EspressoMate EM2 and EM4 Systems

Attn: Installer, Important Safety Precautions: Read before attempting installation!!!! Do not discard these instructions, they contain important operating instructions. Please give to user upon completion of installation!

Do not expose fittings and valves to excessive heat when connecting water supplies. Seals and gaskets could be damaged by high heat due to soldering with a torch.

It is recommended that water hammer arrestors (# WH-500) are used when plumbing system experiences water hammer.

MAXIMUM WATER PRESSURE FOR THE SYSTEM IS 125 PSI.
MAXIMUM WATER TEMPERATURE IS 100° F.

Do not expose filter cartridge to solvents, harsh cleaning agents or chemicals other than water and a mild dishwashing detergent. The plastic will weaken and crack as a result.

DO NOT USE WRENCH TO TIGHTEN FILTER CARTRIDGE AFTER FILTER CHANGE. IF LEAK OCCURS REPLACE O-RING. WRENCH TIGHTENING CARTRIDGE MAY CAUSE HEAD TO STRESS CRACK.

DO NOT INSTALL FILTER SYSTEMS ABOVE ELECTRICAL EQUIPMENT.

DO NOT INSTALL ESPRESSOMATE WHERE FILTERS ARE NOT ACCESSIBLE OR EXPOSED TO HEAT.

DO NOT OVERTIGHTEN FITTINGS INTO PLASTIC HOUSINGS, FITTINGS OR MANIFOLDS.

For use on potable water supplies only! The EspressoMate is not intended for use on water that is microbiologically unsafe.

Specifications:
Inlet/Outlet Connections: 3/8" female NPT.
Rated Capacity: EM2-1160 grains EM4-2560 grains.
Overall Dimensions: EM4-17.5" wide x 15.4" high x 3.2" deep.
EM2-6"wide x 15.4"high x 3.2"deep.

Before Installation:
1. Flush water supply lines to avoid plugging filters with installation debris and resin from solder joints.
2. Check water pressure for requirements of equipment that uses water.
3. Determine site of installation, space required, and mounting hardware required. Wall must be structurally sound for mounting water system. Mount into studs whenever possible. Allow enough clearance below filter cartridges for changing. EspressoMate requires at least 3 inches.
4. Use Teflon tape for sealing pipe joints.
5. Read through instructions before installing water system.
6. Obtain appropriate adapters to go from 3/8" fpt to supply and equipment.
7. Use hardness test strips included with the EspressoMate to test the hardness of the water before and after the EspressoMate and document below.

Installation Date:_____

Installed By:_____

Feed Water Hardness:_____ Treated Water Hardness:_____

Projected Filter Change Date:_____

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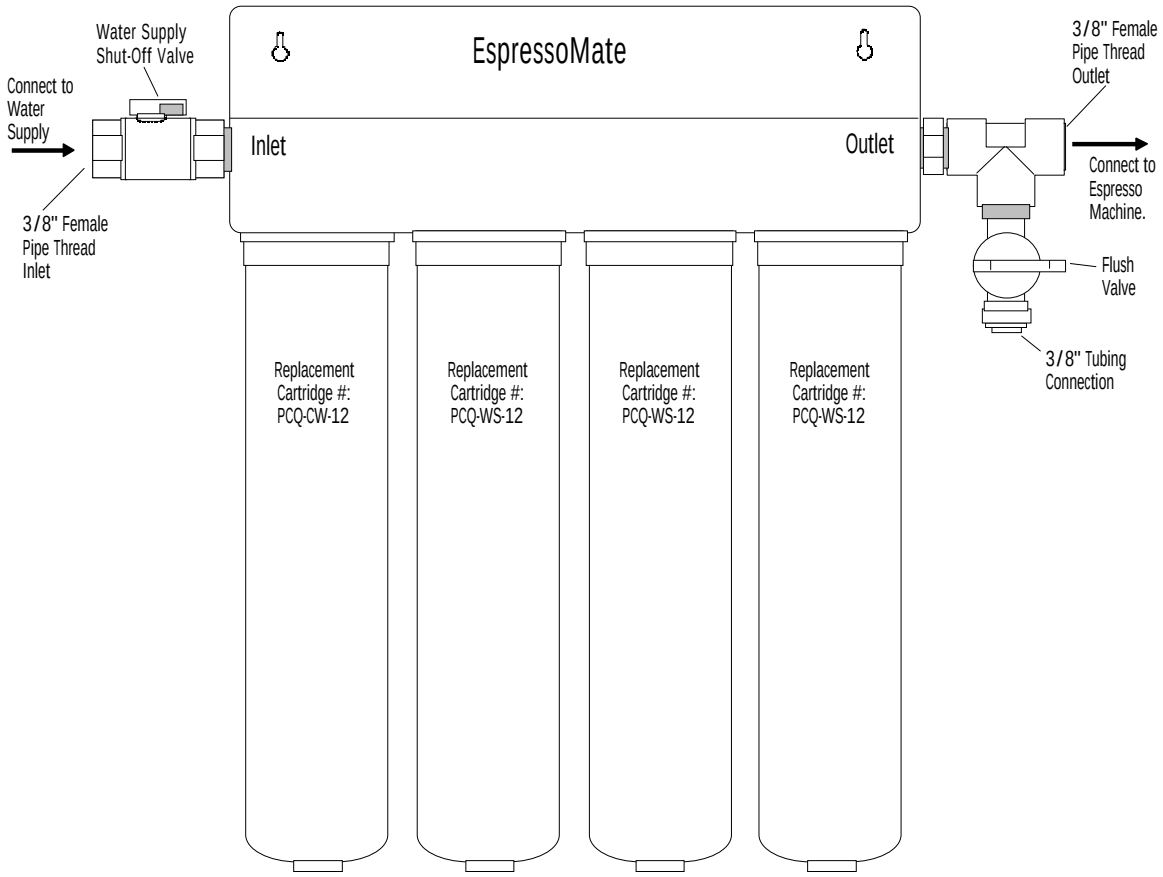
Hardness conversion: 1 grain per gallon equals 17.1 ppm or mg/l. e.g. 10 grains of hardness is equal to 171 mg/l of hardness.

The formula to determine cartridge life span is:

(Grains capacity of filter/grains per gallon) X (ounces per gallon/ounces per serving)

An Example:
If the EspressoMate EM2 was installed in a system with feedwater that contains 10 grains of hardness and the serving size is 2 ounces, the expected life span would be: 1160 grains /10 grains * 128 ozs./2 ozs. = 7,424 servings. The EM4 would have hardness removal capacity for 16,384 servings on the same water.

Caution: If the espresso machine has an automatic cleaning cycle the amount of water used daily must be subtracted from the total gallon throughput. In addition, these figures are the calculated capacity. In cases where the water has above normal sediment or chlorine, the rated capacity of the cartridge may be reduced. To achieve the maximum protection for the equipment it is recommended that the hardness be monitored until a standard can be established.



Installation Instructions:

1. Unpack the water system and determine the appropriate location as close to the espresso machine as possible.
2. Secure the manifold to the wall utilizing the appropriate anchors.
3. Utilizing unions or quick-disconnect fittings; e.g. flare, compression or push-in tubing fittings, connect water supply to 3/8" female pipe thread on inlet ball valve. When installing fittings into inlet ball valve, use a back-up wrench to avoid turning the ball valve when tightening the adapter fitting. Close inlet ball valve.

CAUTION: DO NOT SWEAT COPPER INTO ADAPTER ATTACHED TO BALL VALVE, THE HEAT WILL DESTROY THE SEATS & SEALS IN THE VALVE. NOTE: BEFORE HARD PLUMBING OUTLET LINE TO EQUIPMENT IT IS NECESSARY TO FLUSH THE FILTER (See step 6).

4. Utilizing unions or quick-disconnect fittings, connect to 3/8" fpt outlet on right side of manifold. Do not overtighten or cross-thread.
5. Connect the outlet line to the equipment. (Do not start equipment or open inlet valve at this time, flush filters first.)

6. All filters containing carbon need to be flushed before use. A small amount of carbon fines are rubbed off during shipping and handling, and the first water out of the system will be tinted black. This is normal and will not last longer than a couple of gallons of water throughput. ALWAYS FLUSH THE FILTERS AFTER INSTALLATION AND DISCARD WATER INTO DRAIN OR BUCKET. Flushing may be accomplished by routing a line from the flush valve outlet to a drain or bucket and opening the inlet ball valve and the flush valve simultaneously, allowing several gallons of water to flow through the filters. Close flush valve after water runs clear.
7. Inspect filter system and connections for leaks with inlet ball valve open.
8. Initiate equipment and purge air from system. Check for leaks in the entire line and check water pressure.
9. Document installation date; check water hardness of water supply and filtered water. Calculate projected filter cartridge change date and document.

Filter Cartridge Changing Procedure:

Important Notes: When changing cartridges it is recommended that hands are washed and/or gloves are used to prevent contamination of new cartridges. Never leave replacement cartridges unsealed. DO NOT use petroleum jelly to lubricate o-rings, this practice would invite bacterial contamination. Never re-use filter cartridges that have been previously used in a EspressoMate. Hand-Tighten cartridges only, never use a tool to tighten. If leaks persist, o-ring replacement may be necessary.

1. Shut off power to espresso machine fed by the filter system.
2. Shut off "Water Supply Shut-Off Valve" on the inlet to the EspressoMate. Open flush valve to relieve pressure.
3. Unscrew the first cartridge (the cartridge closest to the inlet valve on the left) by turning to the left until free. Pull cartridge downward and out of the head.
4. Replace the first cartridge with a new cartridge marked PCQ-CW-12. This is the prefilter and should always be in this position. Insert cartridge into the head. Turn cartridge to the right until rotation stops. Hand-Tighten Only.
5. Unscrew the remaining three cartridges by turning to the left until free. Pull cartridge downward and out of the head. All three of these cartridges are the same.
6. Insert the remaining new cartridges marked PCQ-WS-12 into the heads in the manifold. Turn the cartridges to the right until rotation stops. Hand-Tighten Only, do not use any kind of wrench to tighten cartridges.
7. With "Flush Valve" fully open, open "Water Supply Shut-Off Valve". Flush cartridges by running water into bucket or drain until water runs clear. Close "Flush Valve".
8. Turn on power to espresso machine.
9. Purge air from system and check for leaks.

Hardness Testing:

For your convenience we have included two hardness test strips in this installation kit for determining the hardness of your feedwater. Due to the fact that tap water varies dramatically even within the same city we strongly recommend that you test the hardness and calculate the capacity of the system. This will provide you with the maximum protection for your espresso equipment. The test procedure is very simple and will only take a few seconds to complete.

Test Procedure:

1. Flush water from the supply line that you will be using to supply the EspressoMate for several minutes.
2. Fill a clean cup with the water from the line after flushing.
3. Dip the test strip into the water sample for one (1) second, remove and immediately match with the closest color on the strip package for total hardness (TH) as parts per million (ppm) or grains per gallon (gpg). Color is stable for one (1) minute.
4. After installation of the EspressoMate and the unit has been flushed, check the hardness of the treated water using the same procedure in steps 1-3. It should read zero.

Doing this test will confirm that the EspressoMate is performing and will provide you with the peace of mind that your espresso equipment is protected from hardness scale.