ESI Espresso Services Inc.

ESPRESSO MACHINE PRE-INSTALLATION GUIDELINES- MACHINE UTILITY NEEDS

ELECTRICAL

Your espresso machine is powered by a high wattage heating element and internal electrical components. The combined demands of the internal electrical components define the operating capacity of the machine. Machines with high wattage requirements must have a dedicated 208-240 volt (The exact voltage can vary) single phase electrical circuit (+/- 5% to National Electrical Code Standards) in order to properly operate the machine. Nearly all manufacturers offer a small range of traditional one group machines, which operate on a standard 120 volt electrical circuit. In all cases, without exception, any form of electrical work to meet the requirements of a espresso machine is the responsibility of the customer. Espresso equipment sales and service companies typically are neither licensed nor bonded to do any form of electrical circuit work.

VOLTAGE/AMPERAGE LEVEL

The voltage and wattage requirements are listed in the "specifications" section for each model on the unit itself. If in question contact your supplier for the recommended electrical outlet for your machine. The electrical circuit must have the capacity necessary to operate the machine at peak load (80% of Capacity to National Electrical Code Standards).

LOCATION OF ELECTRICAL OUTLET

You should take time to plan the physical location of your electrical outlet to supply electricity for your machine. This outlet should be within three feet of the machine's final location, so plan your counter layout accordingly. You may also choose to locate the outlet above or below the countertop level depending on the location and the amount of space you have. Should you choose to locate it below the countertop (which is very typical and recommended), a hole needs to be made in your countertop prior to installation for the power cord to pass through. If you have purchased a Traditional model espresso machine, you will most likely be using one or two espresso grinders alongside the espresso machine. With this, make sure you plan a 120V outlet within 3 feet of their final location as well. If you have purchased a Super-Automatic model espresso machine with the automatic milk-frother, you will probably need a counter top cooler placed immediately to the left of the espresso machine. This unit requires 120V power at a nominal amperage level, so make sure you plan a 120V outlet within 3 feet of its location as well.

PLUG/RECEPTACLE

A standard 3 prong (2 pole, 3 wire grounding) plug or receptacle is required for all 120 volt machine applications in either 15 or 20 amp configuration. Most 120 volt machines come with a plug on the machine. For 208-240 volt machines, there are several configurations and it is rare for the unit to ship with a plug attached., Therefore, it is critical that your electrician provide the appropriate receptacle and plug necessary for the amperage requirements of the circuit for the machine.

A 3 prong (2 pole, 3 wire grounding) twist-lock style plug and receptacle are most commonly used in commercial applications. Refer to National Electrical Manufacturers Association or NEMA L6-20 for 20 amp circuits, NEMA L6-30 for 30 amp circuits and NEMA L6-50 for 50 amp circuits.

The technician performing the installation will attach the plug to the end of the power cord of the machine, and then perform a voltage check prior to plugging the machine into the receptacle. DO NOT plug a 208-240 volt machine into the receptacle without first consulting a qualified technician. Voltage levels vary greatly and damage to some of the electrical components may occur if the transformer is not properly set.

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WATER SUPPLY

Your espresso machine requires a supply of fresh, clean water in order to operate and provide outstanding espresso based drinks. In most cases, this requires a direct connection to a pressurized water supply line, similar to the connection to a water faucet. In all cases, without exception, plumbing is the responsibility of you, the owner. Espresso equipment sales and service companies typically are neither licensed nor bonded to do any form of plumbing work, and our technicians are strictly instructed not to engage in plumbing work.

WATER CONNECTION

A 3/8" female fitting is required to connect to the water supply line of all espresso machines. Nearly all machines require a male standard to metric adapter 3/8" to 3/8" to make the connection from the water supply, and with some models a male 1/4" to 3/8" adapter is needed. The water supply line connection should be within 3 feet of the espresso machine. If you are using a filtering or softening system installed within 3 feet of the espresso machine the installer can connect directly to the water outlet fitting, located on the system head. This is the most commonly utilized method of installation. It is typical and recommended that the water supply line connection is beneath the counter. A hole is needed through the countertop, prior to installation, for the espresso machine water supply line to pass through. It is typical for this hole to be 2.5-3" in diameter and accommodate the water line, the drain line, and the electrical cord.

WATER SOFTENING/FILTERING

All water contains impurities such as sediment, chemicals, fluorine and chlorine that affect odor and taste, and minerals such as calcium and lime affect the relative hardness of the water. These impurities not only affect the ultimate taste of your drinks, but also pose a significant threat to the reliability and longevity of your espresso machine. For this reason, an approved water softening system is strongly recommended for the protection of your machine. To eliminate the chemicals such as chlorine and fluorine from the water, it is recommended to use an active carbonate filter integrated with your whole facility filtration system and installed before a traditional water softener, if needed. In regions where the water hardness is excessive (above 15 grains), a conventional water softener is highly recommended in place of any other water softening system. These units are available in different capacities (from 1.3 to 2.6 gal traditional and from 1.3 to 2.1 gal automatic), and offer either manual or automatic regeneration capabilities. Whatever water filtration or any other water softening system you ultimately choose, it should be in a conveniently accessible location (such as under your counter, beneath your espresso machine if possible). It is strongly recommended that your espresso machine service company manages the timing and exchanging of your water treatment so that at a minimum annual cartridge changes take place.

DRAINAGE

All espresso machines are equipped with a drain tray to collect spillage as a result of normal operation. Waste water from the tray drains into a flexible rubber hose which is routed to an appropriate drain receptacle. In all cases, without exception, any form of plumbing work to meet the requirements of a espresso machine, is the responsibility of the customer.

Espresso equipment sales and service companies typically are not licensed nor bonded to do any form of plumbing work; the technicians are instructed not to engage in any form of plumbing work. In most installations, waste water from the flexible rubber hose is directed to either a floor drain or an open drain funnel-type receptacle located directly below the espresso machine. There must be a 2" air gap between the end of the drain hose and the drain receptacle (Or as code requires).

DRAIN LOCATION

In planning the location of your espresso machine, the drain must be within 3 feet of the placement of the machine, allowing the flexible drain hose to be routed to the drain receptacle in a positive continuous downward slope (min. 1/4î per foot, or as code requires). This assures adequate flow of waste water and helps prevent drain back-ups. Typically, the drain receptacle is located beneath the countertop, requiring you to provide a hole through the countertop, prior to installation, for the drain hose to pass through.