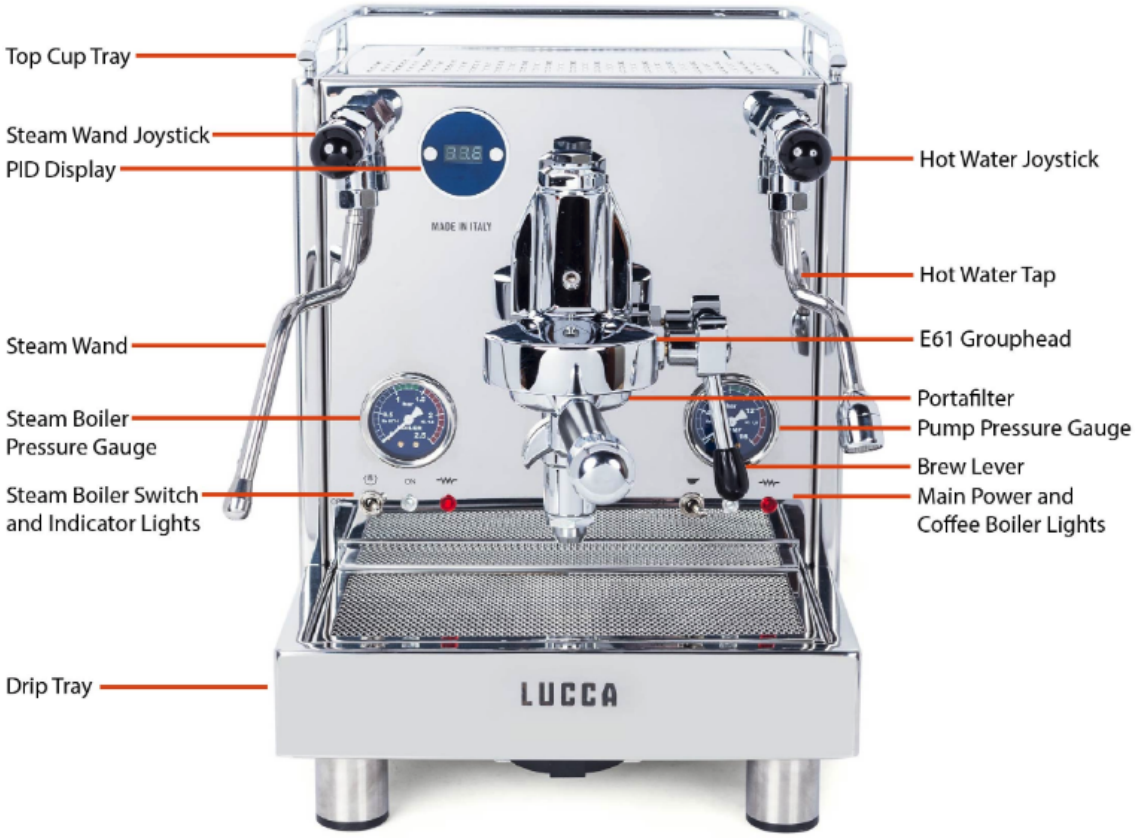
Machine Diagram



Included Accessories

- Double spouted commercial portafilter
- Bottomless commercial portafilter
- Double basket
- Triple basket
- Blind basket
- Cleaning brush
- Direct plumb kit
- 15 amp converter cord

Water

Espresso machines have specific requirements when it comes to water. There are two primary considerations: filtration and hardness.

Filtration gets rid of tiny particles, such as sand or rust, in your water. If these particles were allowed to enter your machine they could cause all manner of trouble, particularly by clogging the precise valves and mechanisms in your espresso machine. Almost any water filter will do the job, whether it's the one built into your fridge, a Brita, or a whole house filter. Ensuring that this filter is replaced in proper time will be important to ensure machine health.

Water hardness is equally important. First, use the water hardness test strips included with your machine to test the water you plan to use with your machine. Ideally, we want a hardness of between 35-85 ppm (parts per million). Hardness refers to the dissolved solids in your water. Common dissolved solids are things like magnesium, calcium, and various forms of sodium. These dissolved solids are what make water, and therefore espresso, taste good. But too much will result in scale buildup in your machine. Scale can cause irreparable damage to your machine by clogging and forming a mineralized layer over the surface of metal parts. The process of descaling is even more damaging, eating away at the machine's metal internals. Luckily, scale can be entirely avoided by keeping your water hardness within the recommended TDS range of 35-85 ppm.

There are numerous methods to soften your water should its dissolved solid content be too high.

A note on RO (Reverse Osmosis) or Distilled Water

Taste aside, espresso machines require some mineral content in order to function properly. Their steam boiler fill probes, in particular, use the conductivity of water to detect the water level. With no dissolved solids, they'll overfill, giving you water instead of steam. You **must** add some mineral content back in. Our recommendation is Third Wave Water packets which are designed to offer ideal flavor and to be safe for your machine.

Reservoir Solutions

Our first recommendation is an in-reservoir water softening pouch. They're affordable, last 4-6 months, and are very effective. Using RO water purchased by the gallon in combination with Third Wave Water packets is another great option.

Direct Plumb Solutions

For machines that are plumbed in, we recommend our Water Softening and Filtration kit. It includes everything you'll need to ensure the water is safe for your machine and delivers the best taste for your espresso.

No matter what solution you pick we recommend testing the water coming from your machine's group head every few months. City water hardness changes seasonally and softening systems wear out. Routine testing will ensure you keep your machine safe.

First time setup with reservoir

If you are using the machine with its internal reservoir you may simply fill the reservoir with your filtered and softened water, leaving a few inches at the top to prevent spillage. The reservoir is removable. Ensure that you do not spill water on top of the machine when filling, as this may cause electrical damage.

First time setup with water line

Your LUCCA M58 comes with a braided water line that connects to the water inlet on the bottom of the machine and has a 3/8ths OD push connect fitting on the other end to direct connect to a plastic water line. Once plumbed in flip the black toggle switch that is underneath the machine on the right side of the unit. If you plan on plumbing in your own water kit to the braided line that doesn't use a 3/8ths OD plastic tubing you'll need to find an adapter for the braided line as it has a 3/8ths BSPT threaded female connection. Standard pipe thread in North America is NPT thread.

Programming PID and Settings

Note - The PID controller and heating lights will turn off when the reservoir is empty.

There are two programming modes: one while the machine is on, and one while the machine is off:

While the machine is on: press both power buttons at the same time to enter temperature adjustment of the coffee and steam boiler. Setting T1 is for the coffee boiler, setting T2 is for the steam boiler. The left button will cycle from T1 - T2 and then back to standard machine operation. The right button will enter the settings value, display its' current value and allow you to change it. If you press the right button while on T1 "202" (coffee boiler temperature) will display for a couple of seconds. While the value is displayed the left button will drop the value 1 and the right button will raise the value 1.

While the machine is off: hold down the left and right PID buttons and turn on the machine. Hold down the buttons until F. 01 appears. From here the same rules apply for the standard operation programming mode, you can cycle through the menu with the left button and access the settings value with the right button. We highly recommend leaving these value alone as our technicians have set them upon bench testing.

Advanced PID Settings

Warning - This section allows the user to change the machine from Fahrenheit to Celsius mode as well as other advanced settings that can greatly affect the performance of the machine.

These settings have been calibrated using specialized test equipment and should not be changed unless the user has a thorough understanding of how a PID controller operates.

Parameter		Setting		Description
F.01		F		Fahrenheit Mode
		C		Celsius Mode
F.02		4		Coffee Priority Mode(Default)
		6		Both Boilers Heating
P 1&2		1.5		Proportional
I1	I2	0.05	0.0	Integral
D 1&2		1.5		Derivative
B1	B2	10	6	
T1		203°		Coffee Boiler Temperature
T2		255°		Steam Boiler Temperature
E1		27°		Coffee Boiler Offset
E2		0°		Steam Boiler Offset

To get into the advanced programming mode, with the machine turned off hold down both left/right buttons simultaneously and then turn the machine on. Keep holding the left/right buttons until the display reads F.01 and then release the buttons. Use the left button to cycle through parameters and then use the right button to select a parameter to change. Then use the left/right button to change the selected parameter.

To save the new changes turn the machine off and then back on again.

F.02 Mode Setting - By default the F.02 setting has been set to 4 (15 amp mode) to give priority to the coffee boiler. The setting can also be set to 6 (20 amp mode) to give power to both boilers.* This can be helpful if you are steaming larger quantities of milk and desire more steam capacity. If you change the F.02 setting to 6 to power to both boilers, then both power switches must be on for the machine to operate or neither boiler will heat up.

*Note: 20 amp mode is a setting only available on the V1 M58 models, the V2 M58 does not have 20 amp capability, therefore "6" will not appear in the F.02 settings list.

E1/E2 Offset Setting - The coffee boiler offset setting has been calibrated using a special Scace device and should not be changed. The steam boiler offset setting is set to 0° by default. It can be changed up to 5° to increase the steam pressure, but the pressure may vary at higher elevations so make sure it does not exceed 2 bars of pressure or damage may occur.