K-3500™
SERVICE MANUAL

KEURIG COMMERCIAL

K-3500 Service Manual

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I. Terms and Abbreviations:

TERM/ABBREVIATION	DESCRIPTION
AC	Alternating electrical current
A/D	Analog to Digital conversion
Air Pump	Electrically operated pump that pressurizes the Hot Water Tank to dispense hot water through the Brew Tube to the K-Cup® Pod.
BIT	Built In Test. Hardware verification built into the brewer. Used in manufacturing and by service personnel, including KADs
Brew	The act of brewing: • User pressing a Brew Button size to start the process Then the brewer automatically: • closes the Vent Valve • starts the Air Pump • displaces the hot water through the Brew Tube and the K-Cup® Pod
Brew Cycle	The complete cycle of brewing consisting of: • Bringing the HWT water level up to the selected volume • Brewing the coffee • Purging the K-Cup® Pod • Refilling the HWT to 4oz level above the bottom of the Brew Tube • Heat the HWT to brew temp • Return to idle state (ready to brew)
Brew Tube	A tube extending down into the Hot Water Tank from the Hot Water Tank Cover to deliver the required volume of hot water for brewing
Check Valve	One way valve located up stream of the Entrance Needle used to prevent coffee grounds from backing up into the Brew Line or Hot Water Tank.
Coffee Temperature	The maximum temperature of the coffee measured in the stream of coffee exiting the K-Cup® Holder Funnel during the brew process
Cold Water Pump (CWP)	Two AC powered, self-priming, Solenoid Pumps used to draw water from the Cold Water Tank and deliver it to the Hot Water Tank
Cold Water Tank (CWT)	A tank that contains a mechanical safety float valve and holds water for the CWP to pump
Conductive Probe	Resistance sensing devices used to determine the level of water in the Hot Water Tank
Contact Time	The amount of time that the hot water is in contact with the coffee grounds. This value is physically measured during the Brew Cycle by starting when the Air Pump starts and stopping when the Cold Water Pump restarts, subtracting the fixed 4 second purge time.
Control Circuit	A system of electronic components, including the microprocessor, located on both the Main, Power, and Camera Processing Board Assembly (PCBA) used to control the functions and display of the brewer
DC	Direct Current (electrical)

De-Scale	An acid based cleansing process that dissolves mineral deposits in the Hot Water Tank, Brew Line and Vent Line
End Of Brew	The condition defined as when the water level has reached the bottom of the Brew Tube.
Entrance Needle	A stainless steel needle with multiple distribution ports that punctures the lid stock of the K-Cup® Pod and delivers the hot water to the coffee grounds
Entrance Needle Gasket	A gasket that seals the puncture in the K-Cup® Lid caused by the Entrance Needle
Exit Needle	A stainless steel needle that punctures the base of the K-Cup® PP and directs the brewed coffee from the K-Cup® Pod into the K-Cup® Funnel
Exit Needle Seal	An elastomeric bellows type seal that seals the puncture in the bottom of the K-Cup caused by the Exit Needle
Filter Tee	A fluid control fitting that contains a stainless steel mesh filter intended to protect the Vent Valve from foreign particle contamination
GMOB	Green Mountain Our Blend coffee that is used as a standard for evaluating brewer performance parameters
Hard Powered	The brewer is plugged into an electrical supply outlet
Heating Element	Immersion style Incoloy electrical resistance heater used to heat and maintain the temperature of the water in the Hot Water Tank
Hot Water Tank (**HWT**)	Collectively, two stainless steel vessels where approximately 1400mL of water is heated and maintained at the specified brewing temperature
Idle	Normal status of the brewer when it is Soft and Hard Powered, not brewing and Hot Water Tank temperature is maintained at proper brew temperature
Initialized Brewer	A new brewer as manufactured that has not yet been Primed
K-Cup® Portion Pack (**PP**)	Patented hermetically sealed portion pack containing ground coffee and a filter (aka Pod)
K-Cup® Holder	The portion of the K-Cup® Holder Assembly that holds the K-Cup® Pod during the brewing process
K-Cup® Holder Assembly	An assembly of the K-Cup® Holder and the K-Cup® Holder Funnel
K-Cup® Holder Funnel	The portion of the K-Cup® Holder Assembly that directs the stream of coffee into the user's cup
Kernel	The most basic portion of the operating system program responsible for resource allocation, low-level hardware interfaces, security, etc.
KAD	Keurig Authorized Distributor
LED	Light Emitting Diode. Light indicator used to communicate the brewer status to the user
LCD	Liquid Crystal Display. An electronically controlled display screen that communicates the status of the brewer's processes to the user
Main PCBA	A Printed Circuit Board Assembly. It is located within the lower brewer compartment that carries the microprocessor and high and low voltage control circuits
Camera Processing PCBA	A Printed Circuit Board located behind the touch screen user interface LCD that controls the brewer User Interface and Brew Engine

Power PCBA	A Printed Circuit Board located in the Power Module that carries the triacs, power regulators and filters.
PIC	Generic term for Microchip Brand of a single chip micro-controller computer
Post-Fill	The process of pumping water into the Hot Water Tank following a Brew that brings the level of the tank back up to the normal (Idle) level
Pre-Fill	The process of pumping water into the Hot Water Tank before a Brew that brings the level of the tank to the chosen brew size level
Pressure Transducer (PT)	Fluidic pressure sensing device used to determine when End Of Brew conditions exist in the brewer. The Pressure Transducer also communicates when excessive pressure is present in the brewer.
Prime	The process of initially filling the brewer's Hot Water Tanks with water, heating it, and bringing the brewer to Idle status
Primed Brewer	A brewer that has its HWTs filled to the nominal level required for brewing
Pulse Width Modulation (PWM)	A software controlled process where a voltage is rapidly switched on and off, producing an effective lower voltage. Can be supplied to a DC motor (Air Pump) for the purpose of varying its operating speed
Puncture Mechanism (PM)	The mechanical system of parts that houses the K-Cup® Holder Assembly and presents it to the user for K-Cup® insertion. The Puncture Mechanism also creates the mechanical advantage for puncturing the K-Cup® and locking it closed for brewing.
Purge	The process of providing an additional 4 seconds of air flow through the Brew Line, connecting plumbing, and the K-Cup® following the End Of Brew signal to expel the remaining water in the system and K-Cup®
Thermal Cut-Out (TCO)	Single use (not re-settable) thermally sensitive fuse that will irreparably cut power to the Heating Element when an unsafe temperature is achieved in the Hot Water Tank
Thermistor (NTC)	Resistive temperature sensing device used to determine the temperature of the water in the Hot Water Tank
Thermostat (T/S)	Automatically re-settable thermally controlled switch used to safely interrupt electrical power to the Heating Element when an over temperature condition exists in the Hot Water Tank. Will reset when the temperature in the tank decreases below the lower temperature threshold.
Tick	The 120 Hz Kernel repeat rate of the micro-processor. It is controlled by a signal generated as the zero crossing of the incoming AC (2 times the 60 Hz AC frequency)
Top Of Tank (TOT)	The condition defined as when the Hot Water Tank is full of water
Triac	A Triac is a semiconductor device that modulate AC power- by switching both halves of alternating cycle.
TTV	Abbreviation for "Time, Temperature, and Volume". These are the factors that control the quality of brewed coffee and are the basis of this specification.
Vent Valve (VV)	Electrically operated, normally closed valve that controls the flow of air during brewing.

II. Operation

A. Brewer Overview

The Keurig K-3500 Brewer is a commercial single serve coffee brewer specifically designed to be used with the proprietary Keurig Pod (K-Cup®) portion pack. Coffee beans or ground coffee cannot be processed in this brewer. It consists of a dual water tank capacity system which allows for fast sequential brewing. The brewing temperatures, water volumes and brewing times are tightly controlled. The water temperature can be set between 192 to 187° F. The default setting is 192° F (89 C)

The Keurig Pod portion pack is punctured automatically on the top and bottom when loaded and the brew process is started through the Control Module interface. In the brewing process, pressurized hot water is processed through the Pod, brewing the coffee and then dispensing it. The K-3500 automatically ejects the used Pod into an internal pod bin located behind the cup/drip tray door before each use. This brewing system requires a water supply that is either plumbed or pumped from a bottle in order to operate. There is no pour over filling capability.

B. K-3500 Brewer Water Flow Mechanisms

A schematic and legend showing the major components of the K-3500 are provided below. The functions of these components are as follows.

1. **Water filling** – The K-3500 is a direct plumbed machine. Municipal water is introduced to the unit through the inlet valve [**X**]. The supply water is then led to the Cold Water Tank (CWT) [**BB**] via the rigid plastic tube connected to the float valve [**Y**]. The Cold Water Tank is allowed to fill approximately 16 ounces, (480 milliliters) and then the valve [**X**] is de-energized (closed) by the CWT float magnet proximity switch [**Z**] which controls the fill level. The proximity switch (located outside the tank) contains magnetically activated reed switch which is controlled by a float magnet (located inside the tank) that monitors the water level.

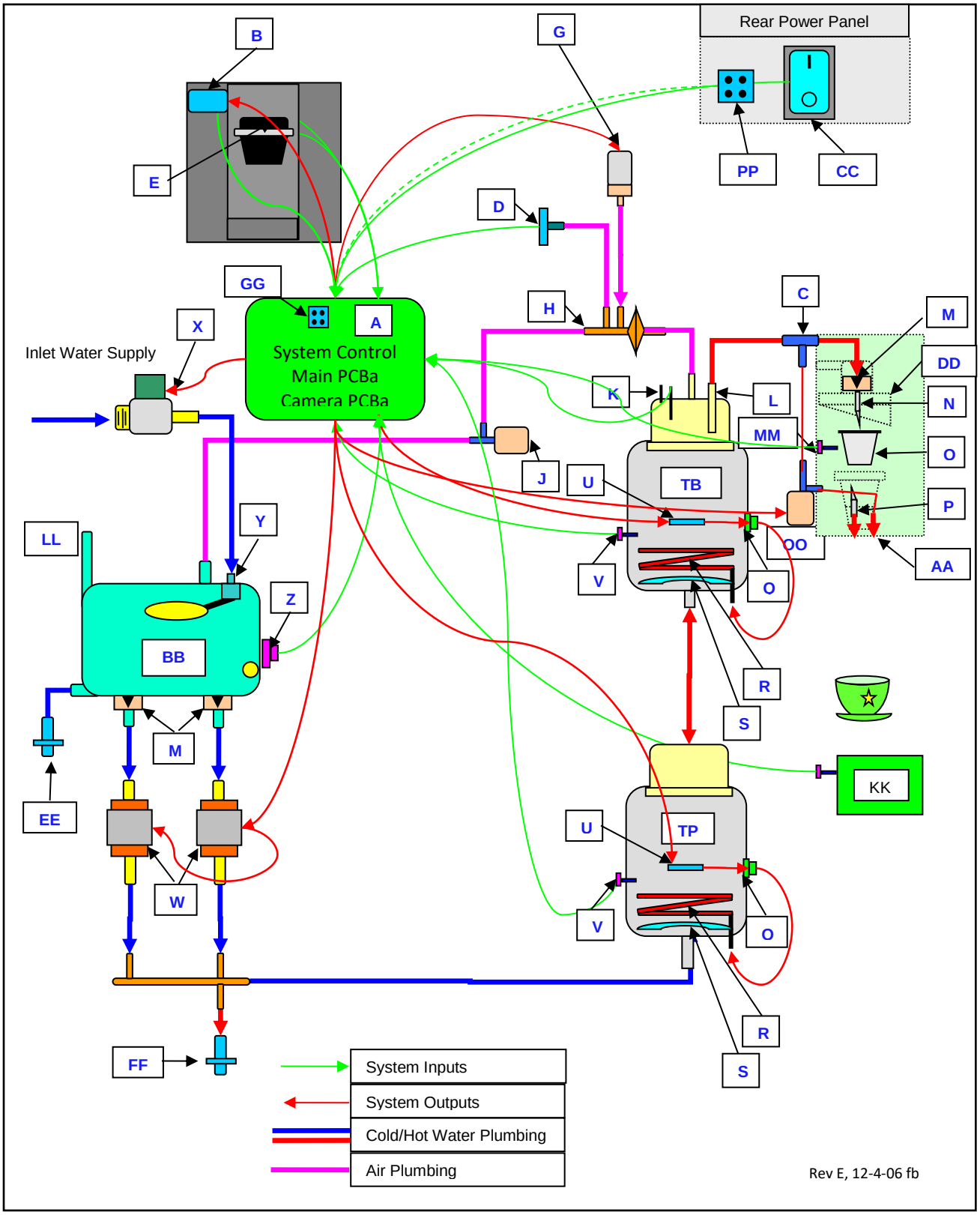
2. **The Cold Water Tank** – The Cold Water Tank [**BB**] functions primarily as housing for the secondary overfill protection device which is the float valve [**Y**] and provides the air gap necessary for back flow protection. If the normally-closed inlet valve [**X**] were to fail to open or otherwise be prevented from closing due to debris or CWT float magnet / switch failure, then the float valve [**Y**] would shut off the water supply once the water level rose to the level to activate the float lever. Back flow is prevented as the float valve inlet is approximately 1 1/4 inches (29 mm) above the over flow port in the Cold Water Tank [**BB**]. The Cold Water Tank also functions as the water supply reservoir for the brewing system. The water supply in the tank is fed through two check valve [**M**] and tubing to the two Cold Water Pumps (CWP) [**W**] that supply water to the hot water tanks via the CWP elbow, CWP connectors, silicone tubing, multi-connector tee, and silicone tube.

3. **The Hot Water Tanks –** The water flows through the bottom tank and into the top tank via a seal assembly which includes two o-rings, a seal washer (between the o-rings), and the sealing cover. To allow the hot water tanks to fill, the vent valve [**J**] is energized (opened) to allow air to leave the system as the tanks are filled with water. Water delivered to the hot water tanks [**TP**] and [**TB**] is heated by the heating elements located inside the tanks. The only one heater at a time is allowed to energize and the heater in the top tank (brew tank) has priority. The water temperature is controlled by the thermistors [**V**] located in each tank. To control volume stainless steel conductive probes are used to sense the brew volumes of 4, 6, 8, 10 and 12 ounces (120, 180, 240, 300 and 355 milliliters). In order to brew, the system is closed, and the vent valve [**J**] is de-energized (closed) to allow pressurization.

4. **The Puncture Mechanism** – the mechanism [**DD**] consists of the Pod holding and puncturing apparatus, a hot water delivery and brewed coffee path, and the hot water dispense valve [**OO**]. To brew coffee, lift the bail handle to present the Pod holder [**AA**]. A Pod is placed in the holder and the handle is returned to the closed position. Upon closing the mechanism, the Pod is punctured on the top first by the entrance needle [**N**] and then the bottom by the exit needle [**P**]. The holes created in the Pod by the two needles are sealed about the needles by gaskets. Once the Pod is in this 'ready to brew' state and a cup is placed on the drip tray, brewing can commence. To brew, the system is closed, vent valve [**J**] de-energized and the brew pump [**G**] is energized. The brew pump pressurizes the system to approximately 4 psi (27.6 kPa). The air is delivered to the top of the brew tank via a silicone tube by way of the filter tee [**H**]. The water in the brew tank is forced out of the tank through the integral brew tube [**L**] in the upper hot water tank cover. The water flows out of the top cover through a silicone tube to the entrance elbow which contains a check valve [**M**]. The water flows next trough the entrance needle, contacts the coffee grounds in the Pod, and brewed coffee is delivered through the exit needle to the cup located on the drip tray.

5. **Dispensing Hot Water** - To deliver hot water only, the system is closed, vent valve [**J**] is de-energized, and the hot water dispense valve [**OO**] is opened. Through a combination of the force of gravity and a pressure boost from the brew pump, water now flows from the lower hot water tank cover thru a silicone tube, the hot water dispense valve [**OO**], a silicone o-ring, seal cover and the hot water trough. The water does not take the same path as in the coffee brewing process because the boost in pressure from the brew pump [**G**] is lower than the cracking pressure of the brew path check valve [**M**].

1. K-3500 Brewer Schematic

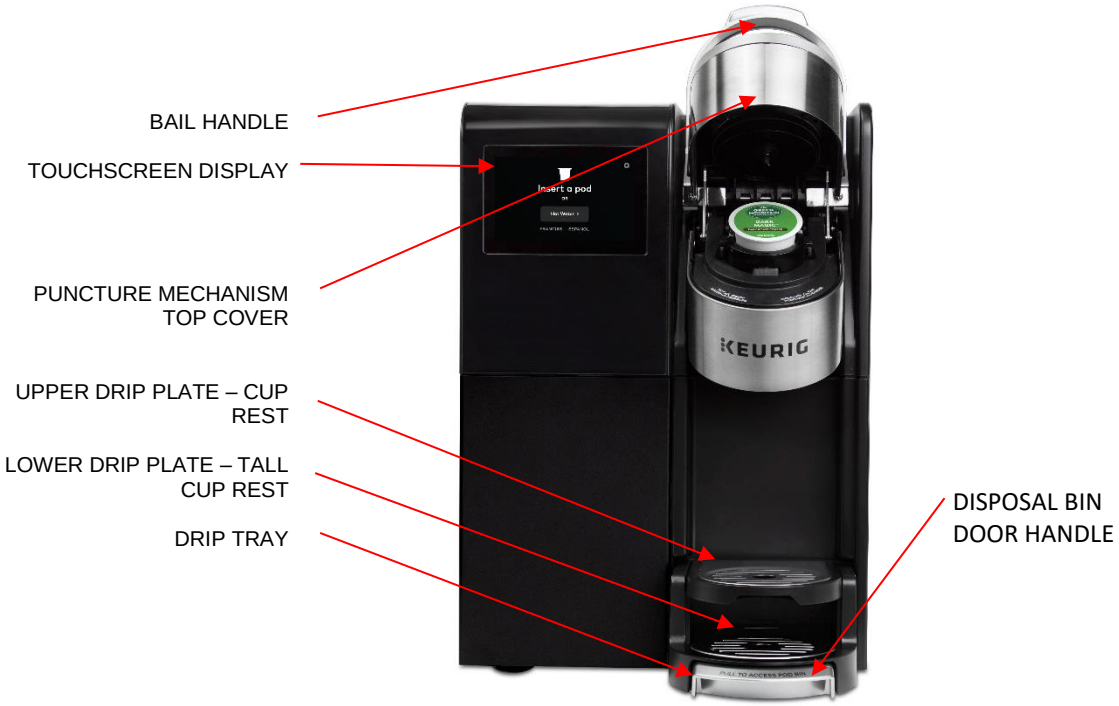


2. Brewer Schematic Legend

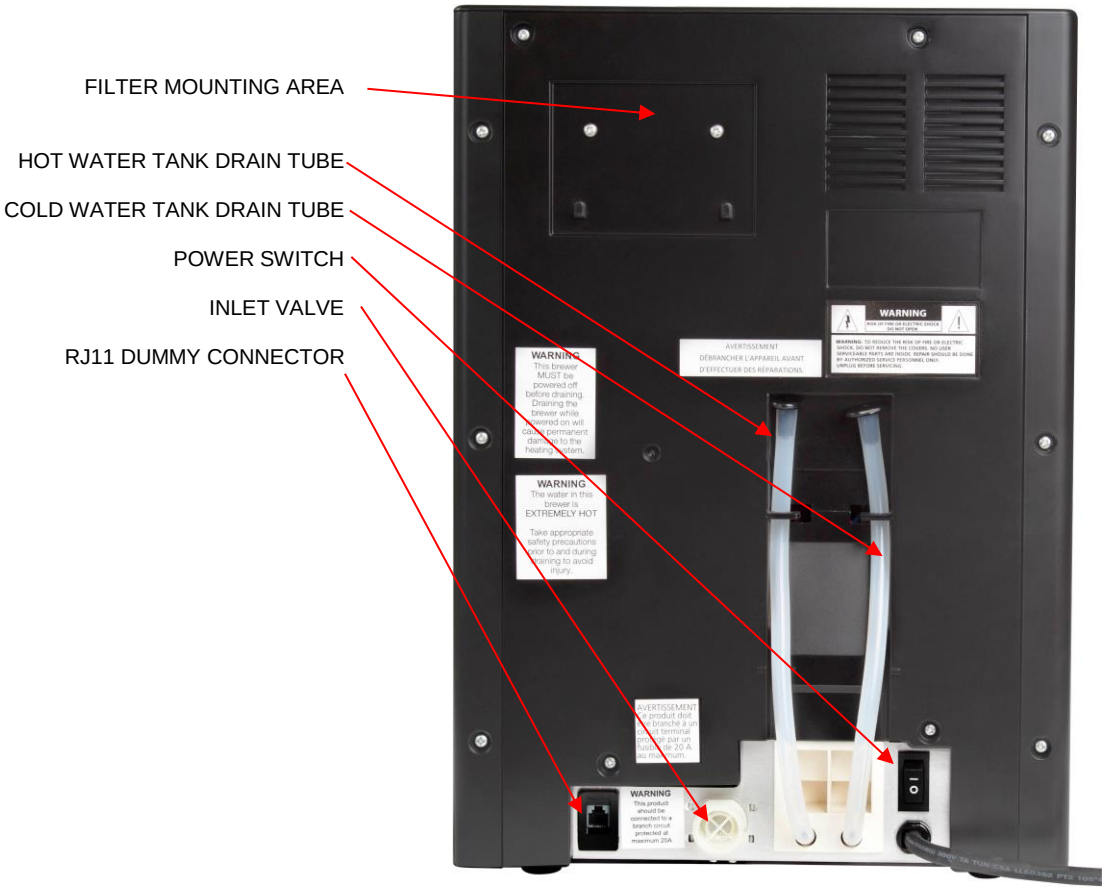
A	Electronics, 3 PCBAs The Processor: K-3500 I/O Overview	B	Touchscreen User Interface	D	Pressure Transducer
E	Puncture Mechanism Switch	**G**	Brew Pump	**H**	Filter Tee
J	Vent Valve	**K**	4 Brew Vol Conduct. Probes	**L**	Brew Tube
M	Check Valves (3)	**N**	Entrance Needle	**O**	Pod Portion Pack
P	Exit Needle	**Q**	Auto reset TCOs (2)	**R**	Heating Elements (2)
S	Baffles (2)	**TB, TP**	Hot Water Tanks. Brew, Preheat	**U**	Non-reset TCOs (2)
V	Thermistors (2)	**W**	Cold-water Pumps (2)	**X**	Inlet Water Valve
Y	Mechanical Float Valve	**Z**	CWT Float Magnet / Switch	**AA**	Pod Holder Assembly
BB	Cold-water Tank	**CC**	Power Switch and circuit breaker	**DD**	Puncture Mechanism Assembly
EE	Cold Water Tank Drain Valve	**FF**	Hot Water Tank Drain Valve	**GG**	ICD2 programming Port
KK	Bin and bin sensor	**LL**	CWT vent to bin	**PP**	Dummy Connectors
MM	Pod sensor	**NN**	Mug sensor	**OO**	HW Dispense Valve

C. Brewer External Components

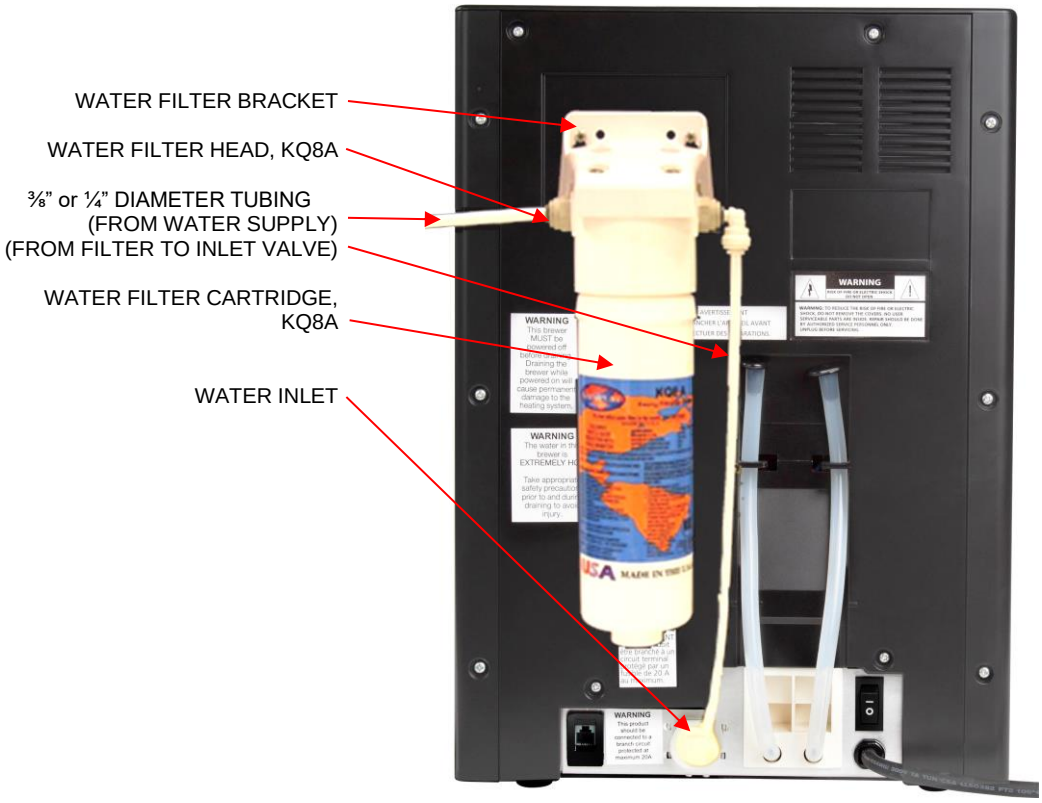
1. Brewer Front Panel



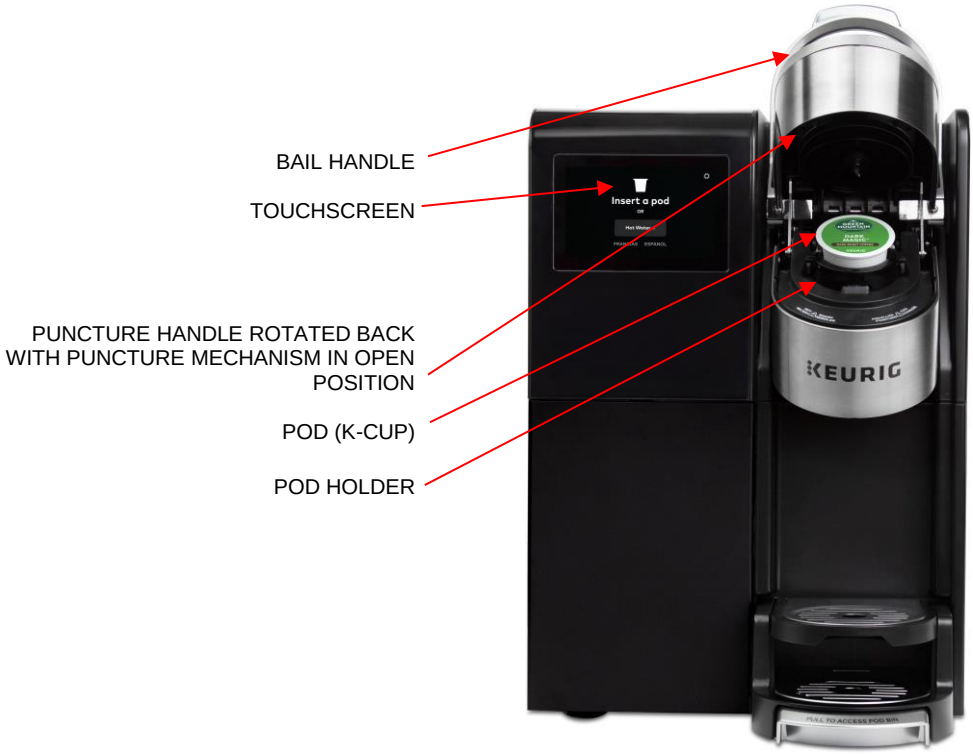
Rear Panel


FILTER MOUNTING AREA
HOT WATER TANK DRAIN TUBE
COLD WATER TANK DRAIN TUBE
POWER SWITCH
INLET VALVE
RJ11 DUMMY CONNECTOR
WARNING
WARNING
WARNING
WARNING

3. Rear Panel with Filter Installed



4. Front – Pod Inserted

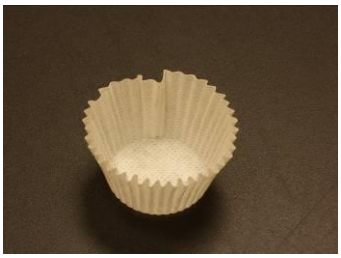


5. Front – Pod Disposal Bin Opened for Removal

III. The Keurig Pod (K-Cup®) Portion Pack

The Keurig K-3500 Brewer may only be utilized in conjunction with the single serve portion pack called the Keurig Pod. The Pod is fitted with a paper filter that is heat sealed to the inside upper edge of the plastic cup.

Depending on the individual blend, up to approximately 9 to 14 grams of premium freshly ground coffee is added. The Pod is nitrogen purged to remove oxygen and heat sealed with a three ply foil lid to lock in freshness for at least 6 months.



During the brewing process water is introduced into the Pod under pressure via the entrance needle, located in the Puncture Mechanism Module. The hot water extracts the coffee and passes it through the filter paper. The exit needle, located on the outer edge of the Pod holder, allows the brewed coffee to be dispensed into a cup or mug.

A. Appliance Safety

When using electrical appliances, basic safety precautions must always be followed. Read all instructions before using this brewer. **Failure to comply with the instructions risks equipment damage, fire or severe bodily injury.**

1. CAUTION: Always Unplug the Brewer Before Servicing

- To reduce the risk of fire or electric shock, do not expose this brewer to rain or moisture.
- Do not immerse the brewer in water, as this could lead to electric shock, electrical and or mechanical malfunctions.
- Do not use brewer for other than its intended use.
- Both the Cold Water Tank (CWT) and the Hot Water Tank (HWT) should be drained prior to moving the K-3500 from one location to another.

2. Power Supply

Only use a correctly wired and grounded 120VAC / 60Hz socket outlet rated for at least 15A service. It is recommended that a Ground Fault Circuit Interrupter [GFCI (20A recommended)] outlet be used.

- Avoid sharing the same outlet with other appliances.
- Your brewer is equipped with a molded, grounded three prong polarized AC line plug. This is a safety feature. Do not defeat the safety purpose of the polarized plug.
- The system requires a 3-wire grounded outlet with a minimum of 15-amp service.
- Do not use extension cords with this brewer.

B. Brewer Setup

Unpacking Instructions

1. Place Brewer box on its side on a large steady surface such as a table, countertop, or on the floor. Open the box from the end that says UP.
2. Remove the Quick Start Guide, Use & Care Guide and other literature.
3. Reach into the box and grasp the poly foam packing that protects the Brewer.
4. Carefully pull the poly foam toward you and out of the box. Remove the poly foam packaging material surroundings the brewer.
5. Place the brewer upright on a flat, steady surface.
6. Remove the plastic bag.
7. It is recommended that you save all packing materials and shipping carton in the event that the brewer must be shipped or stored.

CAUTION: The K-3500 brewer is designed to handle local water pressures from 40 psig up to 125 psig. Consult a licensed plumber for water pressures in your area. Use plumbing fittings and tubing specified to withstand 125 psig.

C. Filter Requirements

WARNING: Keurig® requires the use of an external water filter such as the Omnipure KQ8A Water Filter, available from Keurig®. Failure to use a filter invalidates the brewer warranty. Refer to the appendixes for further installation information.

The Keurig K-3500 brewer system requires the use of a water filtration system to optimize the coffee flavor and brewer reliability. Two mounting holes with screws have been provided on the back of the brewer for this purpose.

Keurig recommends the Omnipure KQ8A filter. A filter kit (part number 5025) is available from Keurig. This kit contains a KQ8A filter, filter head, and mounting bracket.

NOTE: No plumbing connectors are provided with this Kit.

CAUTION: All KQ8A filter cartridges must have a minimum of four gallons of water run through them after mounting to the brewer and before they are connected to the brewer's Inlet Valve at the install location. This procedure will prevent fine particles of carbon from entering and clogging the water inlet valve.

D. Getting Started

You will need several tools for the installation or servicing the K-3500 brewing system. They are as follows:

- Two Number 2 Phillips screw drivers (8" and 12")
- Pliers (Regular Adjustable and Needle Nose)
- Wire Cutters
- 6 mm Nut Driver

Next:

a) Attach a ¾" female garden hose connection that will reduce to either a ⅜" or ¼" connection to the Inlet Valve.
b) Mount the filter assembly to the brewer using the screws provided on the back of the brewer.
c) Flush the filter **BEFORE** connecting to the Inlet Valve.
d) Plug brewer into a dedicated GFCI outlet. If the electric circuit is overloaded with other appliances, the circuit breaker may trip. If possible, the brewer should be operating on its own circuit, separate from other appliances. Never use an extension cord.

IV. Touchscreen User Interface

A. Brewer Priming Process

IMPORTANT: The brewer must be primed for its first use as set forth below. If Spanish or French are going to be the primary language, under the auspices of the **Manager** login (see the **Manager Option Menu** section below) change the language before proceeding with the priming of the brewer. The brewer's default language is English.

NOTE: The K-3500 power switch indicates 0 for OFF and – for ON.

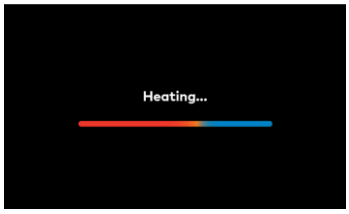
1. Plug the AC power cord to a 115 – 120 V outlet and be sure that water is flowing freely to the inlet at the lower mid rear of the brewer.

2. Apply power, pressing the switch located on the bottom of the rear panel to the **ON** (**–**) position.
3. When you initially apply power to the K-3500, the touchscreen displays a splash screen with the Built in Test (BIT) icon in the upper right corner. All water tanks must be first be drained to perform the BIT under the auspices of a **Technician** login.

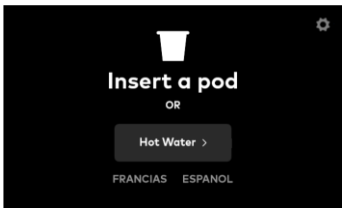
4. Should the K-3500 sense that the water supply is not present, the "**Please connect the brewer to a water source to initiate filling**" message displays. The options to display the message in French or Spanish are available when the appropriate language is pressed. These language display options are available throughout the K-3500 user interface and may be made default language display using the **Manager** options (explained below).

5. The **Filling hot water tank**… display appears next. The blue bar animation gradually lengthens as the tank is filled. If the hot water tank is sensed full before bar has completed lengthening, the animation rapidly speeds up to completion. Conversely, this animation slows should the hot water tank not be full when the blue bar nears completion.

6. After water tank is filled, the tank heating screen displays. A red gradient gradually overtakes solid blue as the correct temperature (187 – 192°F) is attained in the hot water tank - indicated when the bar is fully red



7. The **Insert a pod** display will subsequently display, indicating that brewing a beverage can commence. If the choice of Hot Water is desired, press the button to dispense heated water only.



8. Select a Pod portion pack. Place a cup or mug (8 oz Minimum) on either the upper or lower Drip Tray Plate.

9. Lift the puncture mechanism bail handle. The Pod holder will open towards you.

CAUTION: There are two sharp needles that puncture the Pod portion pack, one in the puncturing mechanism and the other in the bottom of the Pod holder. To avoid risk of injury, do not put your fingers in the Pod chamber.

10. Place a Pod in the Pod holder.

11. Lower the handle completely to close the puncture mechanism. Refer to the next section for more details regarding the brewing cycle

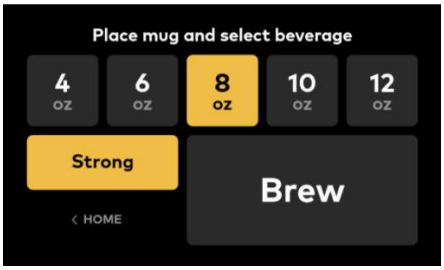
B. Brewing Cycle

The photograph below displays the typical state of the user interface once the handle has been lowered onto a Pod. The touchscreen prompts the placement of a mug and displays the default size, which can be revised, along with the option to increase the diffusion duration for a stronger brew.

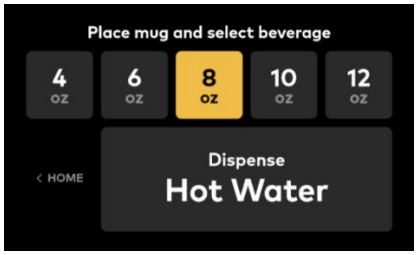
1. As described above, when you initially apply power to the K-3500, the touchscreen displays a splash screen with the **Built In Test** (**BIT**) icon in the upper right corner. All water tanks must be first be drained to perform the **BIT** under the auspices of a **Technician** login. Refer to the final section of this manual for a step-by-step guide to the Built In Test procedure.

2. The **Insert a pod** when the ready touchscreen displays allowing brewing to commence. To brew selected beverages such as coffee or tea using a Pod, lift the handle and place a Pod within the holding cup and press the bail handle to secure the Pod in place. Place a heat resistant beverage holder on the lower or upper drip plate, depending on the size of the mug or carafe. When only hot water is desired to prepare hot chocolate, brew tea from leaves, a basket or bag for instance, tap the **Hot Water** option, as shown below.

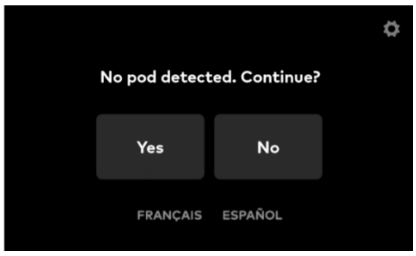
3. The subsequent touchscreen will provide a means to select the size dispensed in ounces or milliliters. When a size is selected, the button converts to solid yellow and the Brew button becomes active. Press the size and select the Strong button to increase the beverage's strength. Press **Brew** to infuse hot water into the Keurig Pod.



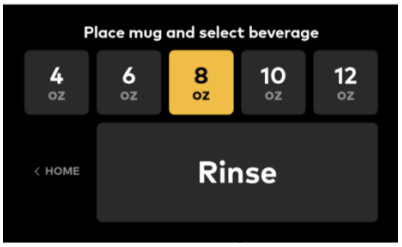
4. When the **Hot Water** option is pressed, select a beverage size is to activate the Dispense Hot Water option. Return to the Ready screen using the Home option.



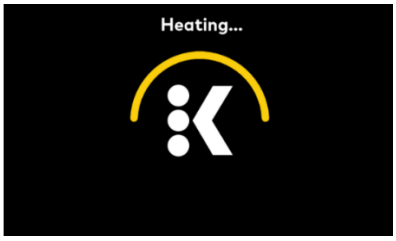
5. Should only a rinse be desired, tap **Yes** to answer **No Pod detected, continue?** to allow a hot water Rinse of whichever size is preferred. Tapping **No** returns to the Ready touchscreen.



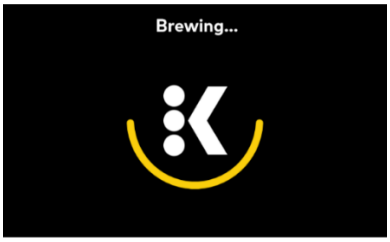
6. The Rinse button will be activated once a rinse water size is selected.



7. The Heating screen displays to bring the hot water tank to the correct temperature.

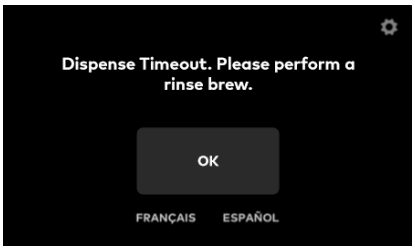


8. The Brewing screen will appear until finished.



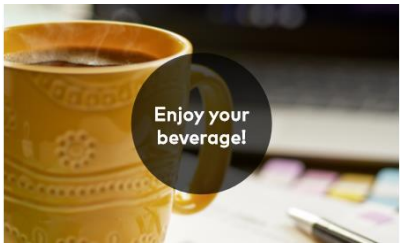
9. If the bail handle is opened during a brew cycle, the interruption prompts the error message shown below to display. After the bail handle is closed again the K-3500 brewer will resume the cycle.

10. If the K-3500 brewing cycle is interrupted, the touchscreen shown displays requiring a Rinse. Tap **OK** to leave the display and follow the Rinse instructions.



11. If the pod bin sensor is triggered at any point during a brew cycle, the K-3500 displays message shown below. Once the Pod bin is emptied and a Pod is not detected within the cup or when a brew sequence has occurred since the last opening and closure of the bail handle, the Insert a Pod touchscreen will reappear. If a brew sequence has not occurred since last opening and closure of bail handle and a Pod is detected, the Place mug and select a beverage size touchscreen displays (see above).

12. Once the Brewing cycle has finished, the Enjoy your beverage screen displays.



C. Manager Option Menu

Managers can monitor & setup:

- Language display
- The fluid units of measure
- Brew Settings: cup size & beverage strength
- Screen saver timing
- Image duration & use
- Sleep settings
- View brew history
- Passcode control

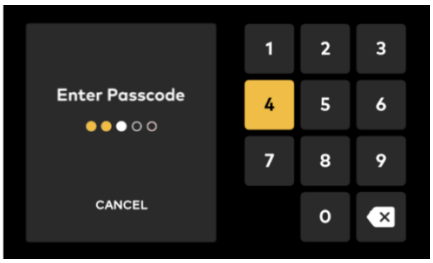
You can manually activate five internal components also. These are

- ✓ The Inlet Valve
- ✓ The Vent Valve
- ✓ The Cold-water Pumps
- ✓ The Brew Pump
- ✓ The Hot Water Dispense Valve

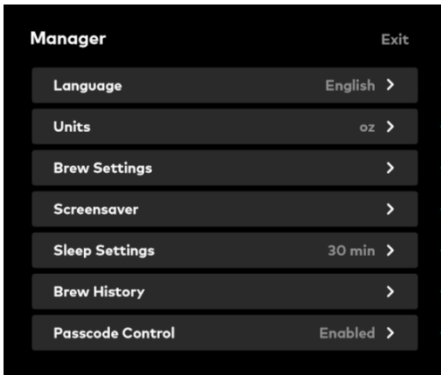
1. To access the **Manager** administration screens, first tap the settings icon found on the Brew cycle touchscreens and press **Manager** in the **Select Admin Role** touchscreen.

2. Select the **About** screen to view the Brewer's model number and software version, as shown below.

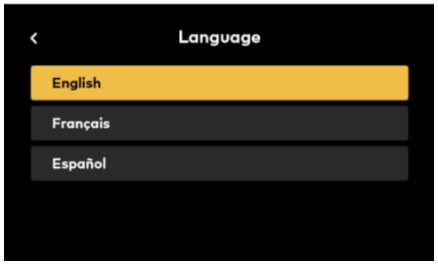
3. If the **Manager Passcode** is enabled, type it in the **Enter Passcode** numeric touchpad. The default code is **23456**.



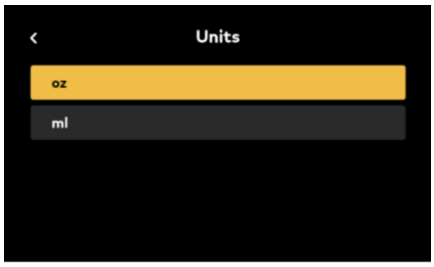
4. The **Manager** option listing displays after the passcode is accepted. Press **Exit** to return to the Ready touchscreen. Black gradients on top and bottom indicate scrollable content that extends beyond the display. Note that menu header and **Exit** remain stationary during scroll.



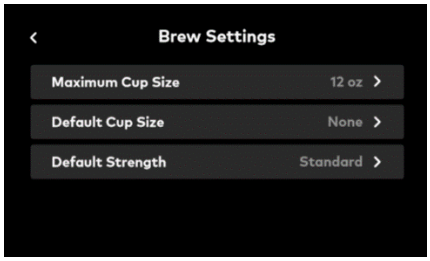
5. The **Manager** sets the default **Language** displayed by the K-3500 touchscreens. When the language choices are displayed on brew cycle touchscreens, selection of an alternate language prompts immediate translation of the message, no matter which language has been selected as the default. To return to the **Manager** option list, use the ◀ icon.



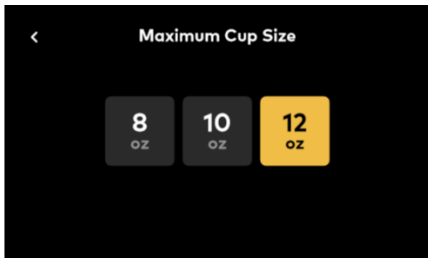
6. The **Units** touchscreen provides a means to set the beverage sizes in ounce (oz) or milliliter (ml) fluid measuring units. Tap the volume unit of measure and then the ◀ back icon to return to the **Manager** option list touchscreen



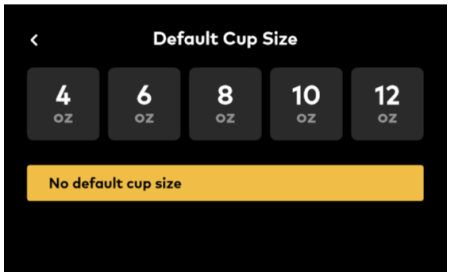
7. The **Brew Settings** touchscreen displays three default configurations that provide options to set maximum and default cup sizes as well as default brew strength.



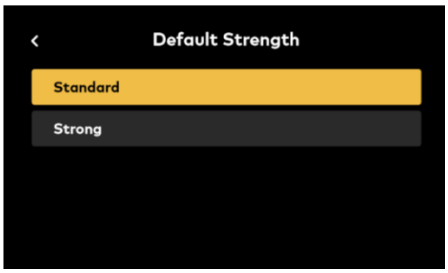
8. The **Maximum Cup Size** touchscreen provides a means to set the largest volume that the K-3500 may dispense. Tap the volume and then the ◀ back icon to return to the **Manager** option list touchscreen.



9. The **Default Cup Size** touchscreen provides a means to set the standard volume that the K-3500 will automatically dispense. Tap the volume button and then the ◀ back icon to return to the **Manager** option list touchscreen.

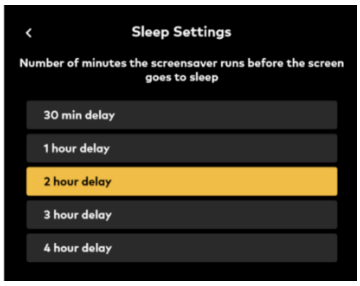


10. The **Default Brew Strength** touchscreen provides a means to set the brew potency that the K-3500 will automatically dispense. Tap either **Standard** or **Strong** and then the back icon to return to the **Manager** option list touchscreen.



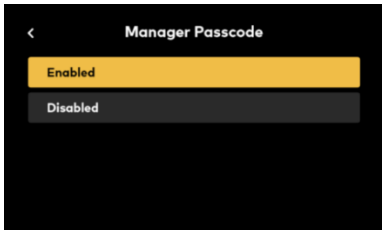
11. The **Images** display presents the 4 standard K-3500 images that can be displayed during inactive periods (Sleep) or as an indication of the conclusion of a brewing cycle. Selected images display a yellow border. Deselected images will not appear as a screensaver. To prevent touchscreen pixel burn, at least two images must be selected. Select the screensavers and then the back icon to return to the **Manager** option list touchscreen.

12. The **Sleep Settings** display provides a means to set the delay duration that the K-3500 screensaver appears during inactivity. To set the delay, tap the duration choice and then the back icon to return to the **Manager** option list touchscreen.



13. Select the **Brew History** option to view a read-only tabulation of the number of completed brewing cycles arranged by volume dispensed.

14. Select the **Passcode Control** option to **Enable** or **Disable** the **Manager Passcode**. If the passcode has been disabled, the user is required to reenter the passcode after the **Enabled** button is selected, as described above in step 3.



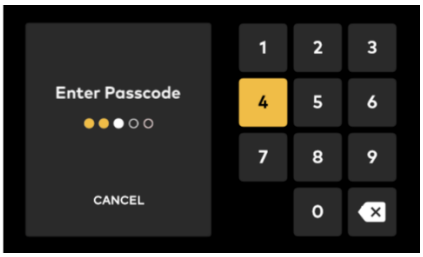
D. Technician Option Menu

Technicians can monitor, setup and activate:

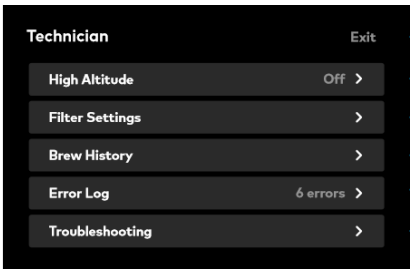
- High altitude
- Filter settings
- Brew history
- Error log
- Troubleshooting - manually activate five components:
  - ✓ Vent Valve
  - ✓ Inlet Valve
  - ✓ Hot Water Dispense Valve
  - ✓ Cold-water Pumps
  - ✓ Air Pump

1. To access the **Technician** administration screens, first tap the settings icon found on the Brew cycle touchscreens and press **Technician** in the **Select Admin Role** touchscreen.

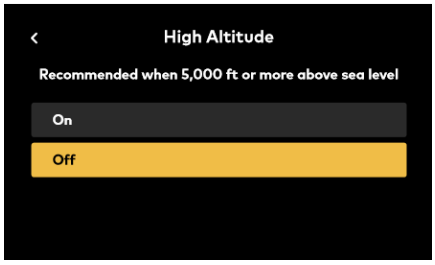
2. If the **Technician Passcode** is enabled, type it in the **Enter Passcode** numeric touchpad. The default code is **34567**.



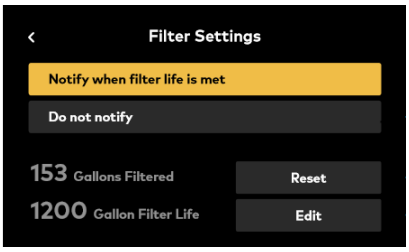
3. The **Technician** option listing displays after the passcode is accepted. Press **Exit** to return to the Ready touchscreen. Black gradients on top and bottom indicate scrollable content that extends beyond the display. Note that menu header and **Exit** remain stationary during scroll.



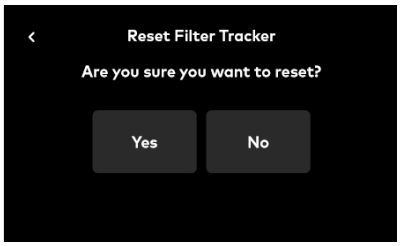
4. Select the **High-Altitude** option which is recommended for locations that exist 5000 feet or more above sea level. To set the option, tap **On** and then the back icon to return to the **Technician** option list touchscreen.



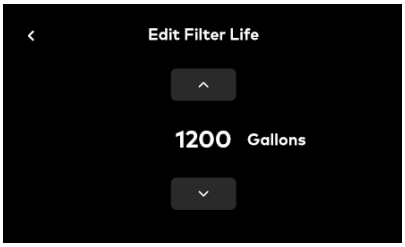
5. Select the **Filter Settings** option to select notification that the K-3500 brewer's filter needs replacement. When the water filter has reached its end-of-life, replace it and select the **Reset** option. Use the back icon to return to the **Technician** option list touchscreen.



6. When **Reset** is pressed in the **Filter Settings** touchscreen, the **Reset Filter Tracker** touchscreen displays. Select **Yes** in the **Reset Filter Tracker** option to reset the total number of gallons filtered by the installed filter. This would be appropriately selected after filter replacement. Use the back icon to return to the **Technician** option list touchscreen.

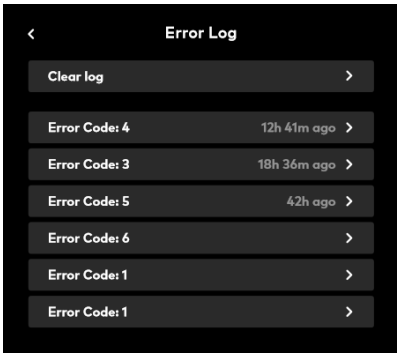


7. Select the **Edit Filter Life** touchscreen to increase ( ) or decrease ( ), by increments of 10, the read-only tabulation of the number of gallons or liters that the installed water filter has dispensed. Use the back icon to return to the **Technician** option list touchscreen.

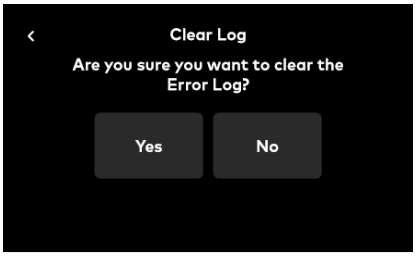


8. Select the **Brew History** option to view a read-only tabulation of the number of completed brewing cycles arranged by volume dispensed. Use the back icon to return to the Technician option list touchscreen.

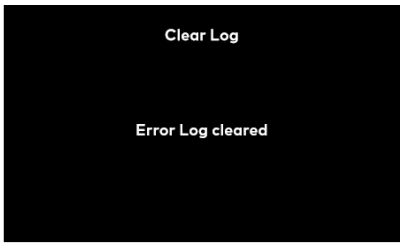
9. Select the **Error Log** option to view a listing of the K-3500 errors. Use the ▶ select forward icon to select **Clear Log** or an individual **Error Code** or use the ◀ back icon to return to the **Technician** option list touchscreen. The most recent error displays at the top of the log. Error Codes with no time stamp occurred prior to the last time the brewer was powered off.
   Time stamp formats are as follows:
   - Less than 24 hours: "_h _m ago"
   + 24 or more hours: "_h ago"



10. Select the **Clear Error Log** option in the **Error Log** option listing to clear the entire error listing and display the **Clear Log** confirmation touchscreen. To confirm the clear command, tap **Yes**. Tap **No** or use the ◀ back icon to return to the **Error Log** option list touchscreen.



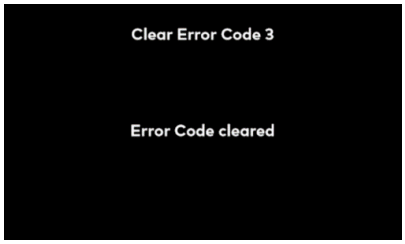
11. Once the **Error Log** has been confirmed to be cleared, the **Error Log Cleared** screen will display for 2 seconds and then automatically return to the **Error Log** listing touchscreen.



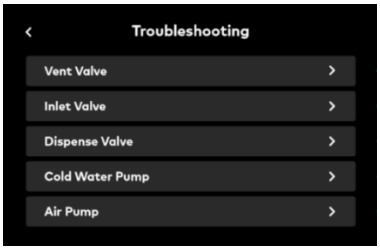
12. To view or clear an individual **Error Code**, select the **Error Code** by number from the option listing using the **Error Code**: ▶ to display the individual **Error Code**. Use the ◀ back icon to return to the Error Log option list touchscreen. To delete the instances of the individual **Error Code**, tap **Clear Error Code** ▶.

13. Select the **Clear Error Code** option in the individual **Error Code** listing to clear all instances of this specific **Error Code** and display the **Clear Error Code** confirmation touchscreen. To confirm the clear command, tap **Yes**. Tap **No** or use the ◀ back icon to return to the **Error Log**.

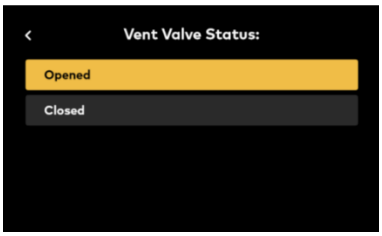
14. Once the **Error Code** has been confirmed to be cleared, the **Error Code Cleared** screen will display for 2 seconds and then automatically return to the **Error Log**.



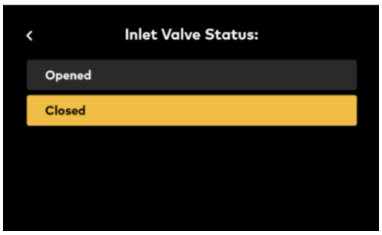
15. Select the **Troubleshooting** option in the **Technician** listing to open, close, turn on or turn off an individual vent or pump. Select the vent or pump from the option listing using the valve or pump buttons to display the individual valve or pump touchscreen. Tap the **Opened** or **Closed** or **On Off** buttons to change the vent or pump status then use the back icon to return to the **Troubleshooting** option list touchscreen. When no change in status is required, simply use the back icon to return to the **Troubleshooting** option list touchscreen.



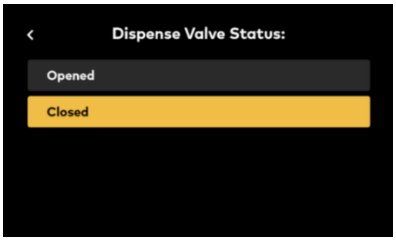
16. Select the Vent Valve Status option to Open or Close the valve. Use the back icon to return to the **Troubleshooting** option list touchscreen.



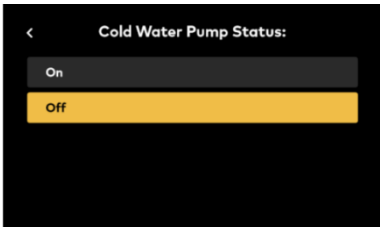
17. Select the **Inlet Valve** option to **Open** or **Close** the valve. Use the back icon to return to the **Troubleshooting** option list touchscreen.



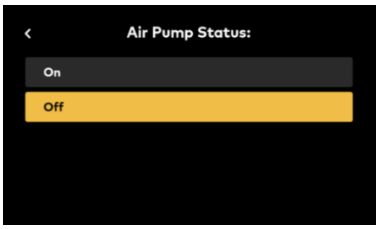
18. Select the Dispense Valve option to Open or Close the valve. Use the back icon to return to the **Troubleshooting** option list touchscreen.



19. Select the **Cold-Water Pump Status** option to turn the pump **On** or **Off**. Use the back icon to return to the **Troubleshooting** option list touchscreen.



20. Select the **Air Pump** option to turn the pump **On** or **Off**. Use the back icon to return to the **Troubleshooting** option list touchscreen.



V. Draining the Brewer

When you wish to drain the brewer, the following steps must be followed:

1. Press the power button to the **0** (Off) position and unplug power cord.
2. Shut off water and disconnect water supply to the brewer. Turn the brewer around so the back is facing you.
3. Move the brewer close to the edge of a sink or large bucket so that the drain hoses hang over either the sink edge or into the bucket .
4. Remove both the Hot Water and Cold-water hoses from their clips. Remove drain plugs from each hose.

   CAUTION: **The water from the hot water tank will be very hot!**

5. When the flow of water stops, the brewer's internal hot water tank and Cold-water tank will be empty.

   NOTE: The brewer is drained by gravity. It will take approximately 3 minutes to complete. There will always be a small amount of water left in the drain hoses.

VI. Emptying the Pod Bin

The used Pods are automatically ejected into the internal Pod bin. If the Pod bin sensor is triggered at any point during a brew cycle, the K-3500 displays message shown:

Once the Pod bin is emptied and a Pod is not detected within the cup or when a brew sequence has occurred since the last opening and closure of the bail handle, the Insert a Pod touchscreen will reappear. If a brew sequence has not occurred since last opening and closure of bail handle and a Pod is detected, the **Place mug and select a beverage** size touchscreen displays (as shown above).

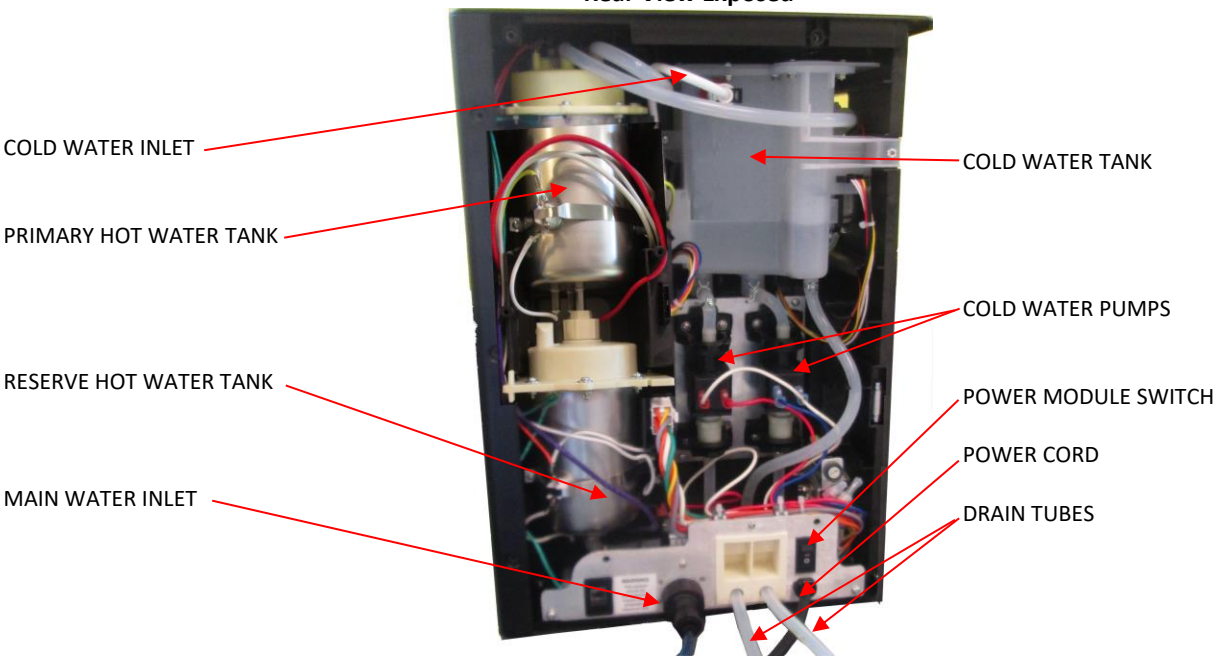
To empty the Pod bin, open the brewer door by grasping the door handle and swinging door fully open to remove bin from brewer. Dispose of the used Pods and reinstall the bin. Note that the bin will only go back inside the brewer one way.

VII. K-3500 Components

A. The Modules

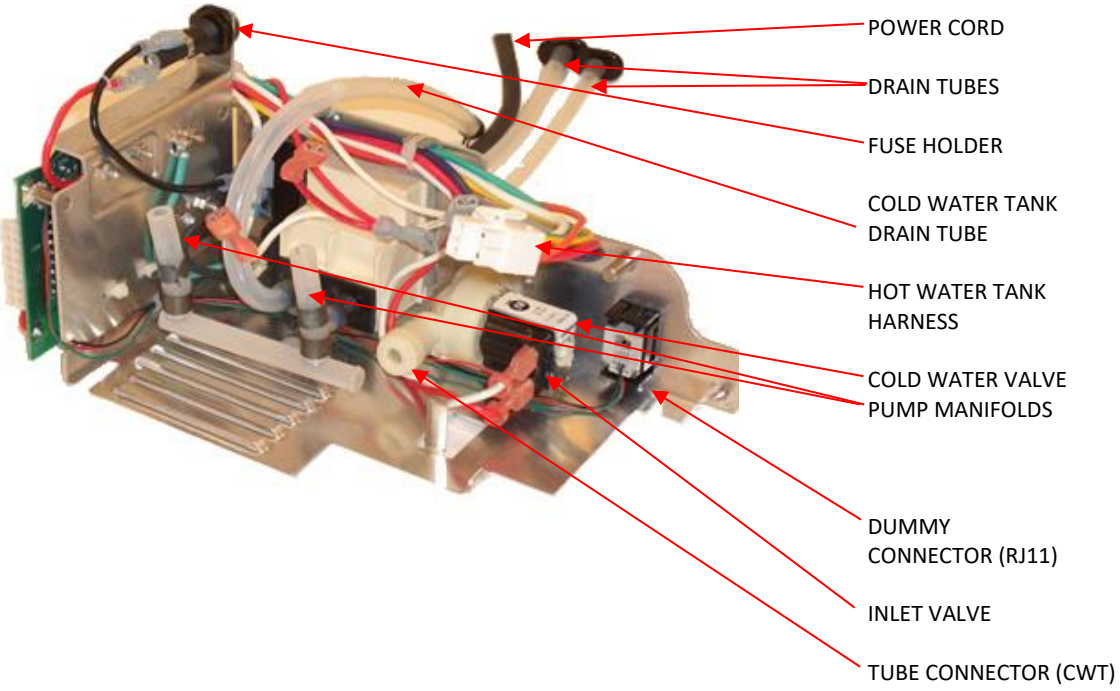
The image below presents the rear view of the K-3500 with the back/right side covers removed, with the main components listed. The figures that follow are images of the individual modules to show their general configuration for removal & replacement. Note that not all of the module components are listed, only those pertinent to the installation processes.

Rear View Exposed

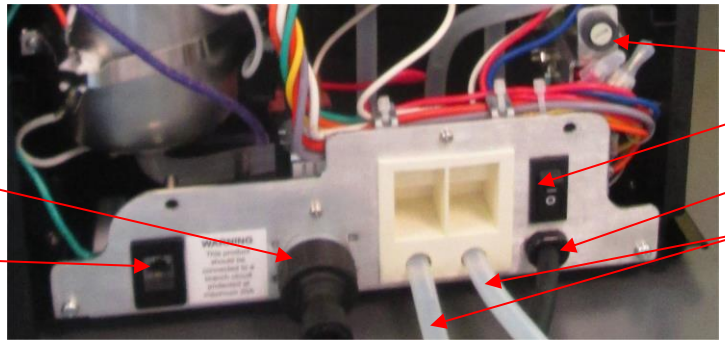


1. Power Module

Rear (Interior) View

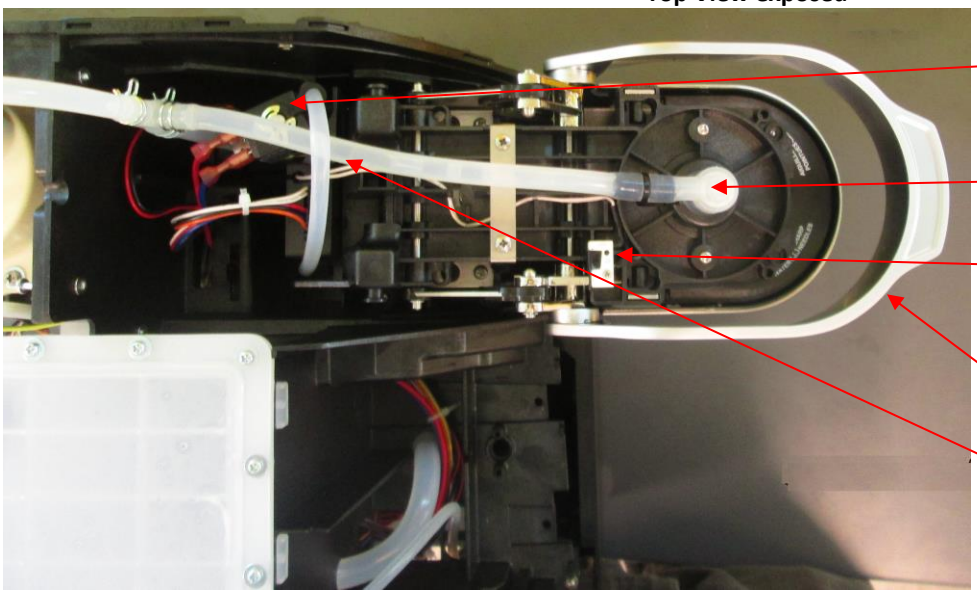


Front View



3. Puncture Mechanism

Top View exposed



HOT WATER DISPENSE VALVE: Note that this valve can be removed & replaced as a separate unit.

PM ENTRANCE NEEDLE ASSEMBLY/CHECK VALVE

MICRO SWITCH

BAIL HANDLE

HOT WATER FEED FROM HWT

Front View exposed

BAIL HANDLE

PIVOT PLATE

PRESSURE PLATE

FRAME PUNCTURE MECHANISIM

ENTRANCE NEEDLE ASSEMBLY

POD HOLDER

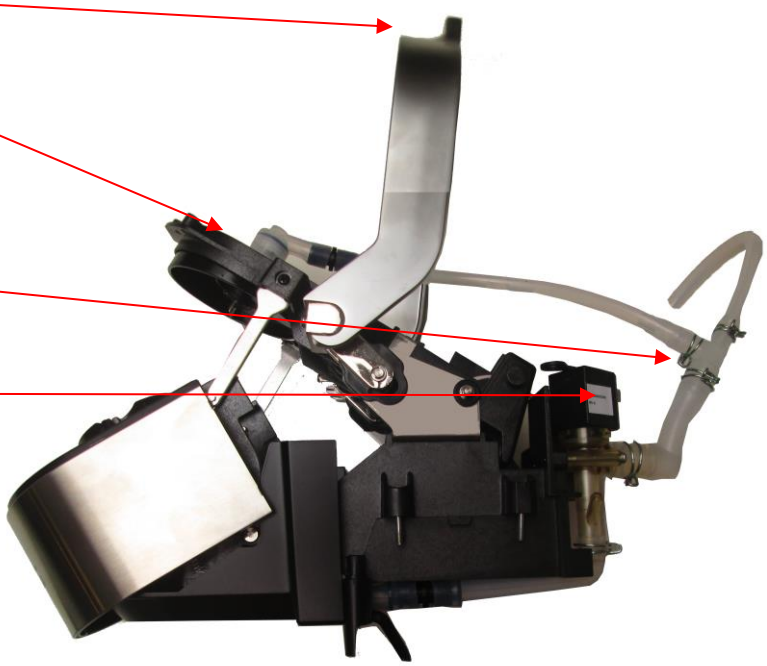
Side View exposed

BAIL HANDLE

HOT WATER DISPENSE VALVE

HOT WATER FEED FROM HWT

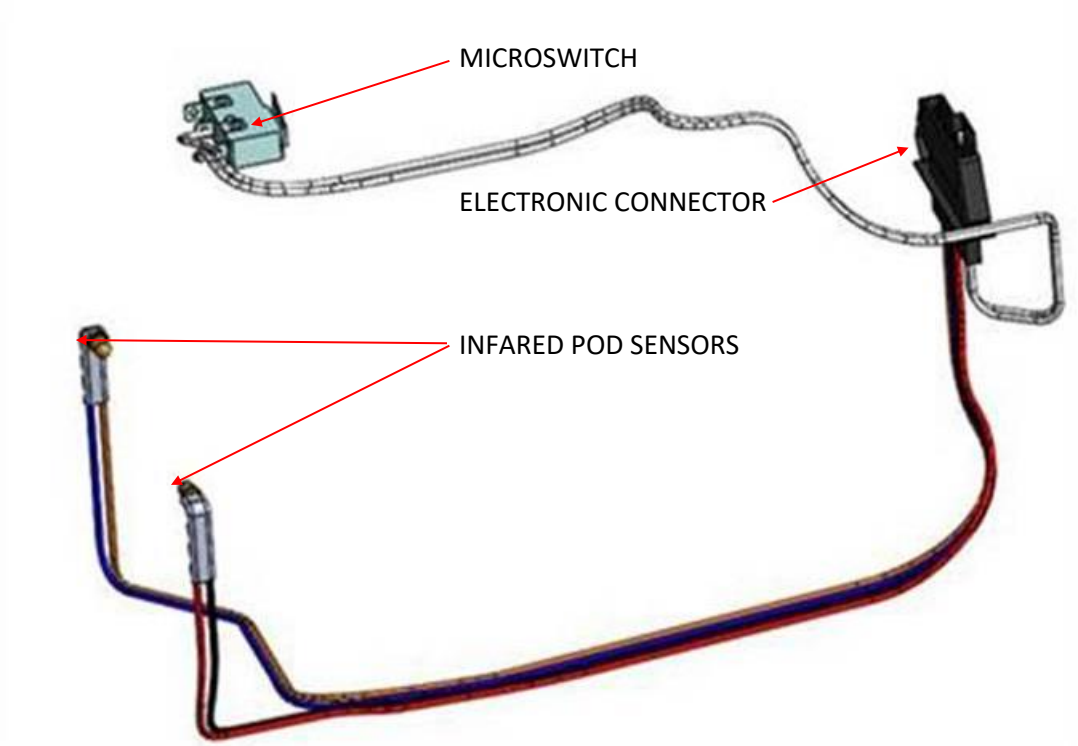
HOT WATER DISPENSE VALVE: Note that this valve can be removed & replaced as a separate unit.



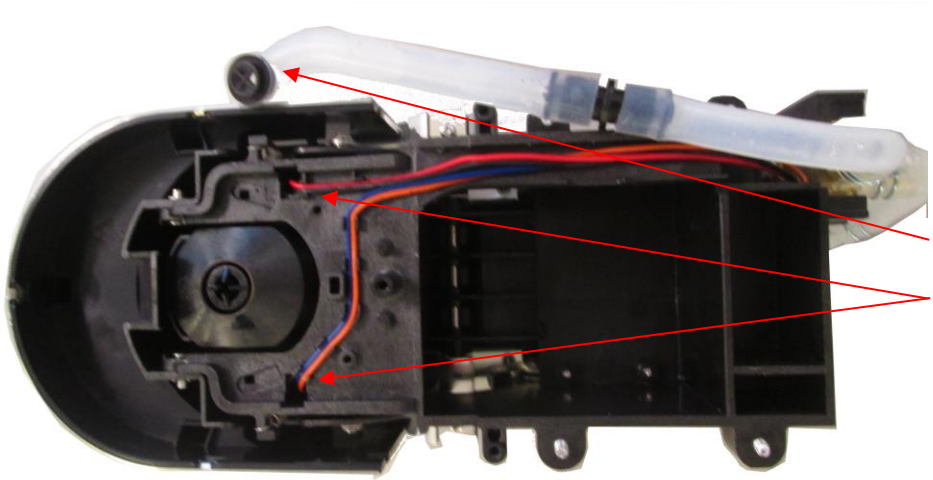
Puncture Mechanism Cover – Top & Side Views

4. Pod Sensors

The Pod Sensors provide a means to indicate to the K-3500's firmware that a Hot Water or Rinse cycle is requested, or that a Pod is required to start the brewing cycle when a Pod is not present in the Holder.

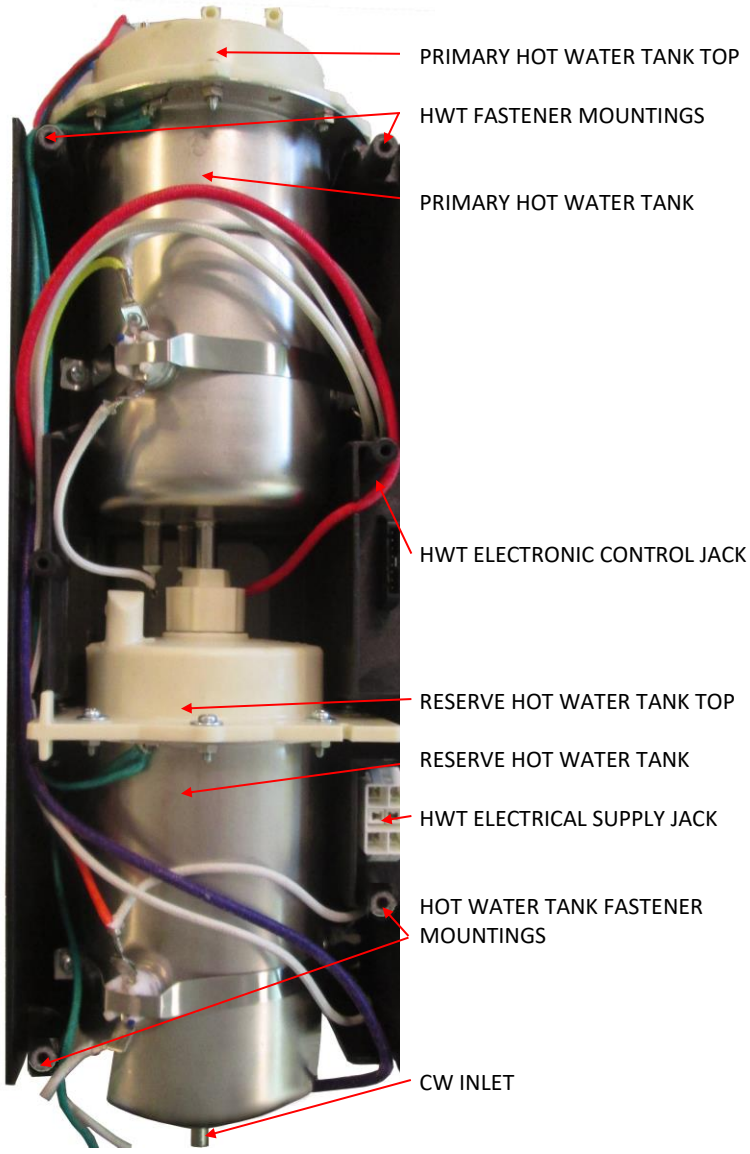


Pod Sensor Location



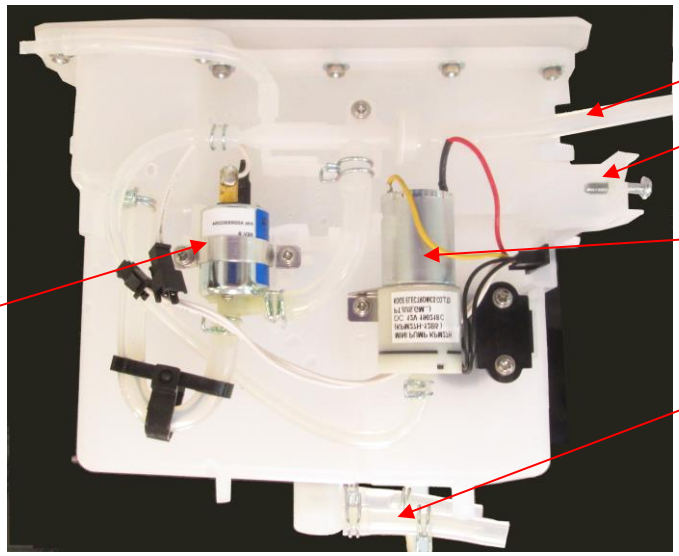
5. Hot Water Tanks

HWT Rear View



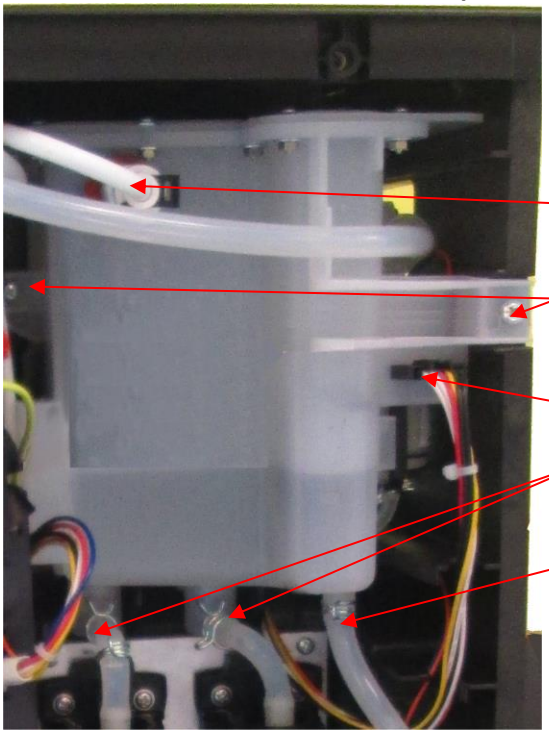
6. Cold Water Tank

CWT Module

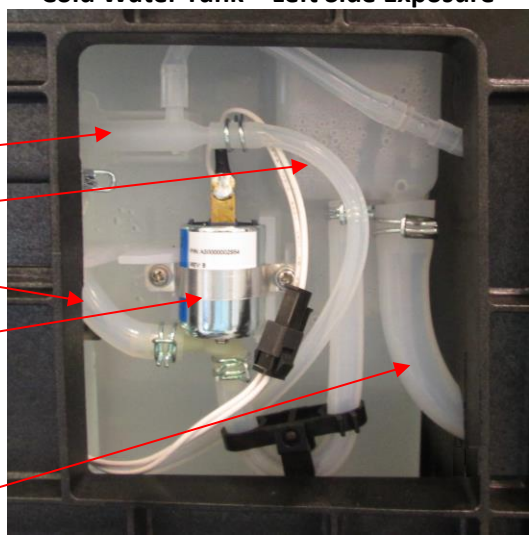


CWT VENT VALVE: Note that this valve can be removed & replaced as a separate unit.
[P/N AS0000002954 REV. B]

Cold Water Tank – Outer Side Rear Exposure



Cold Water Tank – Left Side Exposure



FILTER TEE

VENT TUBES

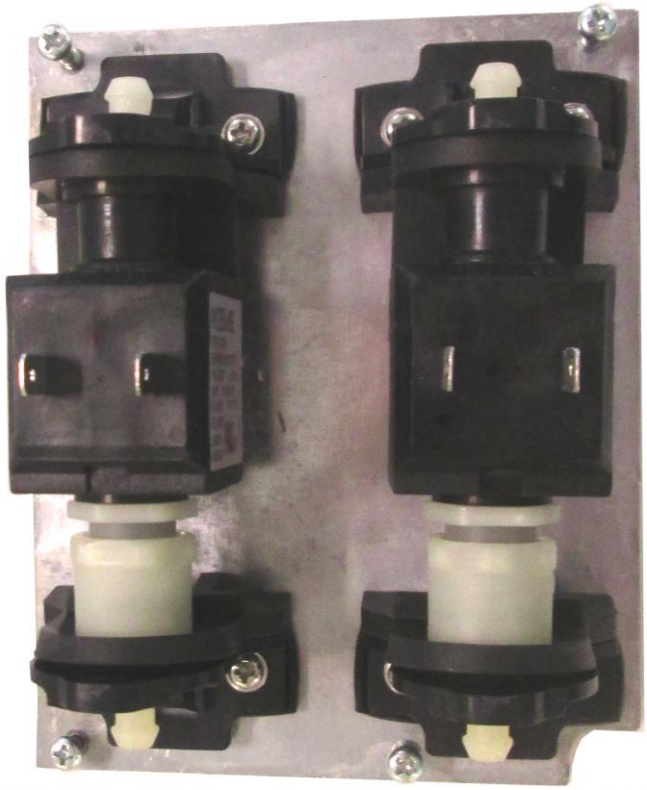
VENT VALVE:
Note that this valve can be removed & replaced as a separate unit
[P/N **AS0000002954** REV B].

OVERFLOW TUBE

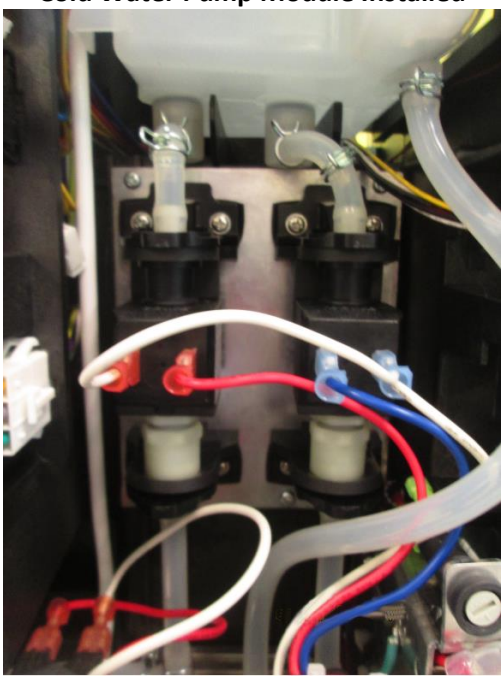
7. Cold Water Pumps

The CW Pumps Module is located in the right-rear of the K-3500, just below the Cold Water Tank, as shown installed below.

Cold Water Pump Module



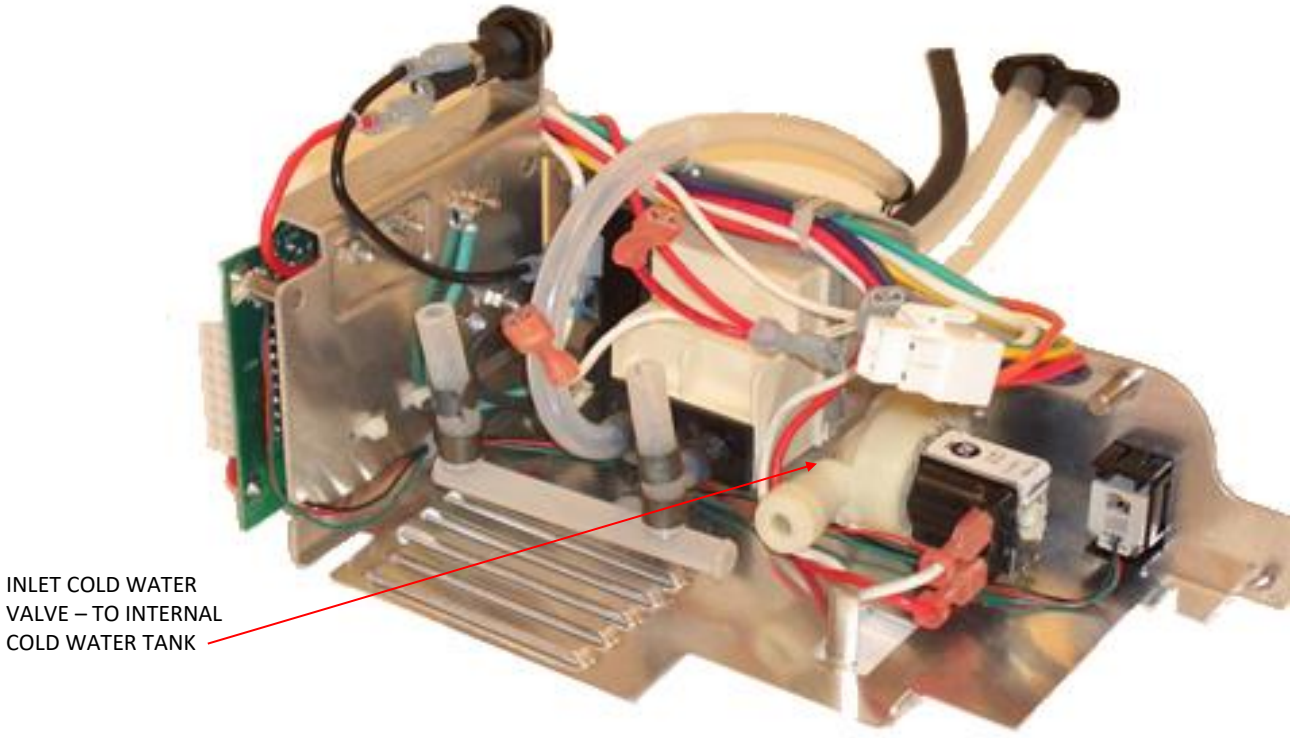
Cold Water Pump Module Installed



8. Cold Water Valve

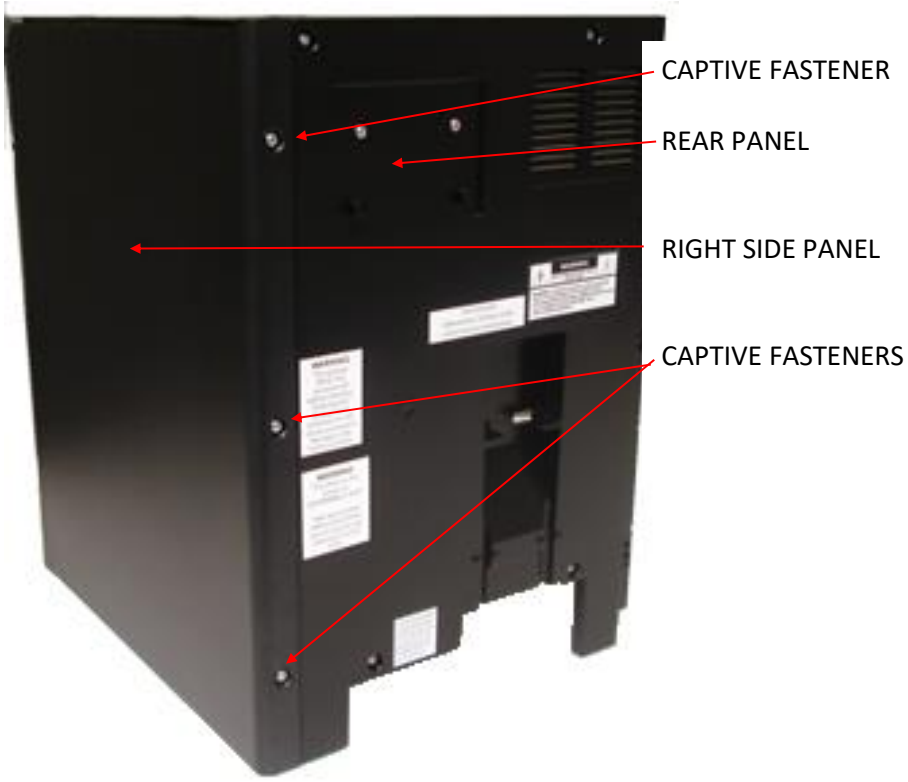
The CW Valve is located within the Power Module as shown.

Power Module Rear (Interior) View



9. Rear & Right Side Cover Panels

The rear and right side panels can be removed as a unit by loosening the 3 captive screws (as shown).

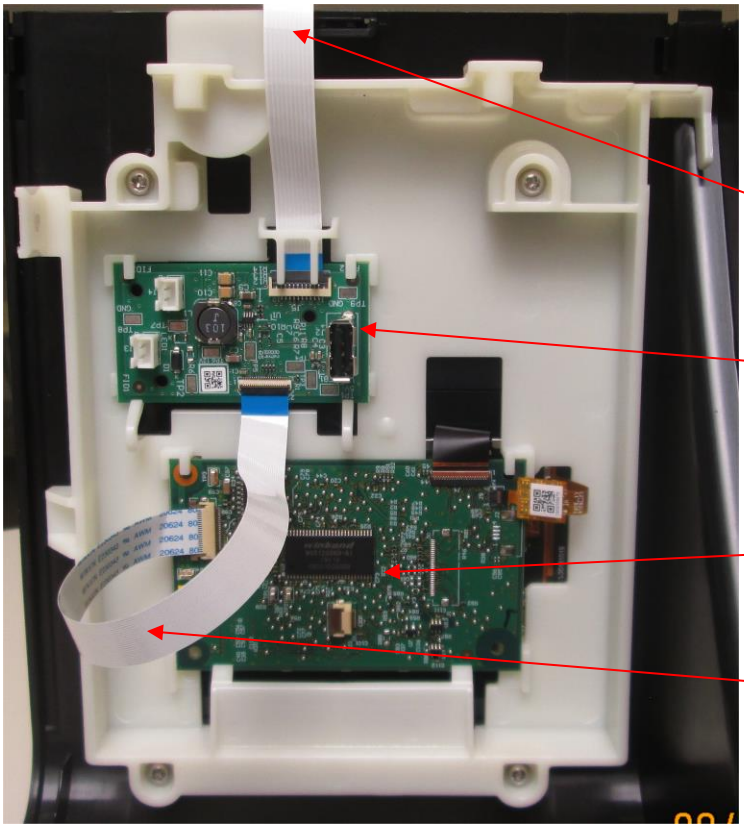


10. User Interface Touchscreen Assembly:

Touchscreen Face & Top Panel Assembly

Top & Front Panel Underside with UI Assembly

User Interface Assembly



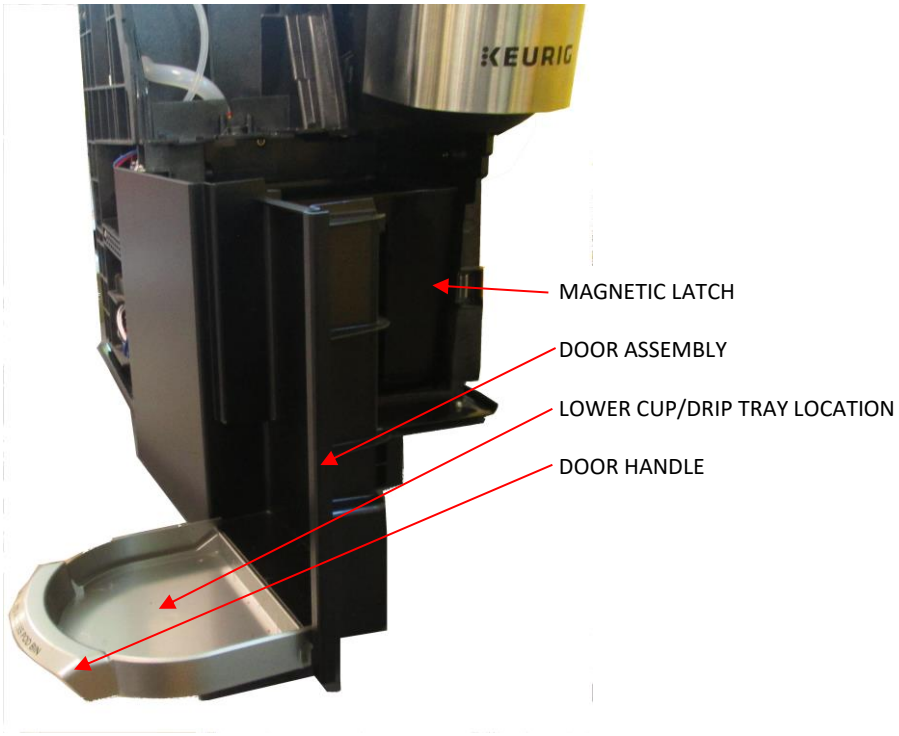
FFC (FLAT FLEX CABLE) CONNECTION TO MAIN PRINTED CIRCUIT BOARD

TRANSITION BOARD

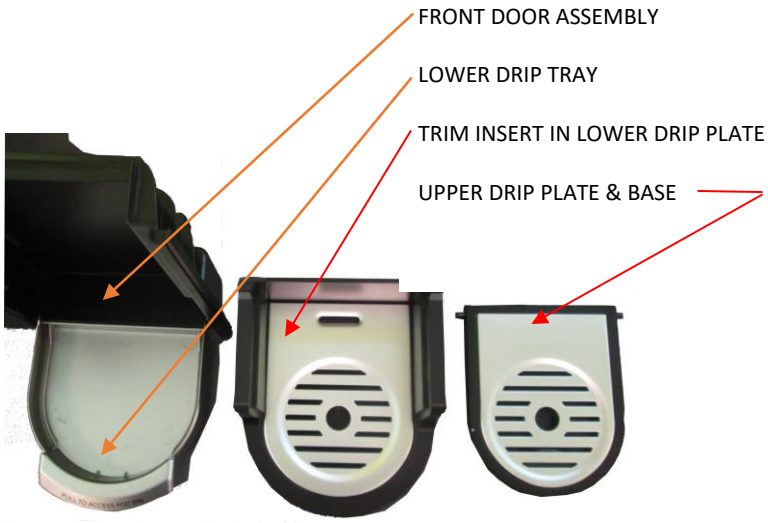
CAMERA PROCESSING BOARD (CPB)

TRANSITION TO CPB PROCESSING BOARDS FFC (FLAT FLEX CABLE) INTERFACE

11. Front Door

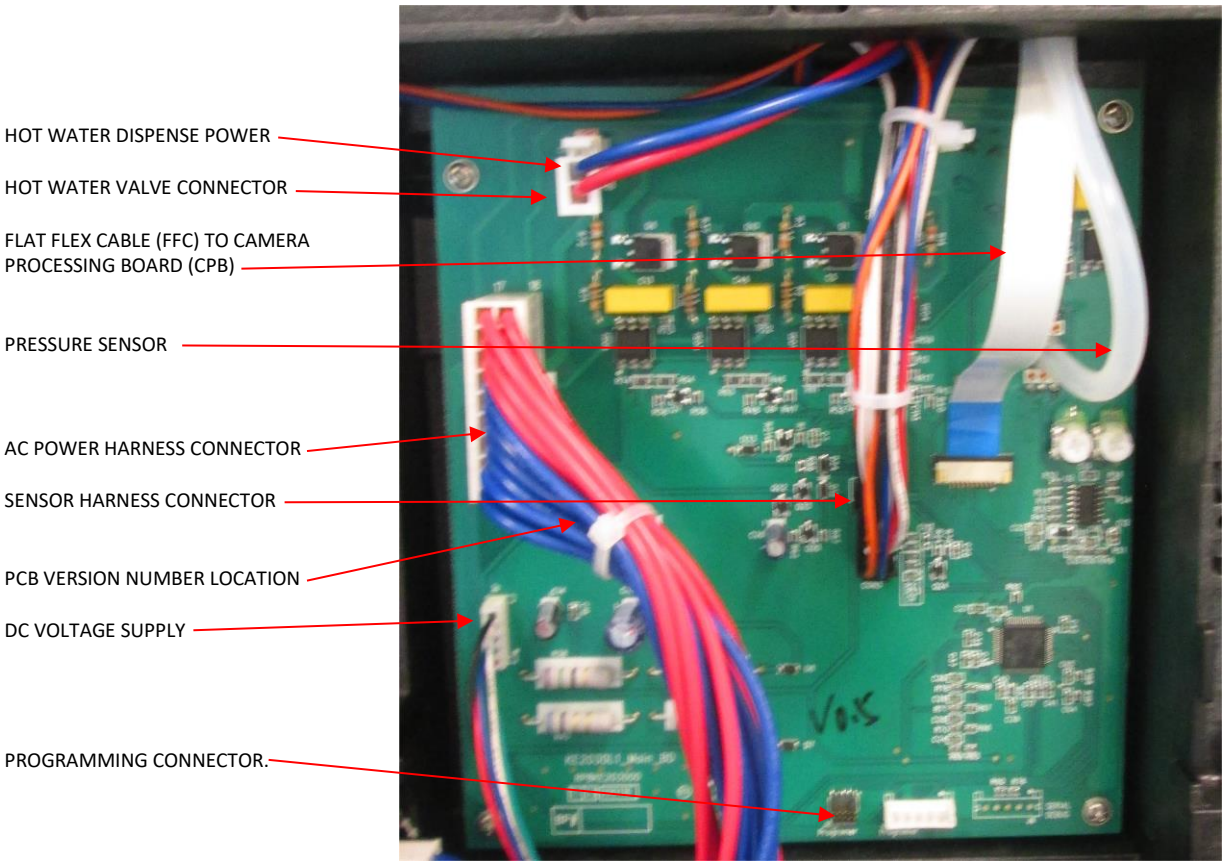


12. Drip Trays

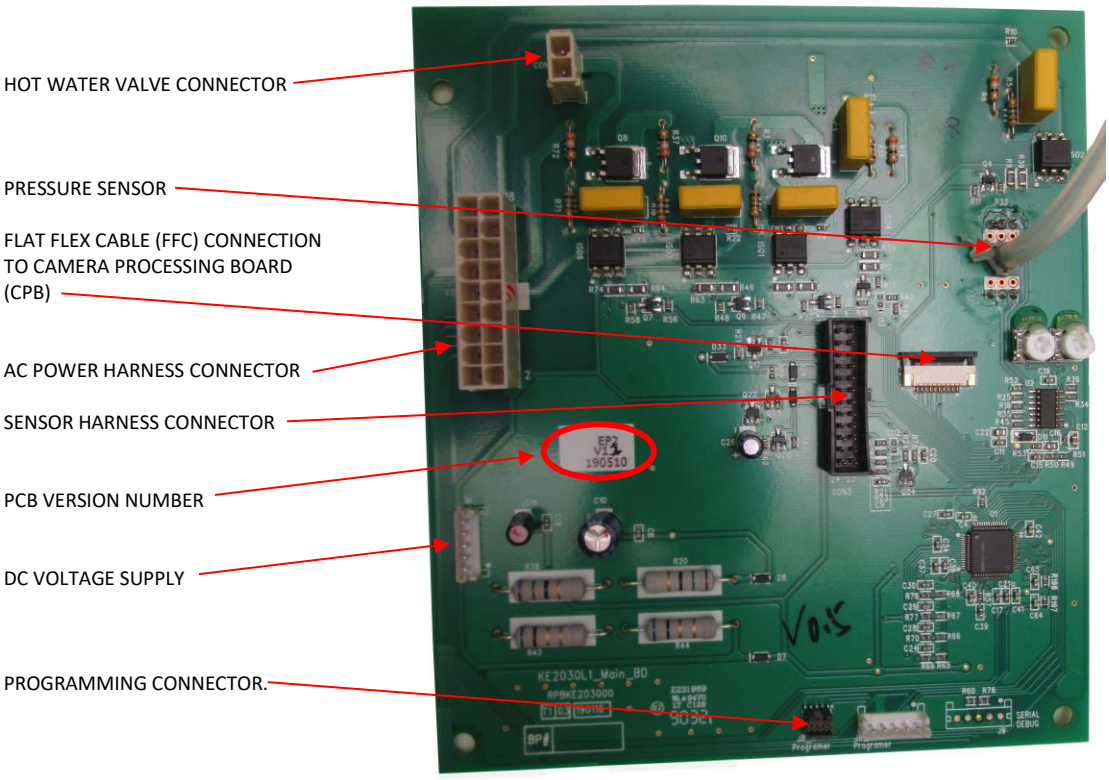


13. Main Processing Control Board [PCB]

PCB Installed



PCB Removed

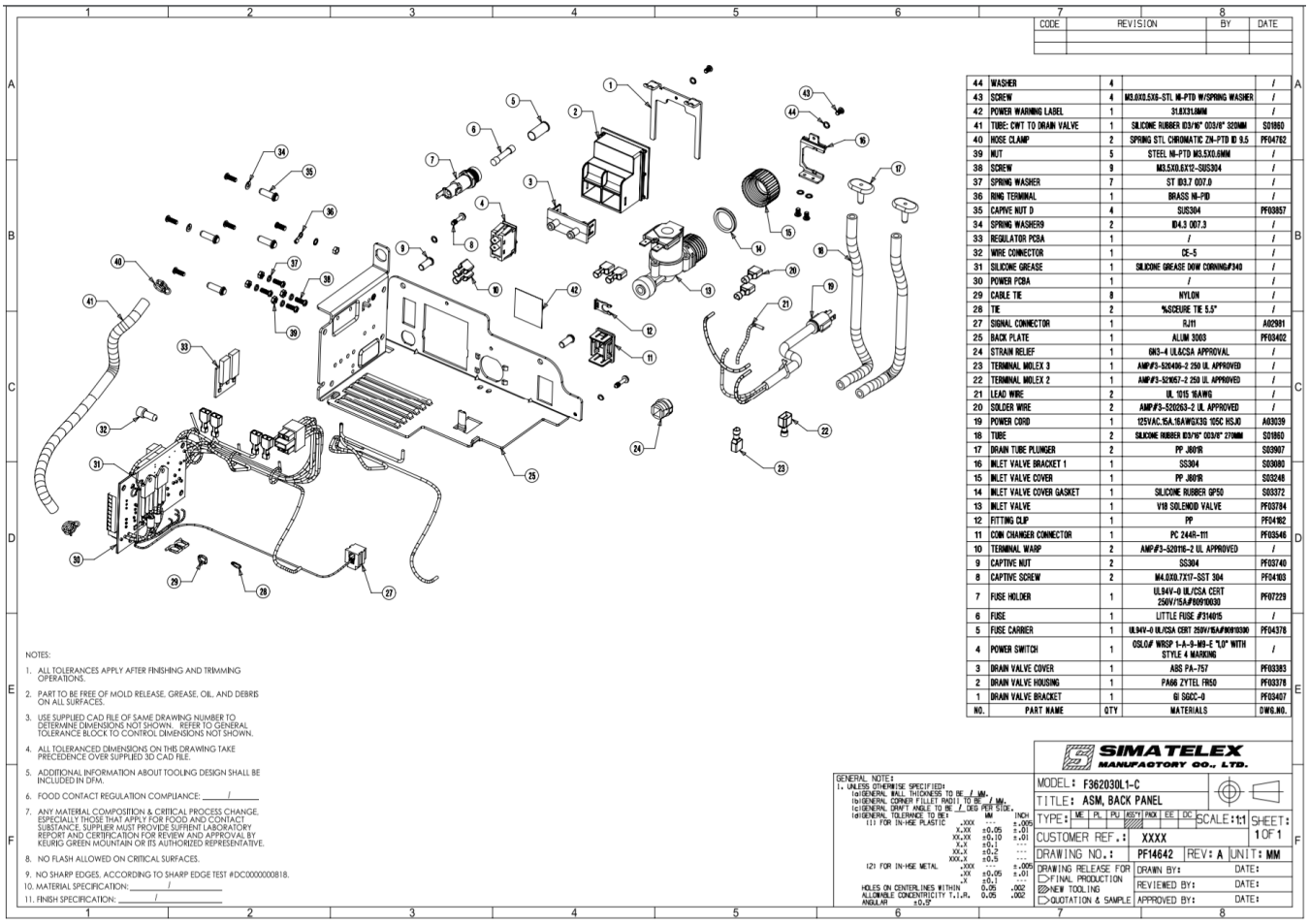

HOT WATER VALVE CONNECTOR
PRESSURE SENSOR
FLAT FLEX CABLE (FFC) CONNECTION TO CAMERA PROCESSING BOARD (CPB)
AC POWER HARNESS CONNECTOR
SENSOR HARNESS CONNECTOR
PCB VERSION NUMBER
DC VOLTAGE SUPPLY
PROGRAMMING CONNECTOR.

14. Replacement Part Numbers

Please note that the images linked in the rightmost column are presented below the Part Numbers Table.

Description	Material ID	Team center ID	Packaging Dim.	Function	Material	Water Path?	Image
ASM REAR PWR BRACKET K-3500	5000349989	AS0000002805	ASM POWER MODULE ASS'Y (WAYSP203001) Packing method.doc Rear Power Bracket Packaging june 11.xls	Regulates AC power. PCBAs without controllers also contains Inlet Valve also contains drain tubes	PCB, Stainless Steel contains some insulated wire, silicone tubing, nylon	Yes (inlet valve)	PFI4642_POWER_MODULE_Explode.pdf
ASM DISPENSE VALVE K-3500	5000349990	AS0000002956	updated 6/11 Dispense Valve Packaging june 11.xls DISPENSE VALVE ASS'Y (WAYSP203003) Packing method.doc	dispense hot water	mainly Polysulfone contains some stainless steel and copper wire	Yes	VD03LS100PROY rev5 VALVE, WATER, CEME.pdf
ASM CWP K-3500	5000349991	AS0000002074	COLD WATER PUMP ASS'Y (WAYSP203004) Packing method.doc COld Water Pump Packaging june 11.xls	move water from cold tank into hot tanks	mainly Nylon, rubber, aluminum contains some stainless steel and copper wire	Yes	PFI4639_CWP_Explode.pdf
ASM PUNCTURE MECH K-3500	5000349992	AS0000003079	updated 6/11 Puncture Mech Packaging june 11.xls PM (WAYSP203006) Packing method.doc	puncture and hold coffee pod	mainly glass filled Polycarbonate contains some stainless steel and silicone	Yes	PFI4640_PUNCTURE_Explode.pdf
ASM DRIP TRAY K-3500	5000349994	AS0000001614	updated 6/11 Drip Tray Packaging june 11.xls DRIP TRAY ASS'Y (WAYSP203005) Packing method.doc	supports coffee mug catches coffee drips	ABS plastic and chrome plated SPCC steel	No	PFI4637_DRIP_TRAY_Explode.pdf
ASM HWT K-3500	5000349995	AS0000002958	HOT WATER TANK ASS'Y (WAYSP203008) Packing method.doc updated 6/11 Hot Water Tank Packaging june 11.xls	heats and stores water	mainly glass filled Polycarbonate and stainless steel contains glass filled Polystyrene contains insulated wires	Yes	PFI4641_HWT_Explode.pdf
ASM CONTROL PANEL K-3500	5000349996	AS0000002806		Control Machine Function includes Touchscreen, PCBA with controller PCBA without controller	PCB, glass, Polycarbonate/ABS blend	No	PFI4638_CONTROL_PANEL_Explode.pdf
ASM VENT VALVE K-3500	5000349997	AS0000002954	updated 6/11 Vent Valve Packaging june 11.xls WAYSP203002 Vent Valve ASSY Packing method.doc	hold ASM CONTROL Panel (WAYSP203007) Packing method.doc Control Panel Packaging june 11.xlsand release air pressure	stainless steel, Nylon	No	PFI4634_VENT_VALVE_Explode.pdf
ASM CWT K-3500	5000349993	AS0000003294		same as 5000051207	same as 5000051207 Polypropylene Silicone tubing stainless steel low density polyethylene (LPDE) tubing	Yes	PFI4635_CWT_Explode.pdf

15. Power Module Detailed View



CODE	REVISION	BY	DATE

NO.	PART NAME	QTY	MATERIALS	DWG.NO.
44	WASHER	4		/
43	SCREW	4	M3.0X0.5X6-STL NI-PTD W/SPRING WASHER	/
42	POWER WARNING LABEL	1	31.8X31.8MM	/
41	TUBE: CWT TO DRAIN VALVE	1	SILICONE RUBBER ID3/16" OD3/8" 320MM	S01660
40	HOSE CLAMP	2	SPRING STL CHROMATIC ZN-PTD ID 9.5	PF04782
39	NUT	5	STEEL NI-PTD M3.5X0.6MM	/
38	SCREW	9	M3.5X0.6X12-SUS304	/
37	SPRING WASHER	7	ST ID3.7 OD7.0	/
36	RING TERMINAL	1	BRASS NI-PD	/
35	CAPIVE NUT D	4	SUS304	PF03857
34	SPRING WASHER9	2	ID4.3 OD7.3	/
33	REGULATOR PCBA	1	/	/
32	WIRE CONNECTOR	1	CE-5	/
31	SILICONE GREASE	1	SILICONE GREASE DOW CORNING#340	/
30	POWER PCBA	1	/	/
29	CABLE TIE	8	NYLON	/
28	TIE	2	%SCEURE TIE 5.5"	/
27	SIGNAL CONNECTOR	1	RJ11	A02981
25	BACK PLATE	1	ALUM 3003	PF03402
24	STRAIN RELIEF	1	GW3-4 UL&CSA APPROVAL	/
23	TERMINAL MOLEX 3	1	AMP#3-520406-2 250 UL APPROVED	/
22	TERMINAL MOLEX 2	1	AMP#3-521057-2 250 UL APPROVED	/
21	LEAD WIRE	2	UL 1015 16AWG	/
20	SOLDER WIRE	2	AMP#3-520263-2 UL APPROVED	/
19	POWER CORD	1	125VAC,15A,16AWGX3G 105C HSJO	A03039
18	TUBE	2	SILICONE RUBBER ID3/16" OD3/8" 270MM	S01660
17	DRAIN TUBE PLUNGER	2	PP J801R	S03907
16	INLET VALVE BRACKET 1	1	SS304	S03080
15	INLET VALVE COVER	1	PP J801R	S03248
14	INLET VALVE COVER GASKET	1	SILICONE RUBBER GP50	S03372
13	INLET VALVE	1	V18 SOLENOID VALVE	PF03784
12	FITTING CLIP	1	PP	PF04102
11	COIN CHANGER CONNECTOR	1	PC 244R-111	PF03546
10	TERMINAL WARP	2	AMP#3-520116-2 UL APPROVED	/
9	CAPTIVE NUT	2	SS304	PF03740
8	CAPTIVE SCREW	2	M4.0X0.7X17-SST 304	PF04103
7	FUSE HOLDER	1	UL94V-0 UL/CSA CERT 250V/15A#E80910030	PF07229
6	FUSE	1	LITTLE FUSE #3140015	/
5	FUSE CARRIER	1	UL94V-0 UL/CSA CERT 250V/15A#E80910030	PF04378
4	POWER SWITCH	1	OSLO# WRSP 1-A-9-M9-E "LO" WITH STYLE 4 MARKING	/
3	DRAIN VALVE COVER	1	ABS PA-757	PF03393
2	DRAIN VALVE HOUSING	1	PA66 ZYTEL FR50	PF03378
1	DRAIN VALVE BRACKET	1	GI SGCC-0	PF03407

NOTES:

1. ALL TOLERANCES APPLY AFTER FINISHING AND TRIMMING OPERATIONS.
2. PART TO BE FREE OF MOLD RELEASE, GREASE, OIL, AND DEBRIS ON ALL SURFACES.
3. USE SUPPLIED CAD FILE OF SAME DRAWING NUMBER TO DETERMINE DIMENSIONS NOT SHOWN. REFER TO GENERAL TOLERANCE BLOCK TO CONTROL DIMENSIONS NOT SHOWN.
4. ALL TOLERANCED DIMENSIONS ON THIS DRAWING TAKE PRECEDENCE OVER SUPPLIED 3D CAD FILE.
5. ADDITIONAL INFORMATION ABOUT TOOLING DESIGN SHALL BE INCLUDED IN DFM.
6. FOOD CONTACT REGULATION COMPLIANCE: _____/_____
7. ANY MATERIAL COMPOSITION & CRITICAL PROCESS CHANGE, ESPECIALLY THOSE THAT APPLY FOR FOOD AND CONTACT SUBSTANCE, SUPPLIER MUST PROVIDE SUFFENT LABORATORY REPORT AND CERTIFICATION FOR REVIEW AND APPROVAL BY KEURIG GREEN MOUNTAIN OR ITS AUTHORIZED REPRESENTATIVE.
8. NO FLASH ALLOWED ON CRITICAL SURFACES.
9. NO SHARP EDGES, ACCORDING TO SHARP EDGE TEST #DC0000000818.
10. MATERIAL SPECIFICATION: _____/_____
11. FINISH SPECIFICATION: _____/_____

GENERAL NOTE:
1. UNLESS OTHERWISE SPECIFIED:
 (a)GENERAL WALL THICKNESS TO BE _/_MM.
 (b)GENERAL CORNER FILLET RADII TO BE _/_MM.
 (c)GENERAL DRAFT ANGLE TO BE _/_DEG PER SIDE.
 (d)GENERAL TOLERANCE TO BE:

	MM	INCH
(1) FOR IN-HSE PLASTIC .XXX	...	±.005
X.XX	±0.05	±.01
XX.XX	±0.10	±.01
X.X	±0.1	---
XX.X	±0.2	---
XXX.X	±0.5	---
(2) FOR IN-HSE METAL .XXX	...	±.005
.XX	±0.05	±.01
.X	±0.1	---
HOLES ON CENTERLINES WITHIN	0.05	.002
ALLOWABLE CONCENTRICITY T.I.R.	0.05	.002
ANGULAR	±0.5°	

SIMATELEX MANUFACTORY CO., LTD.

MODEL:	F362030L1-C
TITLE:	ASM, BACK PANEL
TYPE:	ME PL PU ASSY PACK EE QC
SCALE:	1:1
SHEET:	1 OF 1
CUSTOMER REF.:	XXXX
DRAWING NO.:	PF14642
REV:	A
UNIT:	MM
DRAWING RELEASE FOR	DRAWN BY: DATE:
▷FINAL PRODUCTION	REVIEWED BY: DATE:
▨▷NEW TOOLING	
▷QUOTATION & SAMPLE	APPROVED BY: DATE:

16. Hot Water Dispense Valve Detailed View

1. MATERIAL:

1.1 Body material	PESU™
1.2 Seal material	LSR
1.3 Tube material	PA66 FV30%
1.4 Electrical connections	FASTON

2. ELECTRICAL CHARACTERISTICS:

2.1 Insulation class	H
2.2 Position	VERTICAL
2.3 Rated voltage	110-120 VAC 50/60Hz
2.4 Operating voltage range	110-120Vac 50/60Hz
2.5 Rated current	150mA (120Vac 50Hz)
2.6 Rated use condition	ED 100%
2.7 Insulation resistance	The insulation resistor is 500MΩ Min at DC500V between Coil and non-charge Metal
2.8 Dielectric Withstand	It has to test between coil and outer metal parts at applying AC1500V for 1 second (current≤0.3mA)

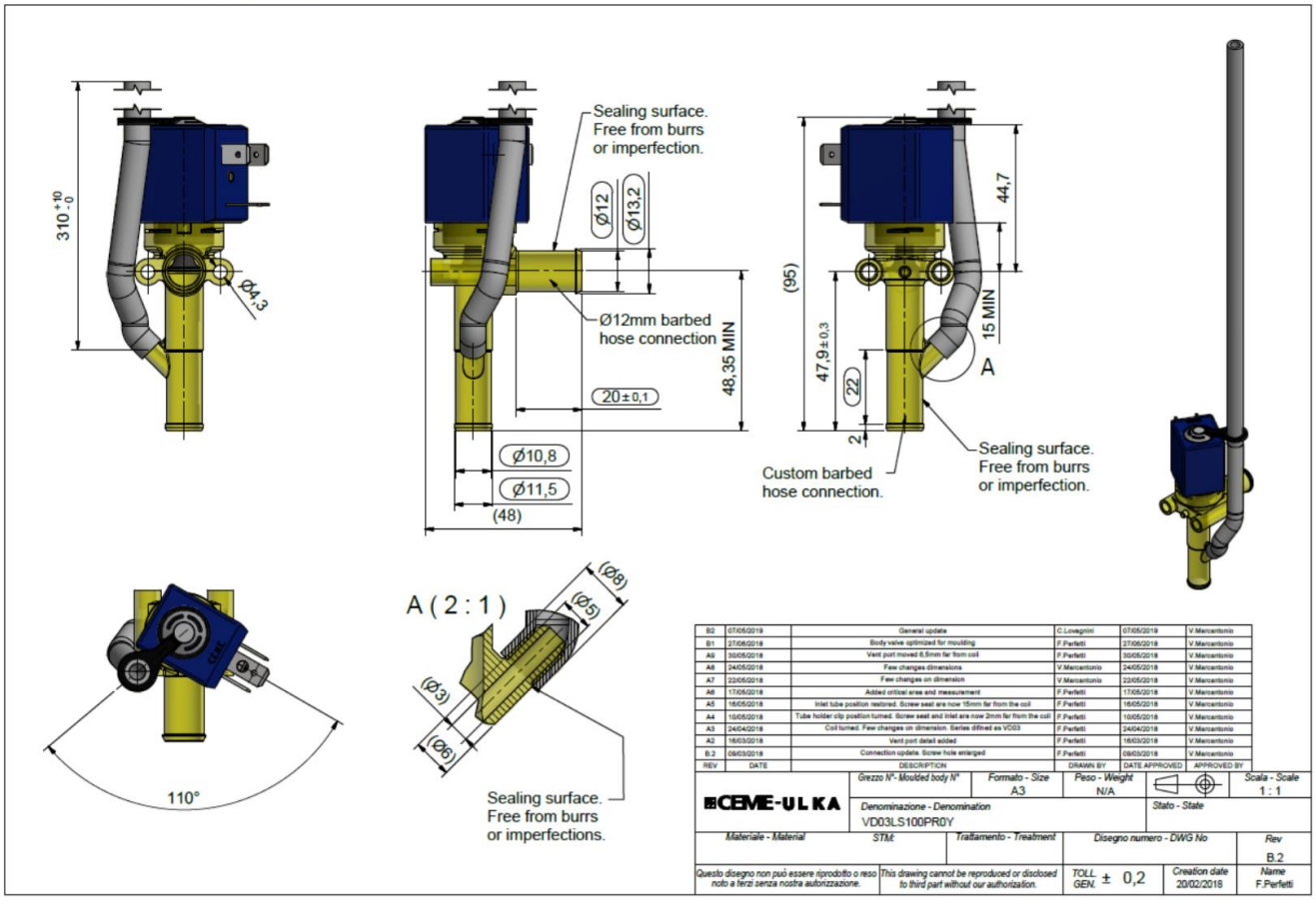
3. RATED CONDITIONS

3.1 Operational pressure (Inlet A)	7.25psi
3.4Burst Pressure	58psi
3.5 Coil power	14 W
3.6 Temperature rise	87° at 120Vac

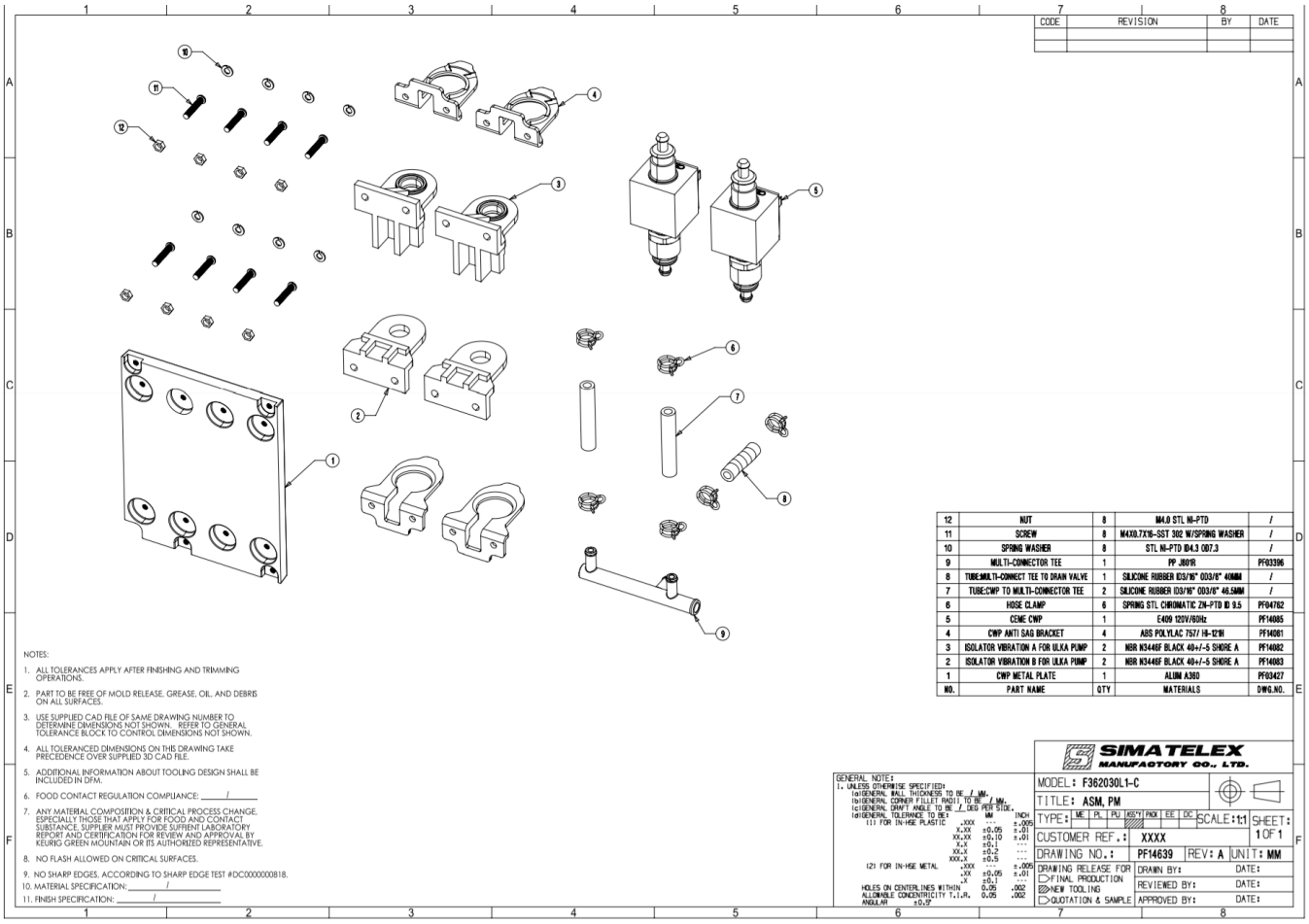
4. STANDARD OPERATING CONDITIONS

4.1 Ambient temp.	0-70°C Humidity to 30% to 85%RH
4.2 Fluid temp	<100°C
4.3 Working fluids	Water, Juice, coffee
Material Certification	CE; NSF61; NSF 51; WRAS

5. STRUCTURAL DRAWING



17. Cold Water Pumps Detailed View



CODE	REVISION	BY	DATE

NO.	PART NAME	QTY	MATERIALS	DWG.NO.
12	NUT	8	M4.0 STL NI-PTD	/
11	SCREW	8	M4X0.7X16-SST 302 W/SPRING WASHER	/
10	SPRING WASHER	8	STL NI-PTD ID4.3 OD7.3	/
9	MULTI-CONNECTOR TEE	1	PP J801R	PF03396
8	TUBE:MULTI-CONNECT TEE TO DRAIN VALVE	1	SILICONE RUBBER ID3/16" OD3/8" 40MM	/
7	TUBE:CWP TO MULTI-CONNECTOR TEE	2	SILICONE RUBBER ID3/16" OD3/8" 46.5MM	/
6	HOSE CLAMP	6	SPRING STL CHROMATIC ZN-PTD ID 9.5	PF04782
5	CSME CWP	1	E409 120V/60Hz	PF14085
4	CWP ANTI SAG BRACKET	4	ABS POLYLAC 757/ HI-121H	PF14081
3	ISOLATOR VIBRATION A FOR ULKA PUMP	2	NBR K3446F BLACK 40+/-5 SHORE A	PF14082
2	ISOLATOR VIBRATION B FOR ULKA PUMP	2	NBR K3446F BLACK 40+/-5 SHORE A	PF14083
1	CWP METAL PLATE	1	ALUM A360	PF03427

NOTES:

1. ALL TOLERANCES APPLY AFTER FINISHING AND TRIMMING OPERATIONS.
2. PART TO BE FREE OF MOLD RELEASE, GREASE, OIL, AND DEBRIS ON ALL SURFACES.
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4. ALL TOLERANCED DIMENSIONS ON THIS DRAWING TAKE PRECEDENCE OVER SUPPLIED 3D CAD FILE.
5. ADDITIONAL INFORMATION ABOUT TOOLING DESIGN SHALL BE INCLUDED IN DFM.
6. FOOD CONTACT REGULATION COMPLIANCE: _____/_____
7. ANY MATERIAL COMPOSITION & CRITICAL PROCESS CHANGE, ESPECIALLY THOSE THAT APPLY FOR FOOD AND CONTACT SUBSTANCE, SUPPLIER MUST PROVIDE SUFFIENT LABORATORY REPORT AND CERTIFICATION FOR REVIEW AND APPROVAL BY KEURIG GREEN MOUNTAIN OR ITS AUTHORIZED REPRESENTATIVE.
8. NO FLASH ALLOWED ON CRITICAL SURFACES.
9. NO SHARP EDGES, ACCORDING TO SHARP EDGE TEST #DC0000000818.
10. MATERIAL SPECIFICATION: _____/_____
11. FINISH SPECIFICATION: _____/_____

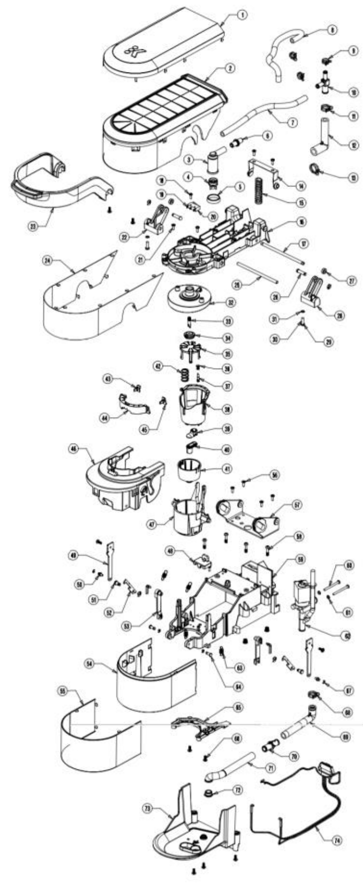
GENERAL NOTE:
1. UNLESS OTHERWISE SPECIFIED:
   (a) GENERAL WALL THICKNESS TO BE ___/___MM.
   (b) GENERAL CORNER FILLET RADII TO BE ___/___MM.
   (c) GENERAL DRAFT ANGLE TO BE ___/___DEG PER SIDE.
   (d) GENERAL TOLERANCE TO BE:

	MM	INCH
(1) FOR IN-HSE PLASTIC .XXX	---	±.005
X.XX	±0.05	±.01
XX.XX	±0.10	±.01
X.X	±0.1	---
XX.X	±0.2	---
XXX.X	±0.5	---
(2) FOR IN-HSE METAL .XXX	---	±.005
.XX	±0.05	±.01
.X	±0.1	---
HOLES ON CENTERLINES WITHIN	0.05	.002
ALLOWABLE CONCENTRICITY T.I.R.	0.05	.002
ANGULAR	±0.5°	

SIMATELEX MANUFACTORY CO., LTD.

MODEL: F362030L1-C
TITLE: ASM, PM
TYPE: ME PL PU ABS*I PMX EE DC SCALE: 1:1 SHEET: 1 OF 1
CUSTOMER REF.: XXXX
DRAWING NO.: PF14639 REV: A UNIT: MM
DRAWING RELEASE FOR
☐ FINAL PRODUCTION
☑ NEW TOOLING
☐ QUOTATION & SAMPLE
DRAWN BY: DATE:
REVIEWED BY: DATE:
APPROVED BY: DATE:

18. Puncture Mechanism Detailed View



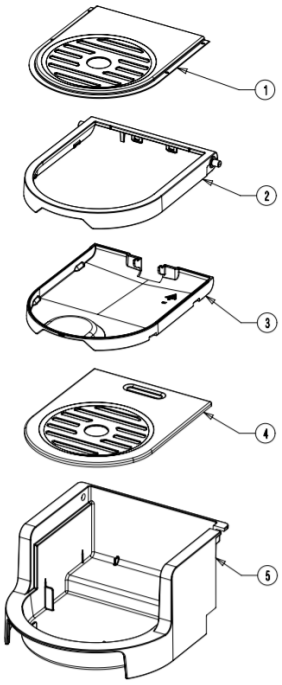
NO.	PART NAME	QTY	MATERIALS	DWG.NO.
74	K-CUP SENSOR ASS'Y	1	/	/
73	SPOUT COVER	1	ABS PA765	PF13885
72	TUBE CONNECTOR	1	PP J801R	PF06054
71	TUBE HOT WATER DISPENSE-1	1	SILICONE ON SILICONE RUBBER GP50 ID6.0	PF06060
70	CONNECTOR	1	PP J801R	PF14587
69	TUBE HOT WATER DISPENSE	1	SILICONE ON SILICONE RUBBER GP50 ID6.0	PF06056
68	HOSE CLAMP	1	SPRING WIRE (SWP-B) ZN-PLATED ID12.5	PF04763
67	E RING	10	ST.STL(ID3XOD7XT0.6)	/
66	SCREW	9	M3.0X10-ST BLACK OXIDE W/WASHER	/
65	MUG LIGHT BASE	1	PC 244R-111	PF03420
64	PUNCTURE NOSESHAFT	2	SUS304	PF03655
63	PICK SPRING	4	ST.STL	PF03658
62	DISPENSE VALVE	1	120VAC 60HZ UL/CSA/NSF APPROVAL	PF14626
61	WASHER	2	SS304 OD6.5 ID3.7	/
60	SCREW	2	M3.5X37-SUS304	/
59	PUNCTURE BASE	1	PC 3025G20BK	PF03419
58	CAPTIVE SCREW	4	M4.0X0.7X17-SST 304	PF04103
57	CAM SLOT BRACKET ASS'Y	1	SUS304 AND POM	PF04105
56	SCREW	6	M3.5X12-ST.STL #302	/
55	PUNCTURE TRAY WRAP	1	SS 430	PF13881
54	LOWER COVER,PM	1	ABS/PC510	PF13884
53	K CUP SENSOR HOLDER	2	PC3025+GF20	PF03424
52	PIVOTING SPRING	2	SUS304	PF03411
51	PICK PIVOT SHAFT	2	SUS304	PF03703
50	ARM FOLLOWER PIN	2	SUS304	PF03742
49	ARM SLOT FOLLOWER	2	SUS 304	PF03414
48	SILICONE BUMPER	1	SILICONE RUBBER GP50 PLATINUM CURED	PF04094
47	CUP HOLDER PIVOT	1	GFN20F-7015	PF03416
46	PUNCTURE TRAY	1	PC 3025G20BK	PF13887
45	BUMPER RIGHT	1	SILICONE RUBBER GP50	PF05391
44	CUP HOLDER FRONT	1	PP J801R	PF05236
43	BUMPER LEFT	1	SILICONE RUBBER GP50	PF05390
42	PLATFORM SPRING	1	ST.STL	PF03700
41	K CUP FUNNEL	1	PP HJ4012	PF03417
40	EXIT TUBE LOWER	1	PC HF-1140-111	PF04569
39	EXIT TUBE UPPER	1	PC HF-1140-111	PF04570
38	CUP HOLDER	1	PP J801R	PF05286
37	EXIT NEEDLE	1	SS316	PF04384
36	GASKET EXIT NEEDLE	1	SILICONE RUBBER FDA APPROVAL	S02320
35	PLATFORM	1	PP J801R	PF03405
34	ENTRANCE NEEDLE GASKET	1	SILICONE RUBBER, PLATINUM CURED, RBB-2101-20	PF12012
33	ENTRANCE NEEDLE	1	SS316 01-201408-000	PF05235
32	NEEDLE PLATE	1	PP HJ730	PF13886
31	SPRING WASHER	2	SUS304 ID3.7 OD6.5	/
30	SCREW	2	M3.5X0.6X14 SUS304	PF04173
29	GLUE	/	LOCKTITE 272	/
28	LINK HANDLE LEFT	1	ZN ALLOY CR-PLATED (DIE CAST)	PF03412
27	BEARING	2	STAINLESS STEEL	A03000
26	PIN HANDLE BEARING	2	SUS304	PF03656
25	BAIL CLEVIS PIN	1	SUS304	PF03657
24	PM TOP WRAP	1	SS430	PF13880
23	HANDLE	1	ZN 3#	PF13877
21	SCREW	2	M3.5X10-ST.STL	/
22	LINK HANDLE RIGHT	1	ZN ALLOY CR-PLATED (DIE CAST)	PF03387
19	SOLDER WIRE.	/	217-227C, DIA. 1.2MM	/
18	SCREW	1	M2.2X10 SS303	/
17	SHAFT PIVOT PLATE	1	SUS304	PF03654
16	PUNCTURE UPPER	1	PC 3025G20BK	PF13883
15	PIVOT PLATE SPRING	1	ST.STL	PF14531
14	DETENT ASSY	1	SUS301 AND POM	PF04087
13	HOSE CLAMP-1	1	SPRING STL CHROMATIC ZN-PTD ID=14.8	PF04765
12	HWD TUBE	1	SILICONE RUBBER GP50	PF14409
11	HOSE CLAMP-2	1	SPRING STL CHROMATIC ZN-PTD ID=10.2	PF04764
10	TEE TUBING,4.8X4.8X7.0	1	PP HJ730	PF14385
9	MULTI-CONNECTOR TEE	3	SPRING STL CHROMATIC ZN-PTD ID 9.5	S03002
20	MICRO SWITCH	1	DMB-1206-06 6A 125VAC	/
8	TUBE: HWT COVER TO TEE TUBING	1	SILICONE RUBBER ID3/16" OD3/8" 320MM	S03002
7	TUBE: TEE TUBING TO K-CUP PUNCTURE	1	SILICONE RUBBER ID3/16" OD3/8" 210MM	S03002
6	TUBE CONNECTOR ENA,8.0MM X 8.0MM	1	PP J801R	PF06062
5	RING ENA	1	PP	PF06131
4	VALVE CHECK	1	OV16	S01874
3	TUBE ELBOW	1	SILICONE RUBBER GP50	PF06061
2	TOP COVER,PM	1	ABS/PC510	PF13882
1	PM METAL TOP	1	SS 430 T0.4	PF14342

SIMATELEX MANUFACTORY CO., LTD.

MODEL: F362030L1-C
TITLE: ASM, PM
TYPE: ME PL PU ASS'Y PACK EE DC — SCALE: 1:1 — SHEET: 1 OF 1
CUSTOMER REF.: XXXX
DRAWING NO.: PF14640 — REV: A — UNIT: MM

19. Drip Tray Detailed View

CODE	REVISION	BY	DATE



NO.	PART NAME	QTY	MATERIALS	DWG.NO.
4	TRAVEL MUG TRAY LID	1	SPCC T0.8	PF13879
3	DRIP TRAY	1	ABS PA757	PF13891
5	DRIP TRAY BASE	1	ABS PA757	PF13897
1	DRIP TRAY LID	1	SPCC T0.8	PF13878
2	DRIP TRAY FRAME	1	ABS PA757	PF13890

NOTES:

1. ALL TOLERANCES APPLY AFTER FINISHING AND TRIMMING OPERATIONS.
2. PART TO BE FREE OF MOLD RELEASE, GREASE, OIL, AND DEBRIS ON ALL SURFACES.
3. USE SUPPLIED CAD FILE OF SAME DRAWING NUMBER TO DETERMINE DIMENSIONS NOT SHOWN. REFER TO GENERAL TOLERANCE BLOCK TO CONTROL DIMENSIONS NOT SHOWN.
4. ALL TOLERANCED DIMENSIONS ON THIS DRAWING TAKE PRECEDENCE OVER SUPPLIED 3D CAD FILE.
5. ADDITIONAL INFORMATION ABOUT TOOLING DESIGN SHALL BE INCLUDED IN DFM.
6. FOOD CONTACT REGULATION COMPLIANCE: _____/_____
7. ANY MATERIAL COMPOSITION & CRITICAL PROCESS CHANGE, ESPECIALLY THOSE THAT APPLY FOR FOOD AND CONTACT SUBSTANCE, SUPPLIER MUST PROVIDE SUFFIENT LABORATORY REPORT AND CERTIFICATION FOR REVIEW AND APPROVAL BY KEURIG GREEN MOUNTAIN OR ITS AUTHORIZED REPRESENTATIVE.
8. NO FLASH ALLOWED ON CRITICAL SURFACES.
9. NO SHARP EDGES, ACCORDING TO SHARP EDGE TEST #DC0000000818.
10. MATERIAL SPECIFICATION: _____/_____
11. FINISH SPECIFICATION: _____/_____

GENERAL NOTE:
1. UNLESS OTHERWISE SPECIFIED:
(a) GENERAL WALL THICKNESS TO BE _____/ MM.
(b) GENERAL CORNER FILLET RADII TO BE _____/ MM.
(c) GENERAL DRAFT ANGLE TO BE _____/ DEG PER SIDE.
(d) GENERAL TOLERANCE TO BE:

	MM		INCH
(1) FOR IN-HSE PLASTIC	.XXX	---	±.005
	X.XX	±0.05	±.01
	XX.XX	±0.10	±.01
	X.X	±0.1	---
	XX.X	±0.2	---
	XXX.X	±0.5	---
(2) FOR IN-HSE METAL	.XXX	---	±.005
	.XX	±0.05	±.01
	.X	±0.1	---
HOLES ON CENTERLINES WITHIN		0.05	.002
ALLOWABLE CONCENTRICITY T.I.R.		0.05	.002
ANGULAR		±0.5°	

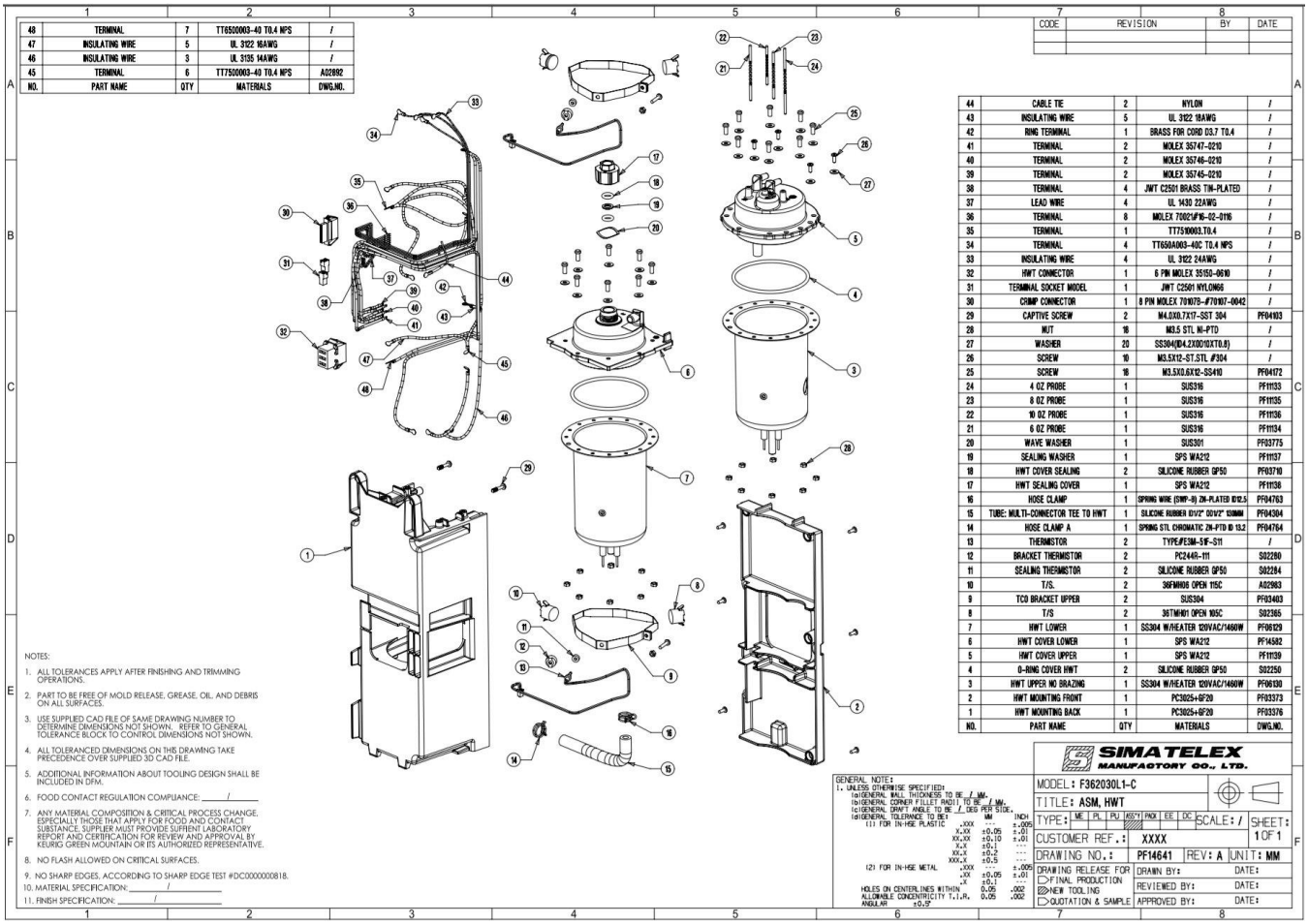
SIMATELEX MANUFACTORY CO., LTD.

MODEL: F362030L1-C
TITLE: ASM, DRIP TRAY
TYPE: ME | PL | PU | ~~KSS'Y~~ | PMX | EE | DC
SCALE: NTS
SHEET: 1 OF 1
CUSTOMER REF.: XXXX
DRAWING NO.: PF14637
REV: A
UNIT: MM

DRAWING RELEASE FOR
▷ FINAL PRODUCTION
▨ NEW TOOLING
▷ QUOTATION & SAMPLE

DRAWN BY: DATE:
REVIEWED BY: DATE:
APPROVED BY: DATE:

20. Hot Water Tanks Detailed View



NO.	PART NAME	QTY	MATERIALS	DWG.NO.
48	TERMINAL	7	TT6500003-40 T0.4 NPS	/
47	INSULATING WIRE	5	UL 3122 16AWG	/
46	INSULATING WIRE	3	UL 3135 14AWG	/
45	TERMINAL	6	TT7500063-40 T0.4 NPS	A02892

CODE	REVISION	BY	DATE

NO.	PART NAME	QTY	MATERIALS	DWG.NO.
44	CABLE TIE	2	NYLON	/
43	INSULATING WIRE	5	UL 3122 18AWG	/
42	RING TERMINAL	1	BRASS FOR CORD D3.7 T0.4	/
41	TERMINAL	2	MOLEX 35747-0210	/
40	TERMINAL	2	MOLEX 35746-0210	/
39	TERMINAL	2	MOLEX 35745-0210	/
38	TERMINAL	4	JWT C2501 BRASS TIN-PLATED	/
37	LEAD WIRE	4	UL 1430 22AWG	/
36	TERMINAL	8	MOLEX 70021#16-02-0116	/
35	TERMINAL	1	TT7510003.T0.4	/
34	TERMINAL	4	TT650A003-40C T0.4 NPS	/
33	INSULATING WIRE	4	UL 3122 24AWG	/
32	HWT CONNECTOR	1	6 PIN MOLEX 35150-0610	/
31	TERMINAL SOCKET MODEL	1	JWT C2501 NYLON66	/
30	CRIMP CONNECTOR	1	8 PIN MOLEX 70107B-#70107-0042	/
29	CAPTIVE SCREW	2	M4.0X0.7X17-SST 304	PF04103
28	NUT	18	M3.5 STL NI-PTD	/
27	WASHER	20	SS304(Ø4.2X00)0XT0.8)	/
26	SCREW	10	M3.5X12-ST.5TL #304	/
25	SCREW	18	M3.5X0.6X12-SS410	PF04172
24	4 OZ PROBE	1	SUS316	PF11133
23	8 OZ PROBE	1	SUS316	PF11135
22	10 OZ PROBE	1	SUS316	PF11136
21	6 OZ PROBE	1	SUS316	PF11134
20	WAVE WASHER	1	SUS301	PF03775
19	SEALING WASHER	1	SPS WA212	PF11137
18	HWT COVER SEALING	2	SILICONE RUBBER GP50	PF03710
17	HWT SEALING COVER	1	SPS WA212	PF11138
16	HOSE CLAMP	1	SPRING WIRE (SWP-B) ZN-PLATED Ø12.5	PF04763
15	TUBE: MULTI-CONNECTOR TEE TO HWT	1	SILICONE RUBBER ID1/2" OD1/2" 120MM	PF04304
14	HOSE CLAMP A	1	SPRING STL CHROMATIC ZN-PTD ID 13.2	PF04764
13	THERMISTOR	2	TYPE/F53M-5/F-S11	/
12	BRACKET THERMISTOR	2	PC244R-111	S02280
11	SEALING THERMISTOR	2	SILICONE RUBBER GP50	S02284
10	T/S.	2	36FM90S OPEN 115C	A02983
9	TCO BRACKET UPPER	2	SUS304	PF03403
8	T/S	2	36TM90Y OPEN 105C	S02365
7	HWT LOWER	1	SS304 W/HEATER 120VAC/1460W	PF06129
6	HWT COVER LOWER	1	SPS WA212	PF14582
5	HWT COVER UPPER	1	SPS WA212	PF11139
4	O-RING COVER HWT	2	SILICONE RUBBER GP50	S02250
3	HWT UPPER NO BRAZING	1	SS304 W/HEATER 120VAC/1460W	PF06130
2	HWT MOUNTING FRONT	1	PC3025+GF20	PF03373
1	HWT MOUNTING BACK	1	PC3025+GF20	PF03376

NOTES:

1. ALL TOLERANCES APPLY AFTER FINISHING AND TRIMMING OPERATIONS.
2. PART TO BE FREE OF MOLD RELEASE, GREASE, OIL, AND DEBRIS ON ALL SURFACES.
3. USE SUPPLIED CAD FILE OF SAME DRAWING NUMBER TO DETERMINE DIMENSIONS NOT SHOWN. REFER TO GENERAL TOLERANCE BLOCK TO CONTROL DIMENSIONS NOT SHOWN.
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5. ADDITIONAL INFORMATION ABOUT TOOLING DESIGN SHALL BE INCLUDED IN DFM.
6. FOOD CONTACT REGULATION COMPLIANCE: _____/_____
7. ANY MATERIAL COMPOSITION & CRITICAL PROCESS CHANGE, ESPECIALLY THOSE THAT APPLY FOR FOOD AND CONTACT SUBSTANCE, SUPPLIER MUST PROVIDE SUFFICIENT LABORATORY REPORT AND CERTIFICATION FOR REVIEW AND APPROVAL BY KEURIG GREEN MOUNTAIN OR ITS AUTHORIZED REPRESENTATIVE.
8. NO FLASH ALLOWED ON CRITICAL SURFACES.
9. NO SHARP EDGES, ACCORDING TO SHARP EDGE TEST #DC0000000818.
10. MATERIAL SPECIFICATION: _____/_____
11. FINISH SPECIFICATION: _____/_____

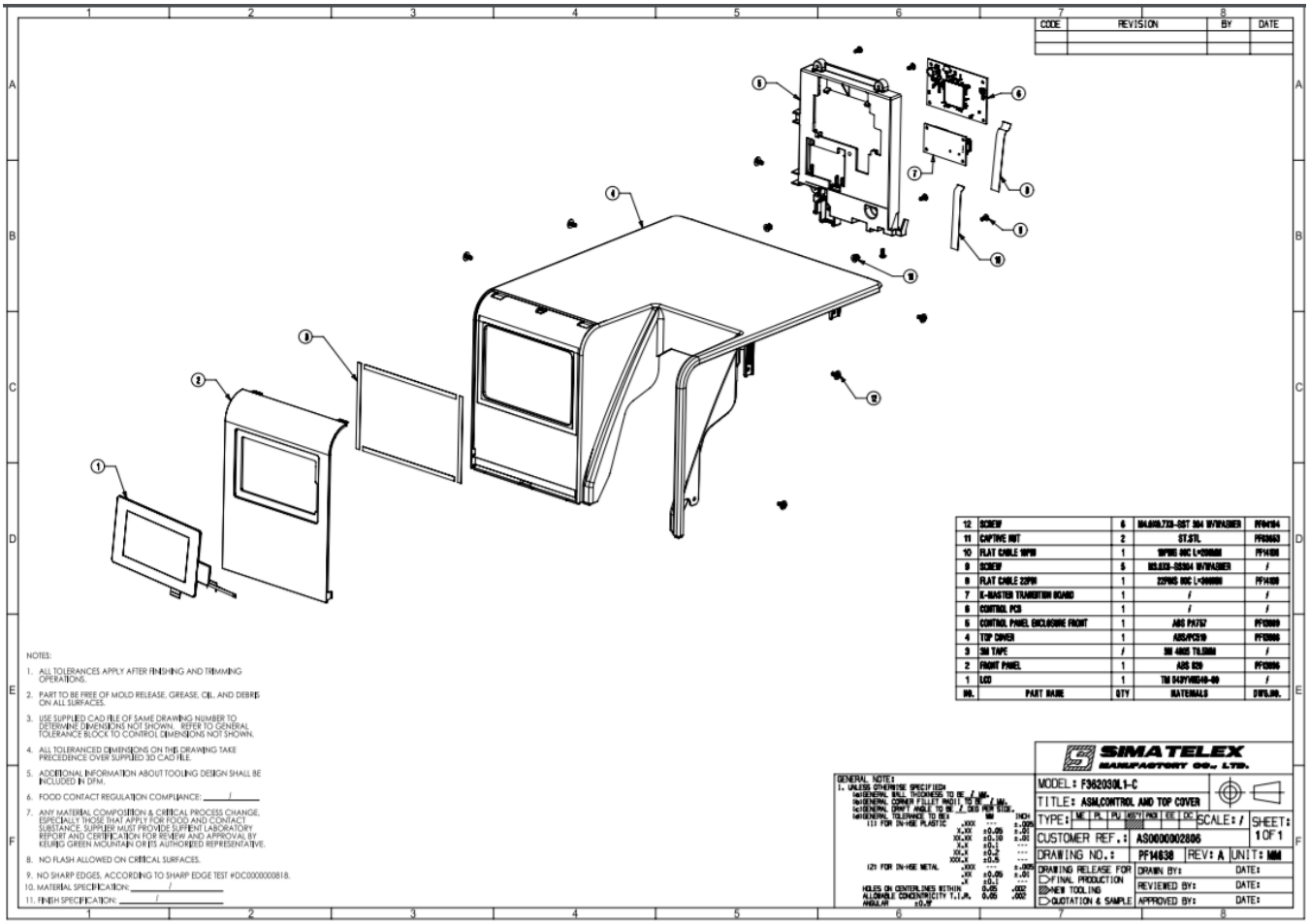
GENERAL NOTE:
1. UNLESS OTHERWISE SPECIFIED:
(a)GENERAL WALL THICKNESS TO BE / MM.
(b)GENERAL CORNER FILLET RADII TO BE / MM.
(c)GENERAL DRAFT ANGLE TO BE / DEG PER SIDE.
(d)GENERAL TOLERANCE TO BE:

	MM	INCH
(1) FOR IN-HSE PLASTIC .XXX	---	±.005
X.XX	±0.05	±.01
XX.XX	±0.10	±.01
X.X	±0.1	---
XX.X	±0.2	---
XXX.X	±0.5	---
(2) FOR IN-HSE METAL .XXX	---	±.005
.XX	±0.05	±.01
.X	±0.1	---
HOLES ON CENTERLINES WITHIN	0.05	.002
ALLOWABLE CONCENTRICITY T.I.R.	0.05	.002
ANGULAR	±0.5°	

SIMATELEX MANUFACTORY CO., LTD.

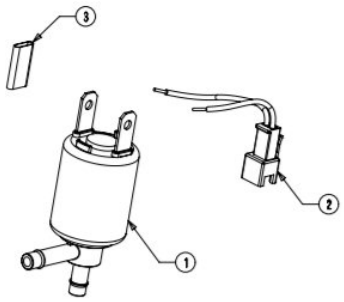
MODEL: F362030L1-C
TITLE: ASM, HWT
TYPE: ME | PL | PU | ASS'Y | PROX | EE | DC
SCALE: / SHEET: 1 OF 1
CUSTOMER REF.: XXXX
DRAWING NO.: PF14641 REV: A UNIT: MM
DRAWING RELEASE FOR
☐FINAL PRODUCTION
☒NEW TOOLING
☐QUOTATION & SAMPLE
DRAWN BY: DATE:
REVIEWED BY: DATE:
APPROVED BY: DATE:

21. Top & Front Control Panel Detailed View



22. Vent Valve Detailed View

CODE	REVISION	BY	DATE



NOTES:

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2. PART TO BE FREE OF MOLD RELEASE, GREASE, OIL, AND DEBRIS ON ALL SURFACES.
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4. ALL TOLERANCED DIMENSIONS ON THIS DRAWING TAKE PRECEDENCE OVER SUPPLIED 3D CAD FILE.
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6. FOOD CONTACT REGULATION COMPLIANCE: _____/_____
7. ANY MATERIAL COMPOSITION & CRITICAL PROCESS CHANGE, ESPECIALLY THOSE THAT APPLY FOR FOOD AND CONTACT SUBSTANCE, SUPPLIER MUST PROVIDE SUFFIENT LABORATORY REPORT AND CERTIFICATION FOR REVIEW AND APPROVAL BY KEURIG GREEN MOUNTAIN OR ITS AUTHORIZED REPRESENTATIVE.
8. NO FLASH ALLOWED ON CRITICAL SURFACES.
9. NO SHARP EDGES, ACCORDING TO SHARP EDGE TEST #DC0000000818.
10. MATERIAL SPECIFICATION: _____/_____
11. FINISH SPECIFICATION: _____/_____

NO.	PART NAME	QTY	MATERIALS	DWG.NO.
3	SHRINKAGE TUBE 7	1	SUMITUBE-F2 ID5.0	/
2	VENT VALVE CONNECTOR A	1	JOINT TECH C2505HM-02P LEADWIRE UL 1430 AWG22 L90MM	/
1	VENT VALVE	1	SH-V0829BC	S02312

GENERAL NOTE:
1. UNLESS OTHERWISE SPECIFIED:
(a) GENERAL WALL THICKNESS TO BE / MM.
(b) GENERAL CORNER FILLET RADII TO BE / MM.
(c) GENERAL DRAFT ANGLE TO BE / DEG PER SIDE.
(d) GENERAL TOLERANCE TO BE:

	MM		INCH
(1) FOR IN-HSE PLASTIC	.XXX	---	±.005
	X.XX	±0.05	±.01
	XX.XX	±0.10	±.01
	X.X	±0.1	---
	XX.X	±0.2	---
	XXX.X	±0.5	---
(2) FOR IN-HSE METAL	.XXX	---	±.005
	.XX	±0.05	±.01
	.X	±0.1	---
HOLES ON CENTERLINES WITHIN		0.05	.002
ALLOWABLE CONCENTRICITY T.I.R.		0.05	.002
ANGULAR		±0.5°	

SIMATELEX MANUFACTORY CO., LTD.

MODEL: F362030L1-C

TITLE: ASM, SOLENOID VALVE, REPLACEMENT

TYPE: ME | PL | PU | ASS'Y | PACK | EE | DC | SCALE: NTS | SHEET: 1 OF 1

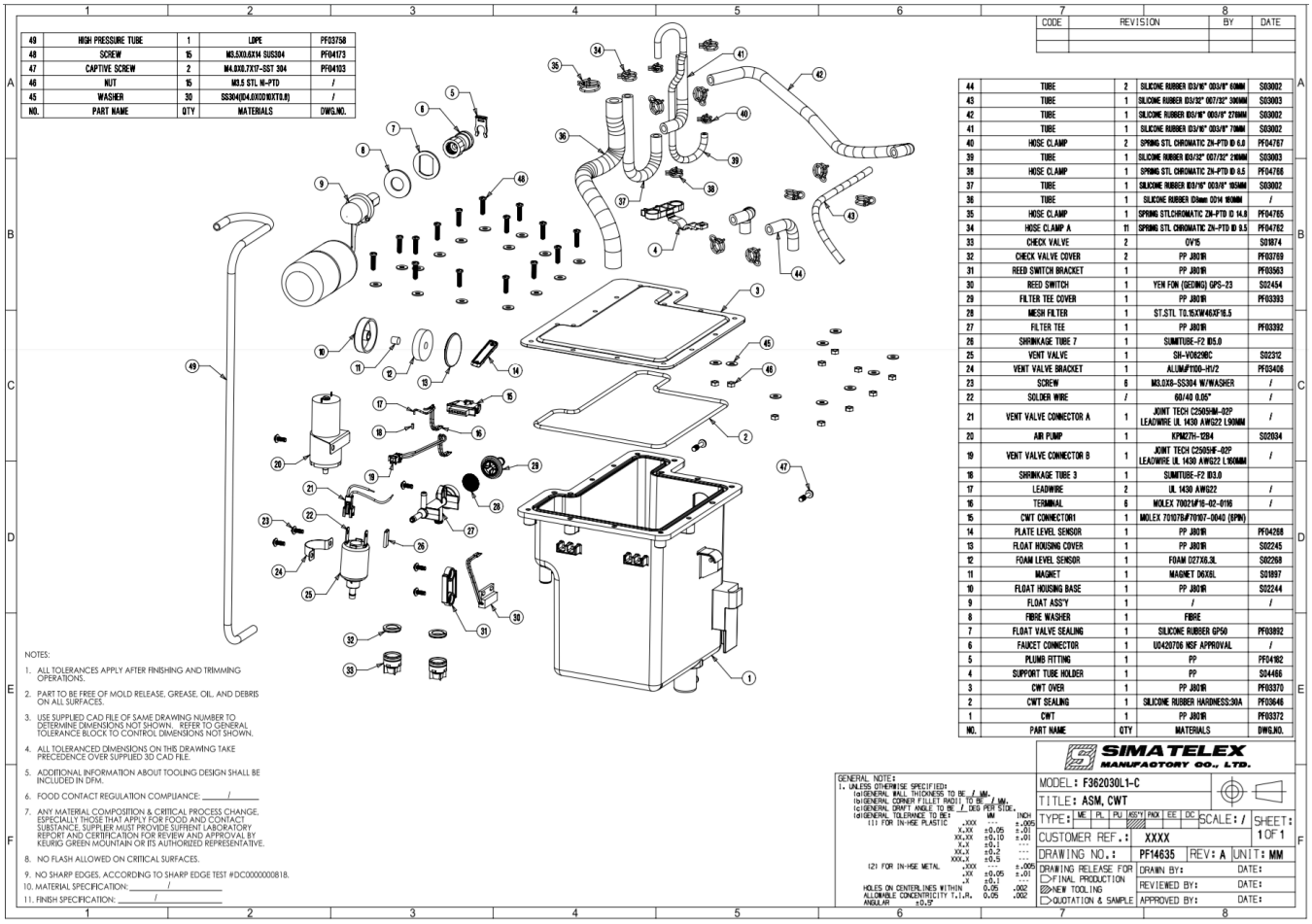
CUSTOMER REF.: AS0000002953

DRAWING NO.: PF14634 | REV: A | UNIT: MM

DRAWING RELEASE FOR
▷ FINAL PRODUCTION
▨ NEW TOOLING
▷ QUOTATION & SAMPLE

DRAWN BY: DATE:
REVIEWED BY: DATE:
APPROVED BY: DATE:

23. Cold Water Tank Detailed View



NO.	PART NAME	QTY	MATERIALS	DWG.NO.
49	HIGH PRESSURE TUBE	1	LDPE	PF03758
48	SCREW	15	M3.5X0.6X14 SUS304	PF04173
47	CAPTIVE SCREW	2	M4.8X8.7X17-SST 304	PF04103
46	NUT	15	M3.5 STL M-PTD	/
45	WASHER	30	SS304(ID4.0XOD9XT0.8)	/

NO.	PART NAME	QTY	MATERIALS	DWG.NO.
44	TUBE	2	SILICONE RUBBER ID3/16" OD3/8" 60MM	SI03002
43	TUBE	1	SILICONE RUBBER ID3/32" OD7/32" 30MM	SI03003
42	TUBE	1	SILICONE RUBBER ID3/16" OD3/8" 270MM	SI03002
41	TUBE	1	SILICONE RUBBER ID3/16" OD3/8" 70MM	SI03002
40	HOSE CLAMP	2	SPRING STL CHROMATIC ZN-PTD ID 6.8	PF04767
39	TUBE	1	SILICONE RUBBER ID3/32" OD7/32" 240MM	SI03003
38	HOSE CLAMP	1	SPRING STL CHROMATIC ZN-PTD ID 8.5	PF04766
37	TUBE	1	SILICONE RUBBER ID3/16" OD3/8" 185MM	SI03002
36	TUBE	1	SILICONE RUBBER ID8mm OD14 180MM	/
35	HOSE CLAMP	1	SPRING STL CHROMATIC ZN-PTD ID 14.8	PF04765
34	HOSE CLAMP A	11	SPRING STL CHROMATIC ZN-PTD ID 9.5	PF04762
33	CHECK VALVE	2	OV15	SI01874
32	CHECK VALVE COVER	2	PP J801R	PF03769
31	REED SWITCH BRACKET	1	PP J801R	PF03563
30	REED SWITCH	1	YEN FON (GEDING) GPS-23	SI02454
29	FILTER TEE COVER	1	PP J801R	PF03393
28	MESH FILTER	1	ST.STL T0.15XW40XF16.5	
27	FILTER TEE	1	PP J801R	PF03392
26	SHRINKAGE TUBE 7	1	SUMITUBE-F2 ID5.0	
25	VENT VALVE	1	SH-V0629BC	SI02312
24	VENT VALVE BRACKET	1	ALUM(PT100-H)2	PF03406
23	SCREW	6	M3.0X8-SS304 W/WASHER	/
22	SOLDER WIRE	/	60/40 0.05"	/
21	VENT VALVE CONNECTOR A	1	JOINT TECH C2505H-02P LEADWIRE UL 1430 AWG22 L90MM	/
20	AIR PUMP	1	KPM27H-12B4	SI02934
19	VENT VALVE CONNECTOR B	1	JOINT TECH C2505HF-02P LEADWIRE UL 1430 AWG22 L160MM	/
18	SHRINKAGE TUBE 3	1	SUMITUBE-F2 ID3.0	
17	LEADWIRE	2	UL 1430 AWG22	/
16	TERMINAL	6	MOLEX 70021#18-02-0116	/
15	CWT CONNECTOR1	1	MOLEX 70107B#70107-0040 (6PIN)	
14	PLATE LEVEL SENSOR	1	PP J801R	PF04268
13	FLOAT HOUSING COVER	1	PP J801R	SI02245
12	FOAM LEVEL SENSOR	1	FOAM D27X8.3L	SI02268
11	MAGNET	1	MAGNET D6X6L	SI01897
10	FLOAT HOUSING BASE	1	PP J801R	SI02244
9	FLOAT ASS'Y	1	/	/
8	FIBRE WASHER	1	FIBRE	
7	FLOAT VALVE SEALING	1	SILICONE RUBBER GP50	PF03892
6	FAUCET CONNECTOR	1	U0420706 NSF APPROVAL	/
5	PLUMB FITTING	1	PP	PF04162
4	SUPPORT TUBE HOLDER	1	PP	SI04466
3	CWT OVER	1	PP J801R	PF03370
2	CWT SEALING	1	SILICONE RUBBER HARDNESS:30A	PF03646
1	CWT	1	PP J801R	PF03372

CODE	REVISION	BY	DATE

NOTES:

1. ALL TOLERANCES APPLY AFTER FINISHING AND TRIMMING OPERATIONS.
2. PART TO BE FREE OF MOLD RELEASE, GREASE, OIL, AND DEBRIS ON ALL SURFACES.
3. USE SUPPLIED CAD FILE OF SAME DRAWING NUMBER TO DETERMINE DIMENSIONS NOT SHOWN. REFER TO GENERAL TOLERANCE BLOCK TO CONTROL DIMENSIONS NOT SHOWN.
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5. ADDITIONAL INFORMATION ABOUT TOOLING DESIGN SHALL BE INCLUDED IN DFM.
6. FOOD CONTACT REGULATION COMPLIANCE: ____/____
7. ANY MATERIAL COMPOSITION & CRITICAL PROCESS CHANGE, ESPECIALLY THOSE THAT APPLY FOR FOOD AND CONTACT SUBSTANCE, SUPPLIER MUST PROVIDE SUFFIENT LABORATORY REPORT AND CERTIFICATION FOR REVIEW AND APPROVAL BY KEURIG GREEN MOUNTAIN OR ITS AUTHORIZED REPRESENTATIVE.
8. NO FLASH ALLOWED ON CRITICAL SURFACES.
9. NO SHARP EDGES, ACCORDING TO SHARP EDGE TEST #DC0000000818.
10. MATERIAL SPECIFICATION: ____/____
11. FINISH SPECIFICATION: ____/____

GENERAL NOTE:
1. UNLESS OTHERWISE SPECIFIED:
(a) GENERAL WALL THICKNESS TO BE / MM.
(b) GENERAL CORNER FILLET RADII TO BE / MM.
(c) GENERAL DRAFT ANGLE TO BE / DEG PER SIDE.
(d) GENERAL TOLERANCE TO BE:

	MM	INCH
(1) FOR IN-HSE PLASTIC .XXX		±.005
X.XX	±0.05	±.01
XX.XX	±0.10	±.01
X.X	±0.1	---
XX.X	±0.2	---
XXX.X	±0.5	---
(2) FOR IN-HSE METAL .XXX	---	±.005
.XX	±0.05	±.01
.X	±0.1	---
HOLES ON CENTERLINES WITHIN	0.05	.002
ALLOWABLE CONCENTRICITY T.I.R.	0.05	.002
ANGULAR	±0.5°	

SIMATELEX MANUFACTORY CO., LTD.

MODEL:	F362030L1-C
TITLE:	ASM, CWT
TYPE:	ME / PL / PU / ASS'Y / PKX / EE / DC
SCALE:	/
SHEET:	1 OF 1
CUSTOMER REF.:	XXXX
DRAWING NO.:	PF14635
REV:	A
UNIT:	MM
DRAWING RELEASE FOR	☐ FINAL PRODUCTION ☒ NEW TOOLING ☐ QUOTATION & SAMPLE
DRAWN BY:	DATE:
REVIEWED BY:	DATE:
APPROVED BY:	DATE:

VIII. Servicing

A. Preventive Maintenance

Regular cleaning of the Brewer's external components is recommended.

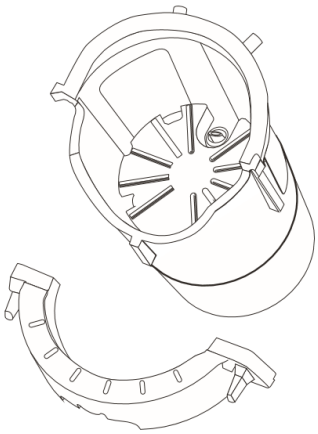
CAUTION: Never immerse the base unit in water or other liquids.

The brewer's enclosure and other external components may be cleaned with a non-toxic food grade cleaner and a damp, non-abrasive cloth.

- The Drip Tray and Drip Tray Plate should be periodically inspected and rinsed clean.
- The Pod Bin should be cleaned on a regular basis.
- The Pod holder/funnel should be periodically removed from the Puncture Mechanism and cleaned with warm water.
- The KQ8A water filter should be replaced every 6 months.

CAUTION: There is a sharp needle that punctures the bottom of the Pod Portion Pack. Use extreme care in cleaning this area.

1. Pod Holder Assembly & Needles



The Pod (K-Cup®) Holder Assembly (PHA) should be removed from the Puncture Mechanism (PM) for cleaning. To remove the PHA, remove the half rim, then squeeze the two snap tips on the rear of its flip seat to release.
The PHA can be cleaned by submerging it in Keurig® Descaling solution, or a vinegar solution (1:3), for 12 hours or more. There may be residual coffee grounds in the groove and the flip seat. If required, take a cotton swab to clean the area. Thoroughly rinse the PHA before restoring it into the flip seat, then to the half rim to lock in place.

There are two sharp needles in the PM that puncture the Pod. The Entrance Needle is located underneath the lid of the handle, and the Exit Needle is inside the PHA. These needles may get clogged over time due to the build-up of scale or residual pod ingredients.
If clogging occurs, both needles can be cleared by inserting a straightened paper clip into the hole. Gently move it around to loosen any coffee grounds, then follow with a rinse brew with water.

CAUTION: **To avoid risk of injury, please be careful of the two sharp needles when cleaning the Pod Holder Assembly and Puncture Mechanism.**

B. Troubleshooting

The K-3500 has a Technician login that display a series of Troubleshooting options, should an error occur while using with the brewer. All repairs of the brewing system are done on a modular level.

By looking at the error code being displayed and reading the diagnostic chart provided in this manual, you will be able to determine which module needs to be replaced.

1. Common Troubleshooting Solutions

Brewer does not have power

- Plug brewer into its own grounded outlet.
- Make sure that the brewer has been turned on and that the touchscreen is illuminated.
- Reset circuit breaker if necessary.
- Plug into a different outlet.

Brewer will not brew when used for the first time

- The brewer must be primed for use by filling the internal hot water tank before the first brew.
- Make sure the water supply is connected and turned on.
- If your brewer has been in an environment below freezing, please be sure to let it warm to room temperature for at least two hours before using.

Brewer will not brew

- After placing the Pod in the Pod holder, make sure the handle is lowered completely.
- The exit or entrance needle may be clogged.

Brewing a partial cup

- Check the exit or entrance needle to clear a clogged Puncture Mechanism.
- Clean Pod holder, if necessary, and rinse under a faucet.
- If the brewer is alerting you to perform a “descale” operation, have your Keurig® Authorized Distributor descale your K-3500.

Grounds in your coffee

Grounds may have gathered in the exit or entrance needles and can be cleaned using a straightened paper clip or similar tool. Refer to the exit and entrance needle care instructions. For any further assistance with troubleshooting, contact your Keurig® Authorized Distributor.

C. Diagnostics – Error Codes:

The K-3500 contains real-time error detection. There are a number of operational errors that, if encountered, will disable the brewer, produce an error code onto the display, and will also flash on the front panel to attract attention. The power may be cycled to attempt to clear the error, but if it occurs again, the same message will be displayed. The error code table below presents a summary of all errors, their meanings and the menu messages.

1. Error Codes:

Error Code	Description (error log text)	Error Screen Text	Effect on Brewer	Error Cleared By	Handling Category
1	The brew tank thermal cutout is open or the hot water tank is empty.	The brew tank thermal cutout is open or the hot water tank is empty.	Causes a transition to Standby if it continues for 3 minutes. If within 2 seconds after transitioning from Standby, transitions back to Standby if it continues for 75 seconds. If between 2 and 40 seconds after transitioning from Standby, transitions immediately back to Standby.	Technician fixes the hot water tank module.	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
2	The preheat tank thermal cutout is open or the hot water tank is empty.	The preheat tank thermal cutout is open or the hot water tank is empty.	No immediate effect. Causes a transition to Standby if it continues for 3 minutes.	Technician fixes the hot water tank module.	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
3	More than 2000 brews have been performed since the last descale event and three consecutive brew failures have occurred.	Please descale the brewer. *Dismiss button available	None - UI displays warning icon, but brewing is allowed to continue.	A successful brew	WARNING - normal flow possible UI displays descale icon, but normal workflow is functional. Icon only disappears after next successful brew.
4	The cold water tank is not refilling.	The cold water tank is not refilling.	Transition to STANDBY.	The CWT sensing that it is full; may require technician to fix the problem.	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.

Error Code	Description (error log text)	Error Screen Text	Effect on Brewer	Error Cleared By	Handling Category
5	A runaway fill has been detected.	A runaway fill has been detected.	Transition to STANDBY.	The CWT sensing low; may require technician to fix the problem.	**Locked out until error cleared** UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
6	The preheat tank is too cold.	The preheat tank is too cold. Please wait.	Transition to STANDBY.	The preheat tank measures >= 40F (probably requires a hard power cycle).	**Locked out until error cleared** UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
7	The brew tank is too cold.	The brew tank is too cold. Please wait.	Transition to STANDBY.	The brew tank measures >= 40F (probably requires a hard power cycle).	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
8	The preheat tank has overheated.	The preheat tank has overheated. Please restart the brewer.	Transition to STANDBY.	Hard reset of the brewer.	Locked out until reset UI should display error screen until power cycle.
9	The brew tank has overheated.	The brew tank has overheated. Please restart the brewer.	Transition to STANDBY.	Hard reset of the brewer.	Locked out until reset UI should display error screen until power cycle.
10	4oz post-fill timeout	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log.
11	Top of tank sensed on post-fill.	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log.

Error Code	Description (error log text)	Error Screen Text	Effect on Brewer	Error Cleared By	Handling Category
12	6oz pre-fill timeout	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log
13	8oz pre-fill timeout	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log
14	10oz pre-fill timeout	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log
15	12oz pre-fill timeout	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log
16	The vent valve is stuck	The vent valve is stuck	Transition to STANDBY	Technician fixes the vent valve	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
17	Overpressure detected	Overpressure detected - please restart the brewer.	Transition to STANDBY	The pressure sensor indicates that pressure is below the overpressure threshold	Locked out until reset UI should display error screen until power cycle
18	Dispense timeout	Dispense timeout - please perform a rinse brew. *OK button available	None functionally; UI displays the dispense timeout error screen	User presses "OK"	WARNING - normal flow possible UI displays error screen until user presses "OK", then normal brewing operation is possible.

Error Code	Description (error log text)	Error Screen Text	Effect on Brewer	Error Cleared By	Handling Category
19	Heater timeout	The heater has taken longer than 10 minutes to reach temperature.	Transition to STANDBY	Technician fixes hot water tank module	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
20	Temperature sensor malfunction	Temperature sensor malfunction	Transition to STANDBY	Technician fixes hot water tank module	Locked out until error cleared UI should display error screen until notified the error has been fixed. This includes persistence through a power cycle.
21	Top of tank sensed on pre-fill	None	None	N/A	No error screen UI does not update current screen or workflow; only updates the error log

D. Removing & Installing Modules

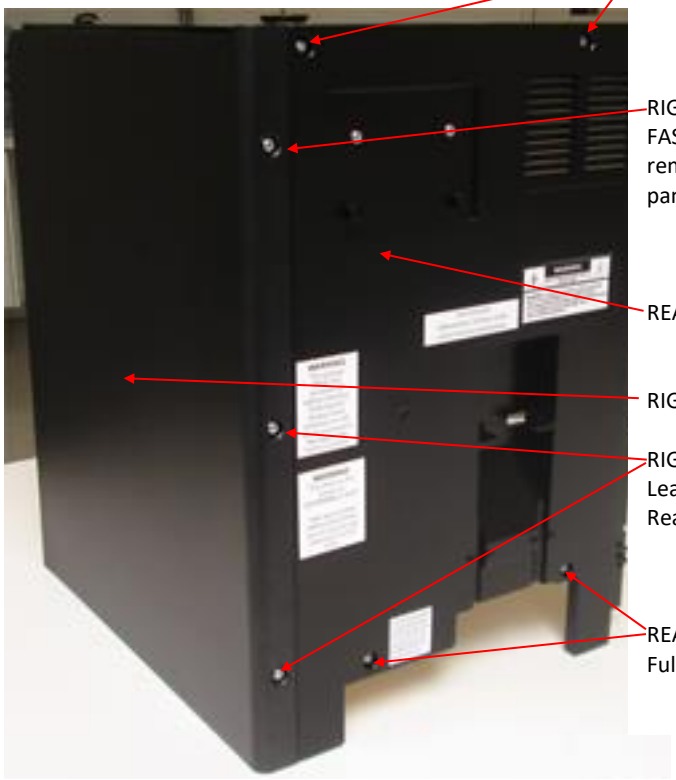
NOTE: Both the hot and cold-water tanks must be drained and the unit unplugged before any module is removed.

The K-3500 brewing system is modular in design. This design facilitates ease of repair at customer locations. The following describes the removal of each of the modules. Whenever a module is removed and replaced, it is recommended that a Built In Test (BIT) be conducted to ensure proper function of the K-3500.

1. Removal of Rear & Right Side Panels

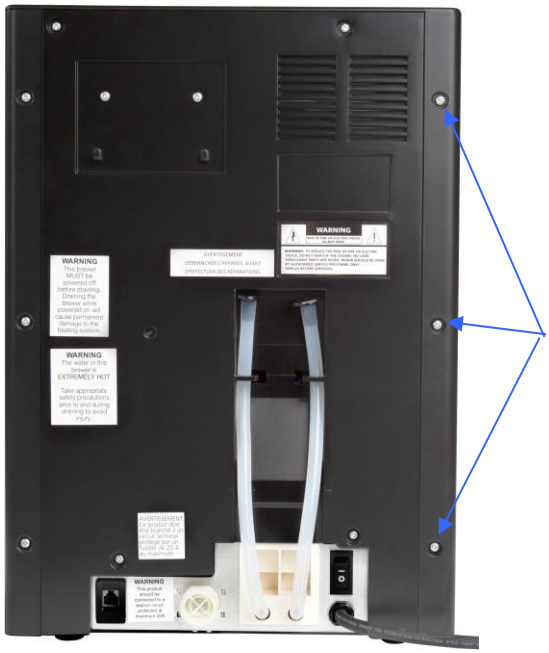
For Rear & Right side panel removal, locate the four captive screws on the Rear panel and loosen these screws. Next, when these Rear panel captive fasteners have been fully loosened, be sure that the three screws on the Right side panel remain tightened and remove both the Rear and Right side panels as a unit (as designed for ease of both panels' removal).

Right & Rear Panels



2. Removal of Left Side Panel

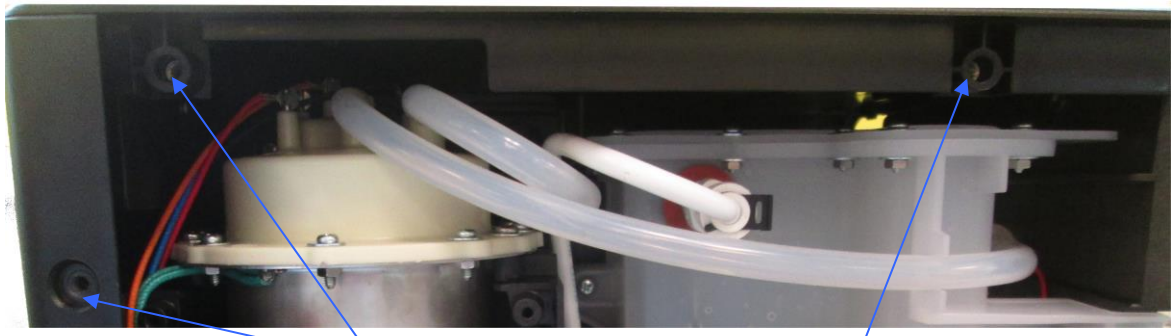
For Left side panel removal, locate the three captive fasteners on the left side of the back panel loosen the screws to remove the Left side panel.



NOTE: All screws are captive they cannot be removed from the panels.

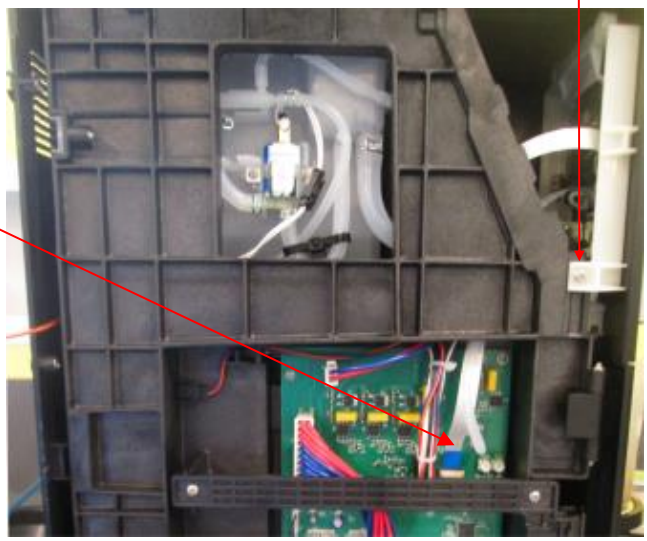
3. Removal of Front & Top Panel Assembly

When it is necessary to remove and replace the Hot Water Tank, UI Control Panel or Cold Water Tank Modules, removal of the Top and Front panels is a common first step. Refer below to the corresponding fastener locations for removal points. First, release the FFC on the Main PCB to ensure there is no damage to the electronic components.

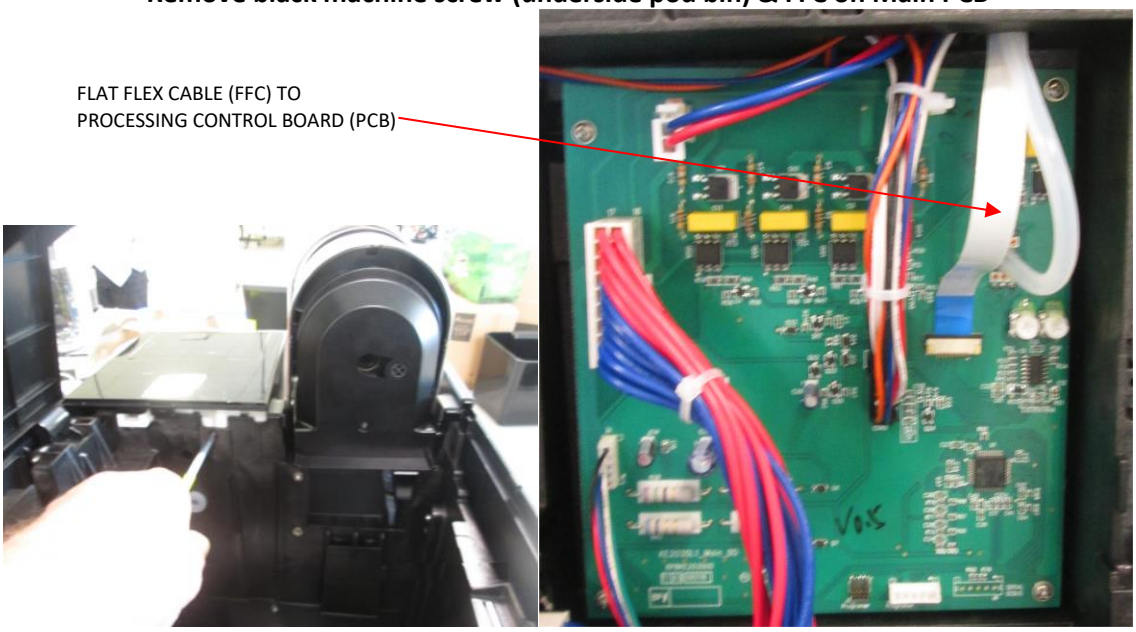


REMOVE TOP LEFT & RIGHT SIDE
FASTENERS TO REMOVE TOP & FACE PANEL.

FLAT FLEX CABLE (FFC) TO PROCESSING CONTROL BOARD (PCB)



Remove black machine screw (underside pod bin) & FFC on Main PCB



Touchscreen Face & Top Panel Assembly

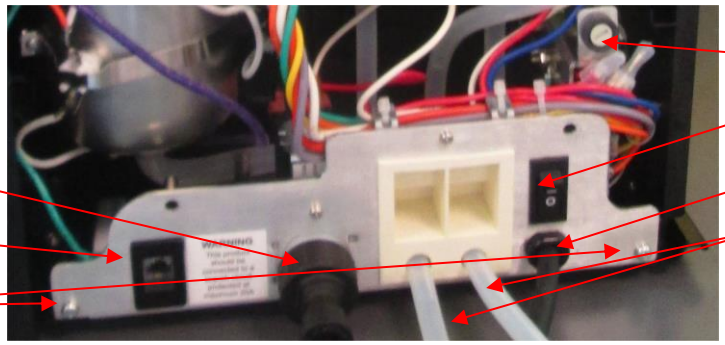
Top & Front Panel Underside showing UI Touchscreen Assembly

3. Power Module

The Power Module is located in the back on the bottom edge of the brewer.

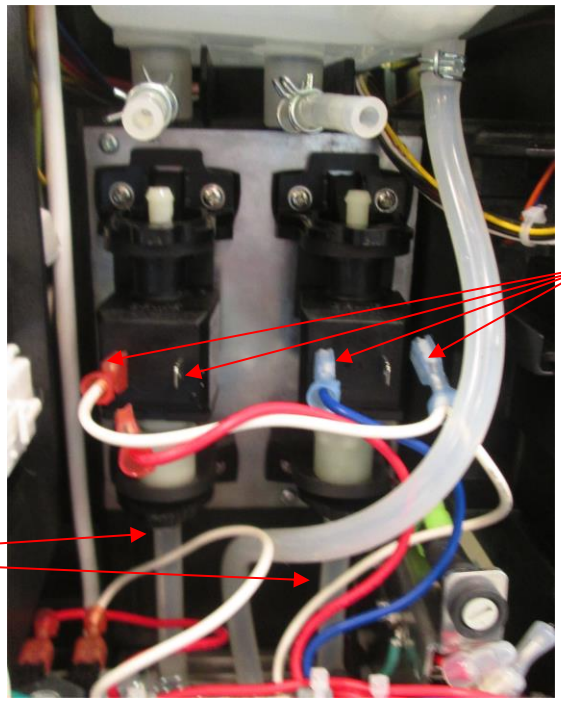
Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer.

Front View



1. Completely loosen the two **captive** screws holding the Power Module to the bottom base plate and pull out slightly. This will help in accessing the hoses on the pumps.
2. Loosen the clamps and disconnect the hoses on the top of each pump.

Spare Fuse Location

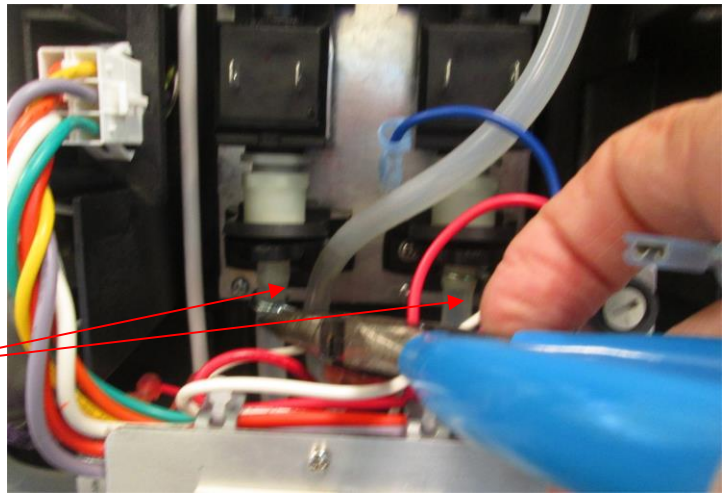


3. Prior to disconnecting the four wire connections attached to bottom of the green water pumps make a note of their respective connections. Disconnect these four wires.

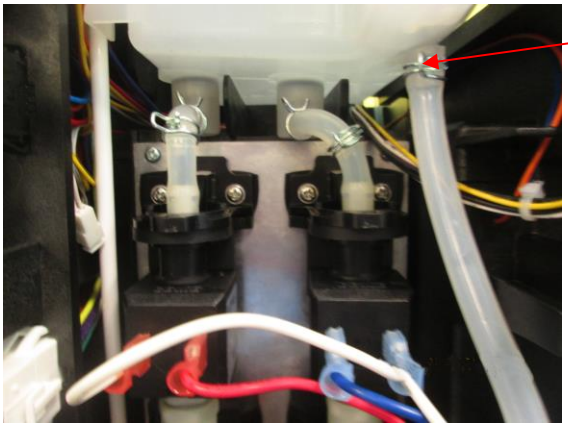
NOTE: The wires must be reconnected to their proper connections when installing the new module. Failure to do so will result in having extremely noisy pumps while they are in operation.

4. Disconnect the clamps and water hoses attached to the water manifold.

Disconnect the inlet hoses to the HWTs located at the bottom of both pumps.



5. Disconnect the Multi Connector Tee manifold from the Power Module and add to the replacement unit.



Disconnect the CW Drain tube at the bottom the CWT.

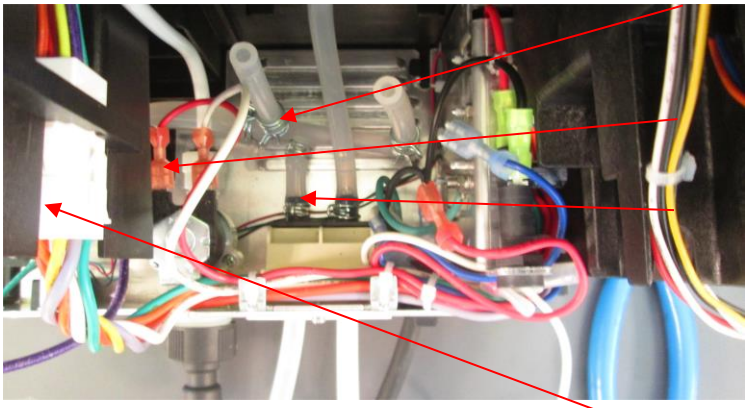
5. Disconnect the Cold Water drain tube from the bottom of the tank.

Disconnect the tube from the Inlet Valve that goes to the Cold Water Tank.

Disconnect power leads from the CW Inlet Valve.

Disconnect the Multi Connector Tee manifold from the Power Module, plus disconnect the clamps and water hoses attached to the water manifold.

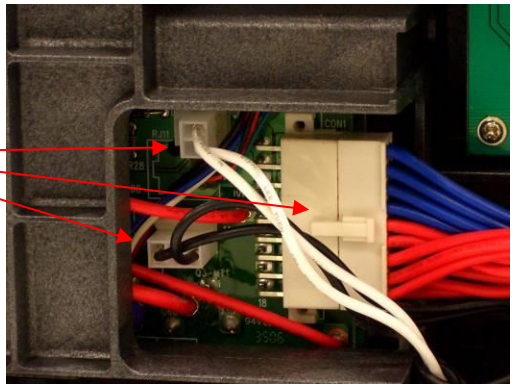
Disconnect the wire harness attached to the Hot Water Tank module.



6. Disconnect the tube from the Inlet Valve that goes to the Cold Water Tank. The Inlet Valve is located on the Power Module. This is a quick release tube connection. Remove the black locking clip from the fitting if present. Push in on the collar, and pull out the tube.

7. Disconnect the wire harness attached to the Hot Water Tank module.
8. Looking at the left side of the brewer when facing from the front, locate the main power harness, and transformer.

Disconnect the transformer and main power harness from the Power Module PCB.



9. Disconnect the transformer and main power harness from the Power Module PCB.

10. The Power Module can now be removed from the brewer.

11. Install the new module and connect all of the appropriate connections, hoses, and wires making sure that they are secure and tight.

12. Conduct a Built In Test to ensure the proper function of the brewer.

NOTE: There is a removable filter screen located in the Inlet Valve. If this screen should become blocked by foreign material preventing water from flowing into the brewer, you can gently remove the blocked screen using a pair of needle nose pliers and insert a new one. The part # for the replacement screen is 01-201200-000.

Inlet Valve Screen Inserted

Inlet Valve Screen Removed

4. Puncture Mechanism Module [PM]

The Puncture Mechanism (PM) module is located in the top front portion of the brewer, under the bail handle.

Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer.

1. Disconnect the Hot Water Valve tube from the top of the **Bottom** Hot water tank.
   This hose is on the right hand side of the brewer looking at the front of the brewer.

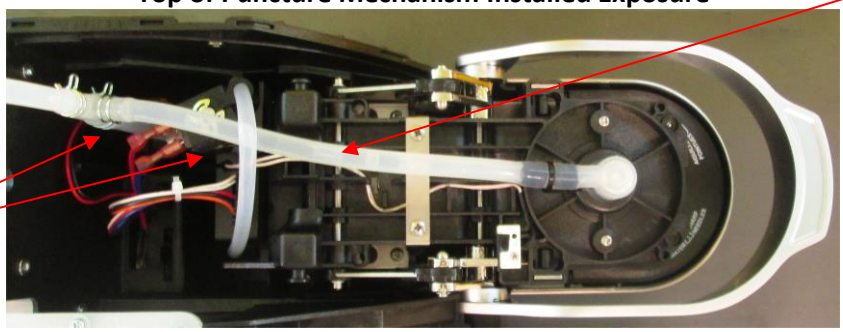
2. Raise the bail handle and pull the Puncture Mechanism cover back slightly and lift up to remove it.

Puncture Mechanism Cover Removed

3. Disconnect the multi colored wire harness located to the left of the Hot Water Valve and the two wires on the Hot Water Valve solenoid. There is no polarity for these wires.

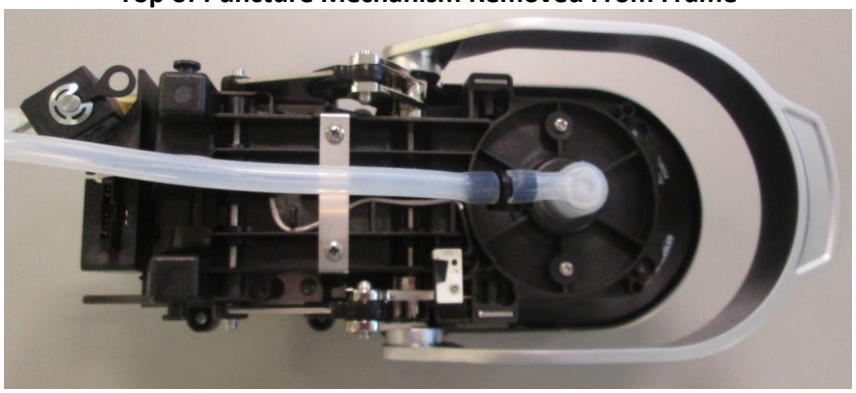
Top of Puncture Mechanism Installed Exposure

Remove the wiring harness along with the 2 wires from the solenoid located at the rear of the PM.



Disconnect the Hot Water Valve tube from the top of the Reserve (bottom) Hot water tank.

Top of Puncture Mechanism Removed From Frame

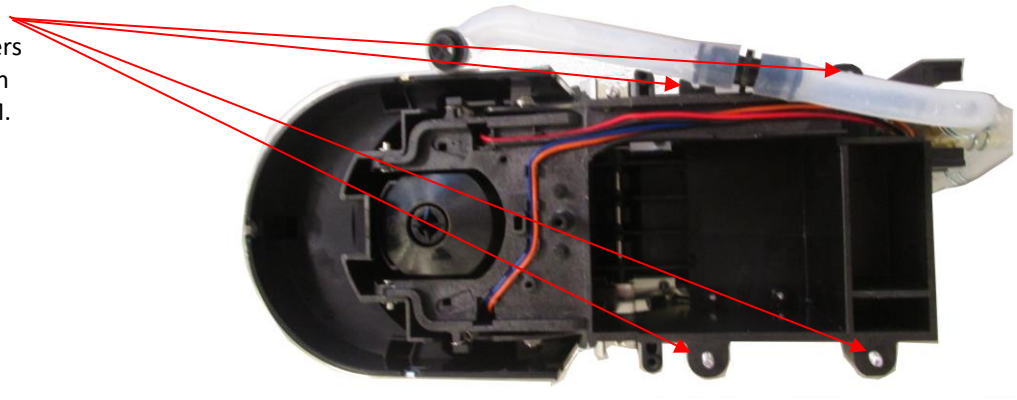


4. Disconnect the Vent tube from the venting nipple on the left hand side of the module area. The Puncture Mechanism Module can now be removed from the brewer.

5. Using a long-shafted [6 inch (15 cm) or longer] Phillips-head screwdriver, loosen the four captive screws that secure the Puncture Mechanism module. There are two on either side and they will emerge with the PM module.

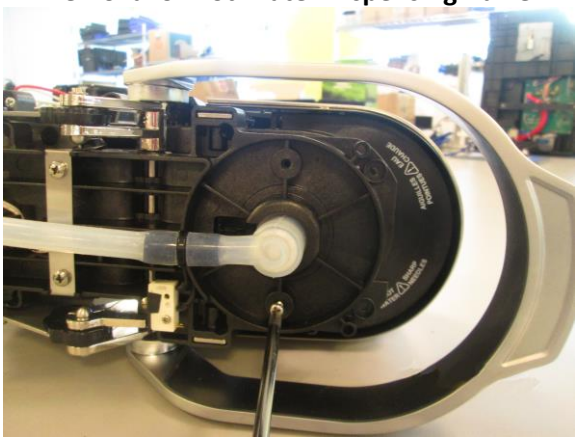
Puncture Mechanism Underside with Mounting Screws Exposed

Loosen these 4 captive fasteners located on both sides of the PM.



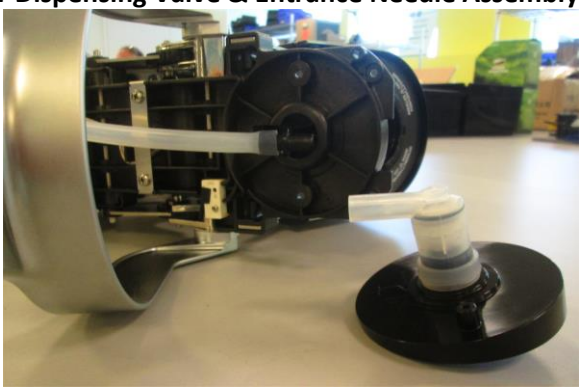
6. Should the PM needle need replacing, locate the 2 screws that secure the Puncture Mechanism needle and remove them.

Removal of Hot Water Dispensing Valve

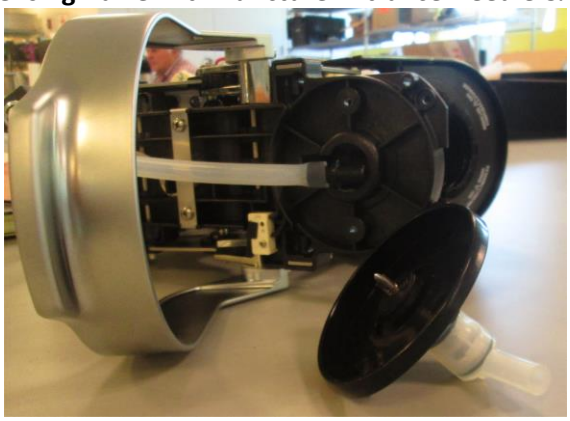


7. Disconnect the HW supply brew tubing coupling from the Puncture Mechanism.

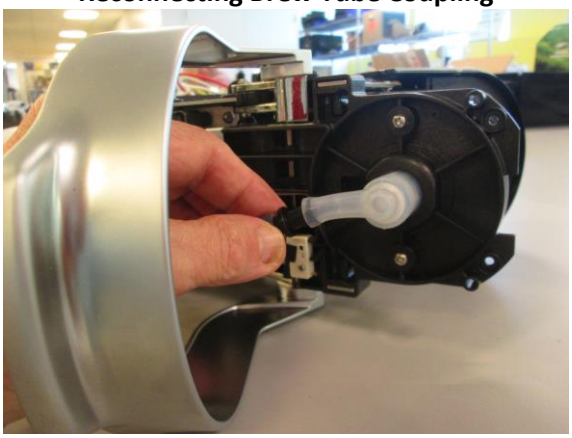
Hot Water Dispensing Valve & Entrance Needle Assembly Removed



Hot Water Dispensing Valve with Puncture Entrance Needle & Gasket Exposed



Reconnecting Brew Tube Coupling



8. Replace the Puncture Mechanism and reconnect HW brew supply tubing. Refasten the Puncture Mechanism needle and reinstall the entire Puncture Mechanism module.

NOTE: When reinstalling the new module, connect the Hot Water Vent hose to the vent nipple **first** and then connect the wire harness and two solenoid wires before you place the module on its support post, making sure that they are

secure and tight. Finally, reconnect the remaining hoses. **Always perform the Built In Test to ensure proper functionality once an installation is completed.**

5. Hot Water Dispense Valve Assembly

The HW Dispense Valve is located at the rear of the Puncture Mechanism. In order to remove and replace this valve removal of inlet and outlet brew tubing from the existing HW Dispense Valve must be performed, as shown below.

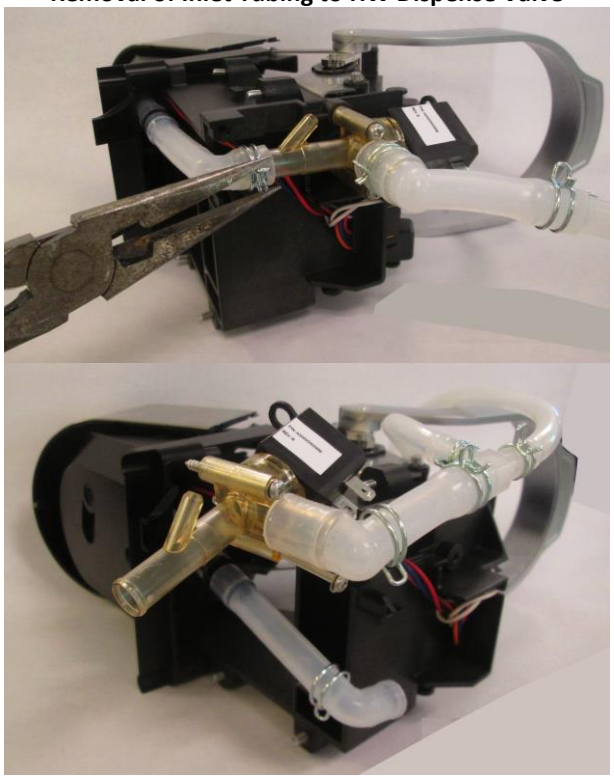
Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer.
See **Puncture Mechanism Module** above.

1. Locate the Hot Water Dispense Valve at the rear of the Puncture Mechanism.

HW Dispense Valve

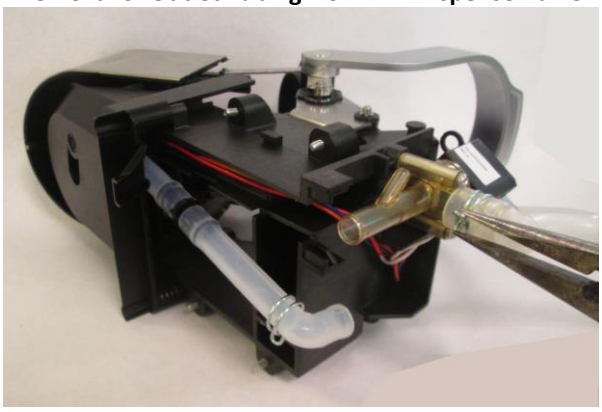
2. Release the hose clamp and remove the HW supply tube from the HW Dispense Valve.

Removal of Inlet Tubing to HW Dispense Valve



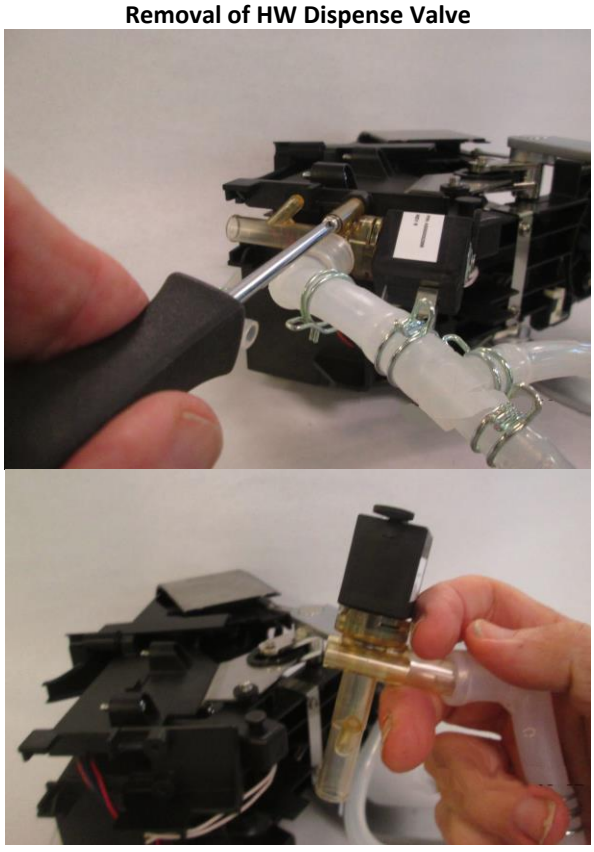
3. Release the hose clamp from the HW Dispense Valve and remove the HW supply tube to the Puncture Mechanism needle.

Removal of Outlet Tubing from HW Dispense Valve



4. Remove the two self-tapping Phillips screws that secure the valve to the PM assembly.

Removal of HW Dispense Valve



5. Release the hose clamp and remove the HW supply tube to the PM needle, from the HW Dispense Valve.

6. Gently pull out the valve assembly and reinstall the new valve.
7. Conduct a Built In Test to ensure the proper function of the brewer.

6. Hot Water Tank Module [HWT]

The HWT Module is located in the rear-right side of brewer. Be sure that the brewer is off, drained and unplugged from the AC power outlet before removal and replacement of the Hot Water Tank (HWT).

Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer. To replace the HWT, it is necessary to remove the Rear panel plus the Top, Front and UI Control Module in order to lift out and then reinstall the HWT from the brewer.

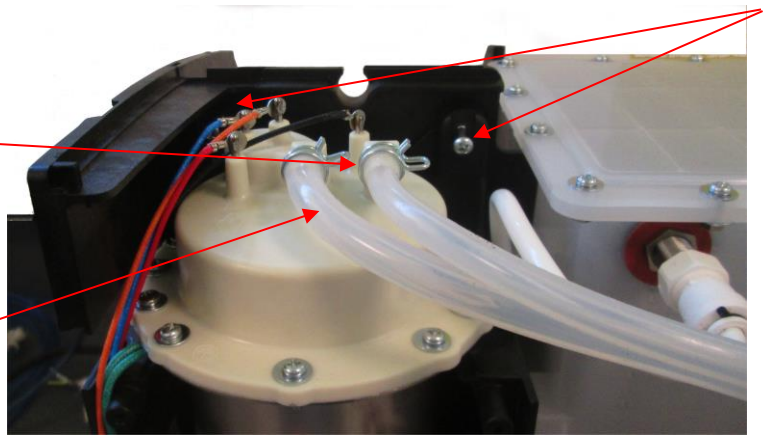
NOTE: Before disconnecting the two hoses on top of the module, make a note of where they are attached. The **LEFT** hose comes from the Cold-water Tank. The **RIGHT** hose goes to the Puncture Mechanism Module. These hoses **MUST** be reinstalled correctly. If they are not, then there will be no water dispensed during the brew cycle. Needle nose pliers can be used to release the two hose clamps that secure these hoses. Care must be taken when removing these clamps so that damage to these hoses does not occur.

1. At the top of the HWT, remove the HW and CW supply tubing as shown.

2. Partially loosen the 2 fasteners located on both sides of the top of the HWT Module. Fully loosen these captive fasteners when ready to remove and replace the HWT Module.

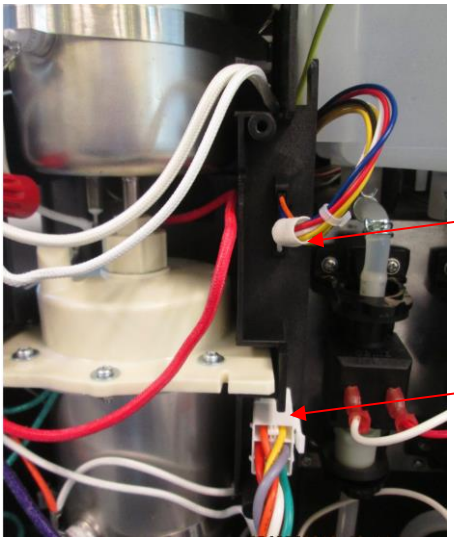
Loosen the clamp & remove CW Supply Tubing from the top of the HWT.

Loosen the clamp & remove HW Supply Brew Tubing that flows to the PM. It is a good idea to mark one or the other to quickly distinguish them during reassembly.

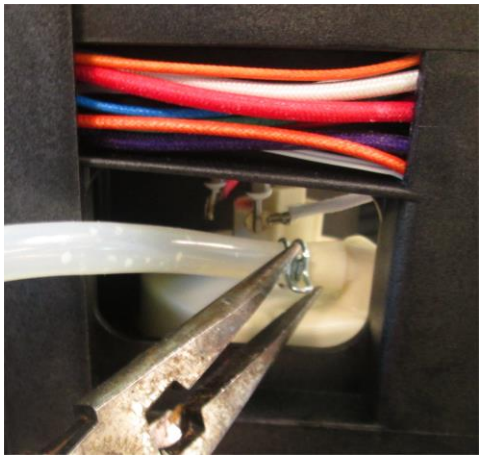


Loosen the 2 captive fasteners located on both sides of the top of the HWT. Fully loosen these when ready to remove the module, as described below.

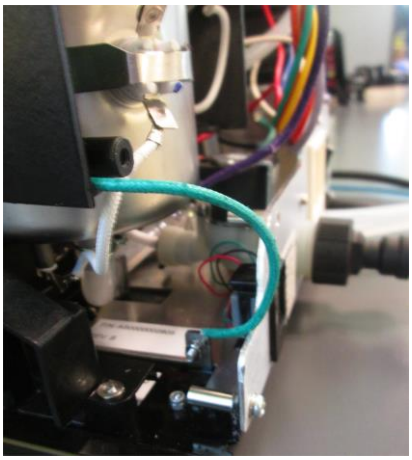
3. Disconnect the 2 wiring harnesses (HWT Electronic Control and Electrical Supply Wiring Harnesses) located on the middle-right of the Hot Water Tank Module, as shown.



4. Loosen the clamp and disconnect the Hot Water Valve hose from the top of the bottom tank, as shown below.

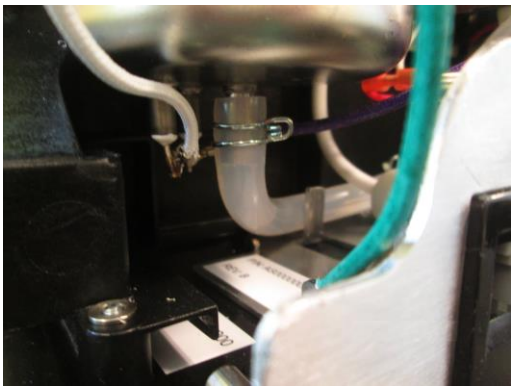


5. Remove the nut (6mm) securing the green ground wire on the left-hand side of the Power Module. It is best to loosely reattach the washer and nut to provide quick recoupling of the HWT Module.



6. Relocate the two captive screws at the top of the module and loosen them fully.

7. Disconnect the CW inlet hose from the bottom tank as shown below.



8. The Hot Water Tank Module can now be removed from the brewer. Tilt the module toward you. It is secured on the bottom with mounting tabs. Lift the module out carefully.

9. Install the new module and reconnect all of the appropriate connections, hoses and wire harnesses ensuring that they are secure.

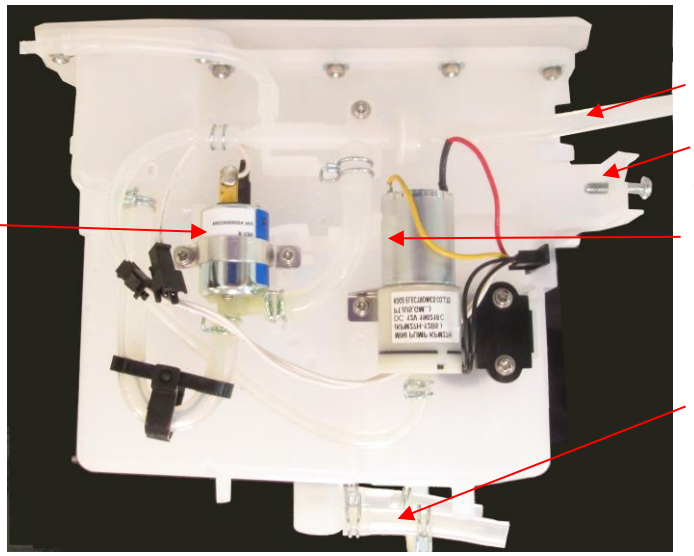
10. Conduct a Built In Test to ensure proper functionality of the brewer.

7. Cold Water Tank Module [CWT]

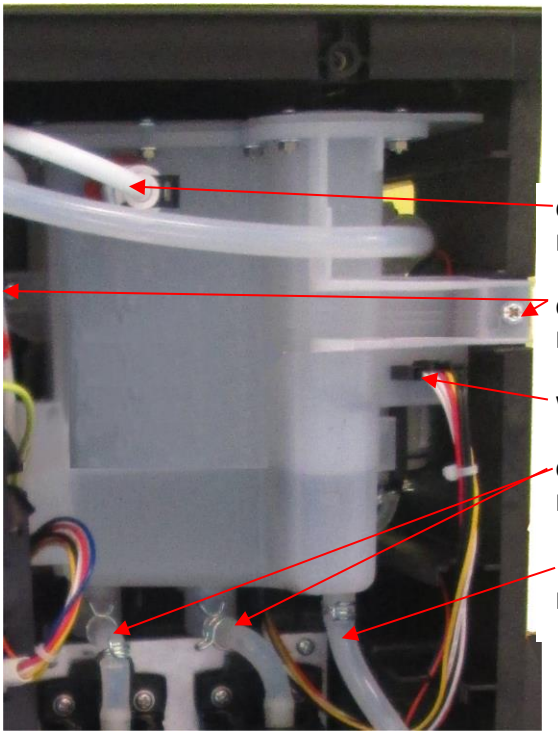
The Cold Water Tank is located at the top, rear-right of the brewer. The brewer must be drained and unplugged before CWT and replacement can begin safely. The rear/right and top/front panels need to be removed to access and extract the CWT Module.

Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer.

CWT Module



Rear View of the CWT Installed



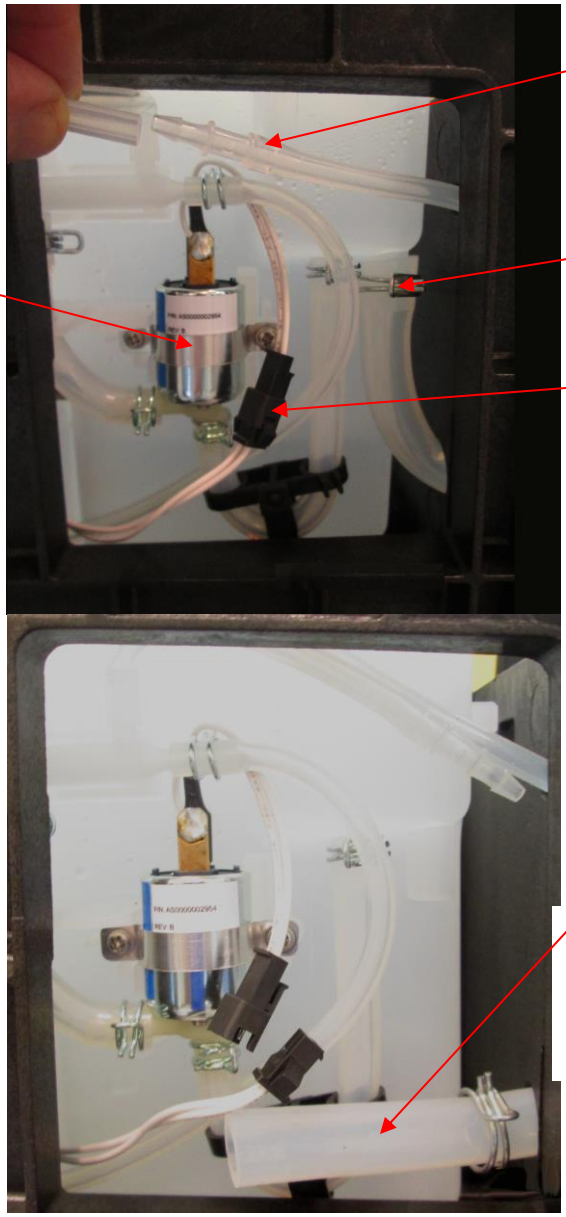
1. Disconnect the hoses on the top of each of the water pumps.

2. Disconnect the Cold Water Tank drain hose on the bottom right side of the tank.

Facing the brewer at the left side, take note of the cutout in the chassis near the top. You will see one small hose with a plastic filter tee coupling and two larger ones.

3. Disconnect the small hose from the filter tee, just above the vent valve.

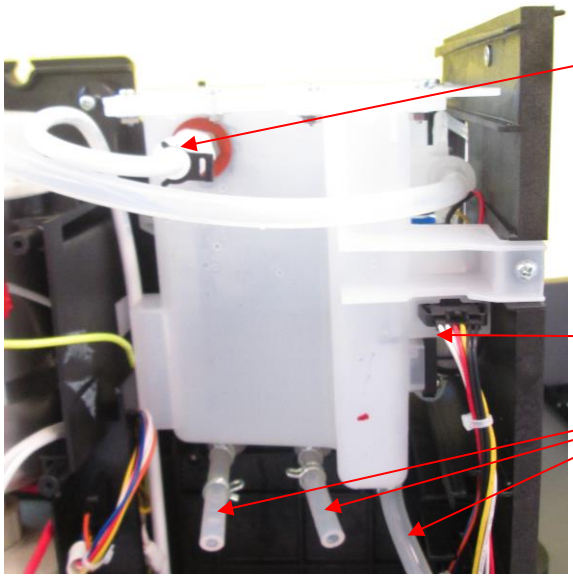
Left side cutout



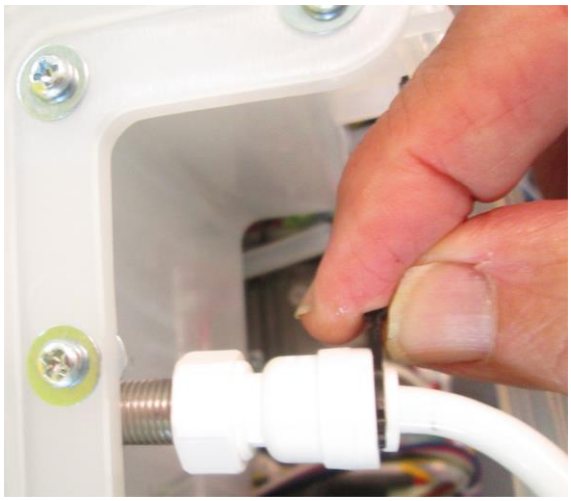
4. Loosen the clamp and disconnect the larger hose on the right.

5. Facing the rear of the brewer at the CWT, disconnect the multi colored wire harness located on the right side of the CWT.

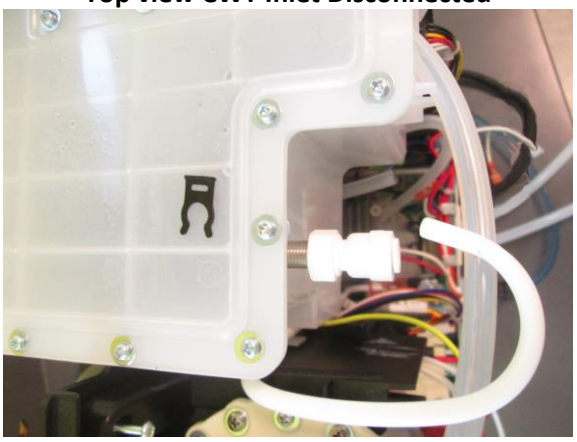
CWT Inlet Quick Release Connection



6. Remove retaining clip from CW Inlet tube fitting. This is a quick release tube connection. Push in on the collar, and pull out the tube.



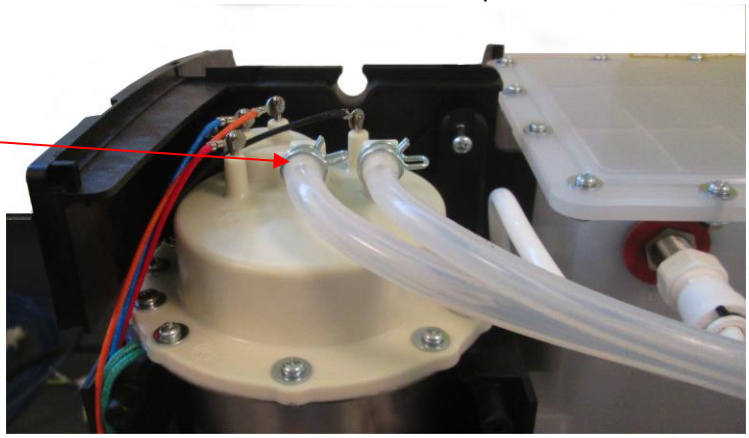
Top view CWT Inlet Disconnected



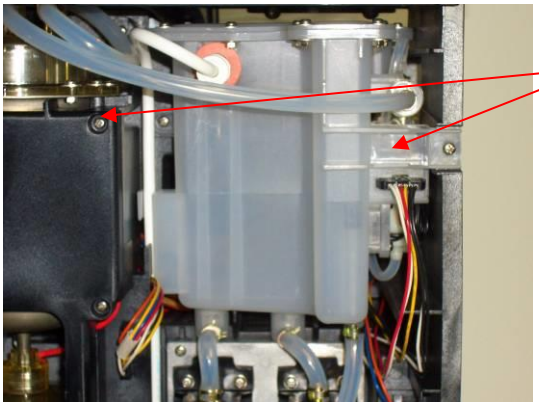
7. Release clamp and disconnect the hose on the **LEFT** side of the top Hot Water Tank.

Loosen the clamp & remove CW Supply Tubing from the top of the HWT.

8.



9. Loosen fully the two screws that secure the Cold Water Tank to the chassis. They are **captive** screws so they will **NOT** come out completely.



Loosen the captive CWT mounting screws to enable removal of the CWT Module.

10. While gently holding the plastic tube from the Inlet Valve out of the way, remove the Cold Water Module.

11. Install the new module; connect all of the appropriate connections, hoses and wires making sure that they are secure and tight.

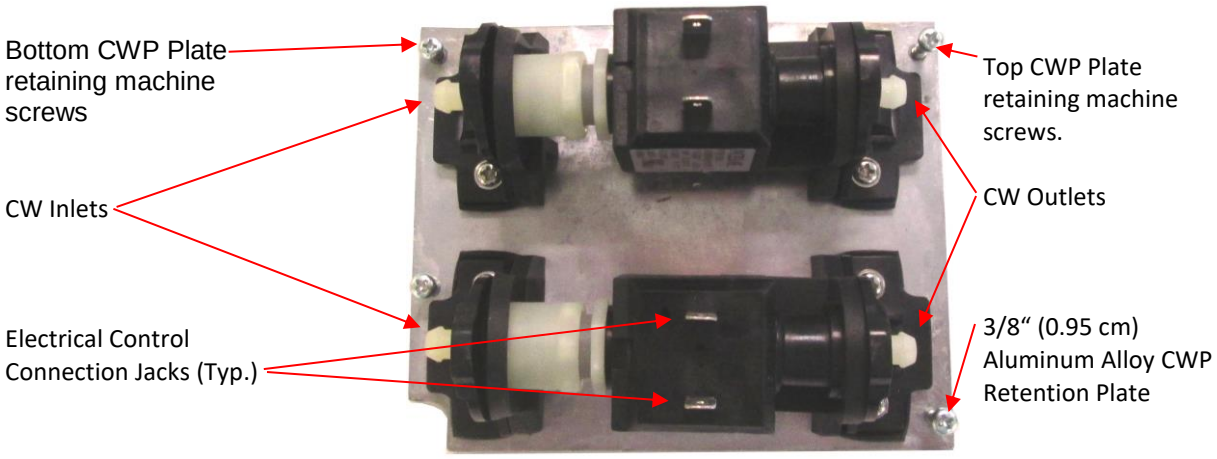
12. Conduct a Built In Test to ensure the proper function of the brewer.

8. Cold Water Pump Module [CWP]

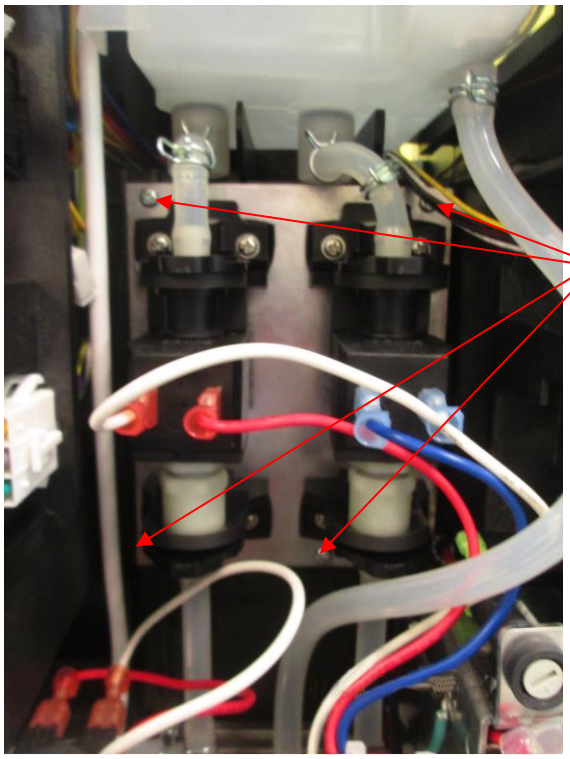
The CWP Module is located in the middle-rear of the brewer.

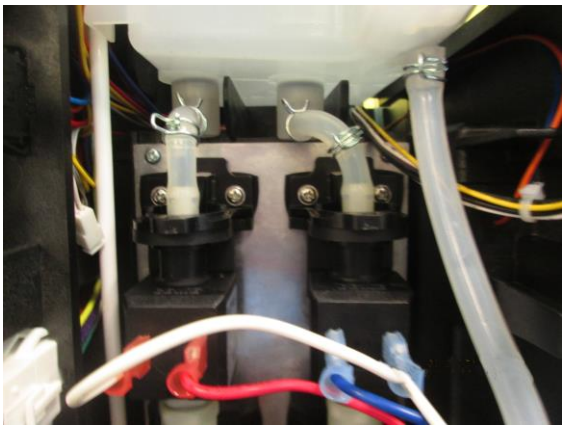
Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer. To replace the CWP Module, the rear panel must be removed.

The figure below shows the Cold Water Pump replacement module and plate retention bottom machine screw locations on left, with top screw locations on right.



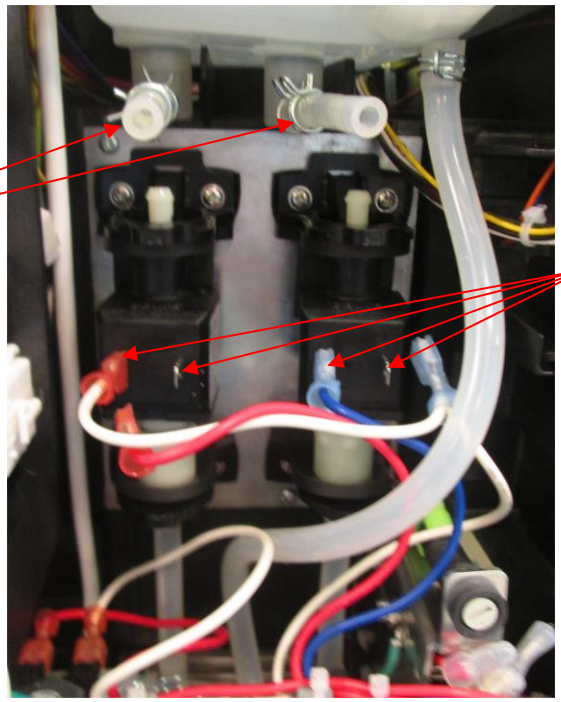
The Cold Water Pump Module is accessible from the rear, in the middle-right of the brewer below the Cold Water Tank. Note the module’s machine screw fastener plate retention locations.





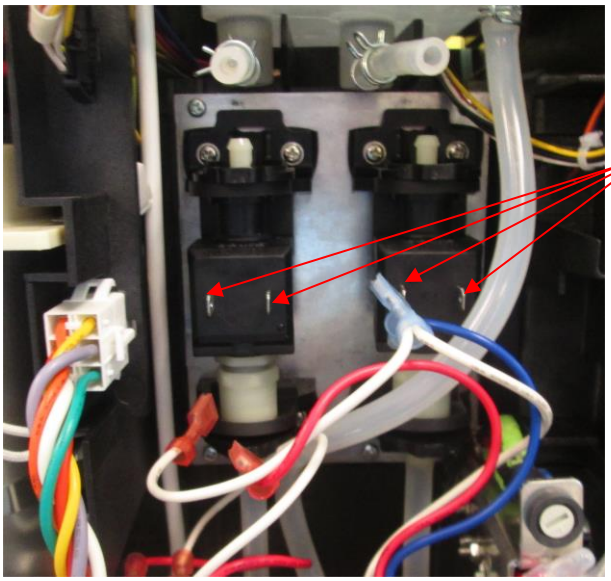
1. Loosen the clamps and disconnect the hoses on the top of each pump.

Disconnect the outlet hoses to the CWT on the top of each pump.



Disconnect the electrical power connections to the CW Pumps on the side of each pump.

2. Prior to disconnecting the four wire connections attached to bottom of the green water pumps make a note or take a smartphone photo of the respective connections.



Electrical power connection jacks to the CW Pumps on the side of each pump shown disconnected.

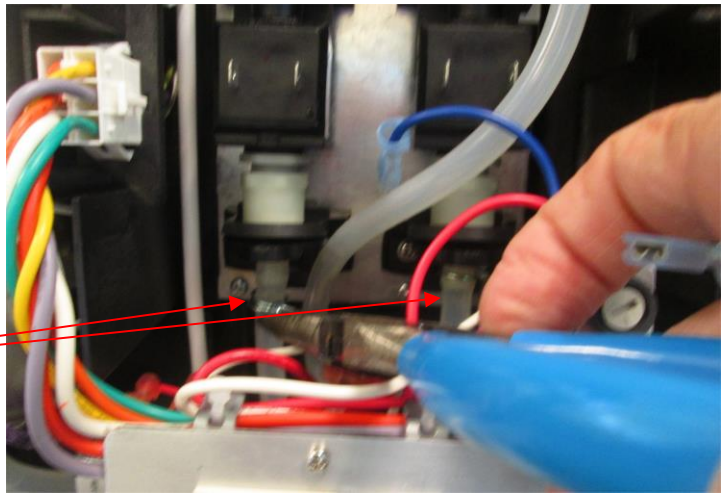
NOTE: The wires must be reconnected to their proper connections when installing the new module. Failure to do so will result in having extremely noisy pumps while they are in operation. Make sure that Cold Water Tank drain hose is NOT pinched when reassembling.

3. Disconnect these four wires.

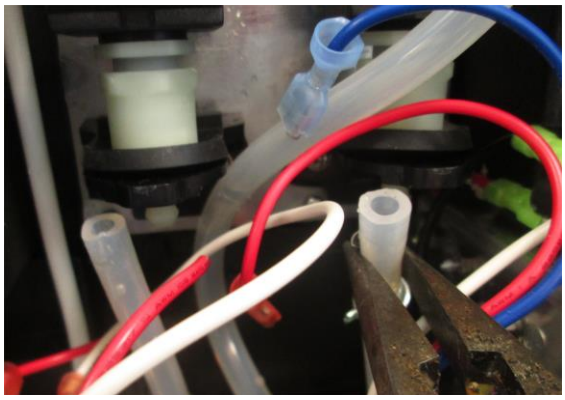
4. Loosen the captive screws holding the Power Module in place. Gently pull out the module. This will allow access to the manifold clips.

5. Disconnect the clamps and water hoses attached to the water manifold and inlet to the Hot Water Tanks.

Disconnect the inlet hoses to the HWTs located at the bottom of both pumps.



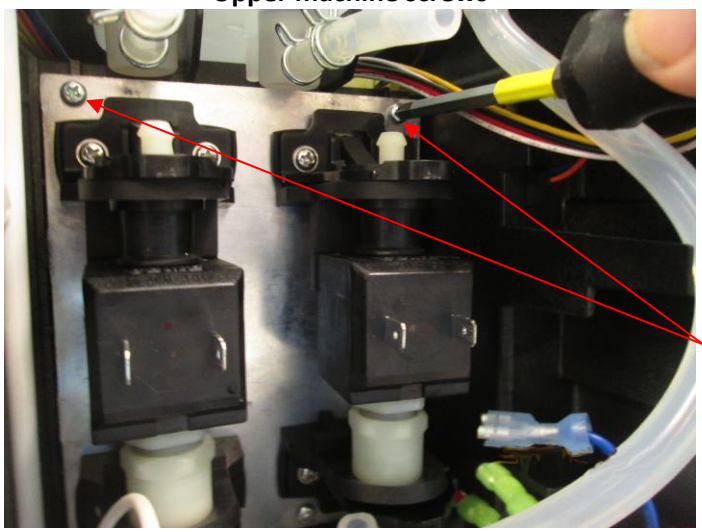
Inlet hoses to HWTs from manifolds removed



6. Remove the Multi Connector Tee manifold from new module. Set this aside. It will be used when installing a new Power Module that does not come with this connection.

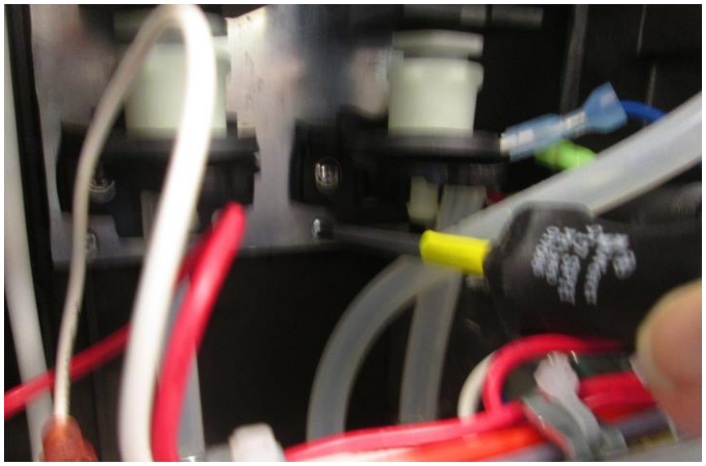
7. Locate the four machine screws holding the CW Pump Module to the chassis on a 3/8” (0.95 cm) aluminum plate. Fully loosen these screws while holding the CW Pump Module. It is not necessary to completely remove these screws to extract the module.

Upper machine screws



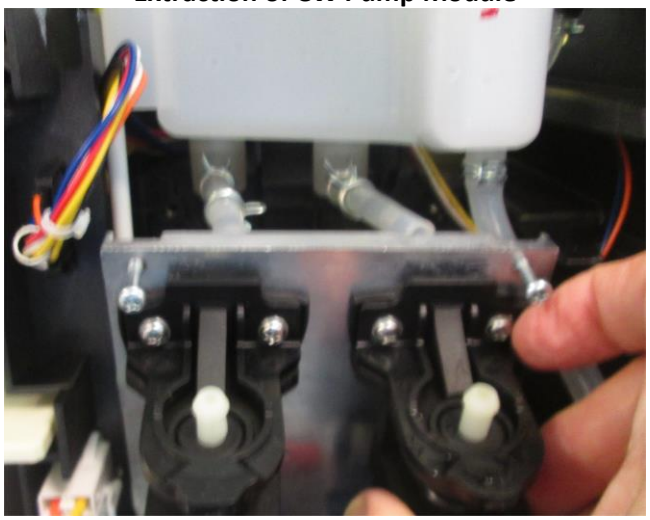
Lower machine screws

Unscrew the 4 CW Pump plate retention fasteners to remove the CW Pump Module. It is not necessary to completely remove these screws.

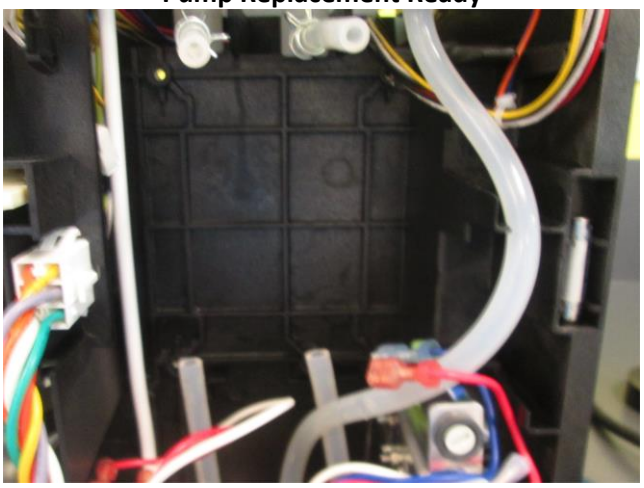


8. The Cold Water Pump Module can be extracted from the brewer.

Extraction of CW Pump Module



Pump Replacement Ready



9. Install the new module and connect all of the appropriate connections, hoses and wires making sure that they are secure and tight.

10. Conduct a Built In Test to ensure the proper function of the brewer.

9. Control Panel Module

The Control Panel Module is located on the left front of the brewer, incorporated within the single-section front & top panels.

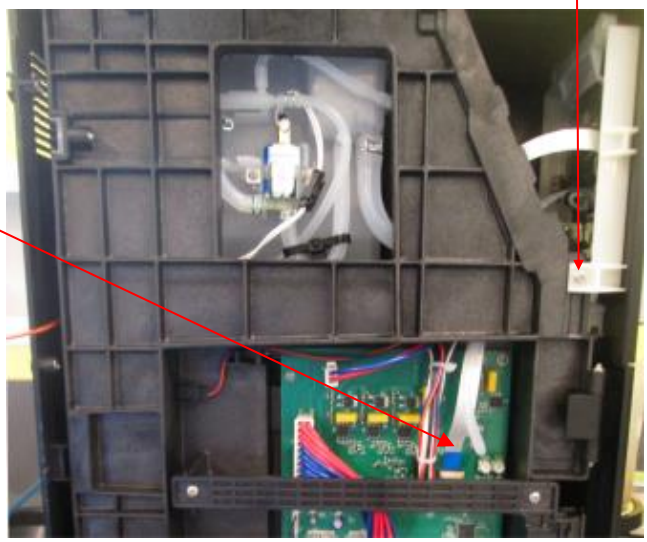
CAUTION: The technician must attach an ESD wrist strap to themselves and the metal base plate of the brewer or earth ground when replacing this module.

Removal of Front & Top Panel

1. To replace the Control Panel assembly, first remove the fasteners from both the top right and left sides.

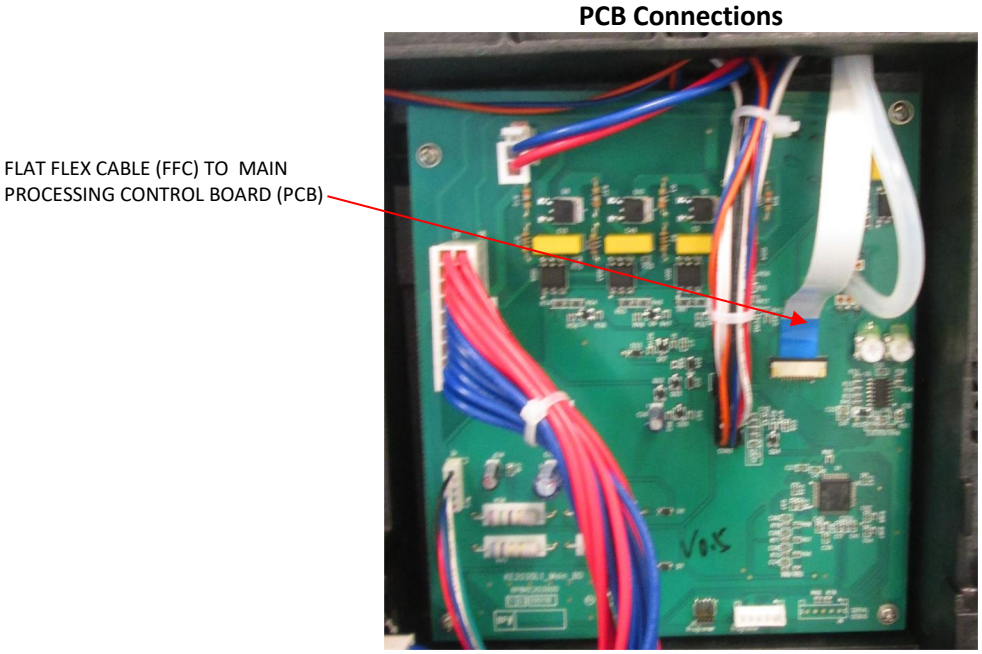
REMOVE TOP LEFT & RIGHT SIDE
FASTENERS TO REMOVE TOP & FACE PANEL.

FLAT FLEX CABLE (FFC) TO CAMERA PROCESSING BOARD (PCB)



2. Gently remove the FFC (Flat Flex Cable) interface connection from the main board prior to lifting off the top and front panel assembly as described above in Removal of Front & Top Panel Assembly instructions.

PCB Connections

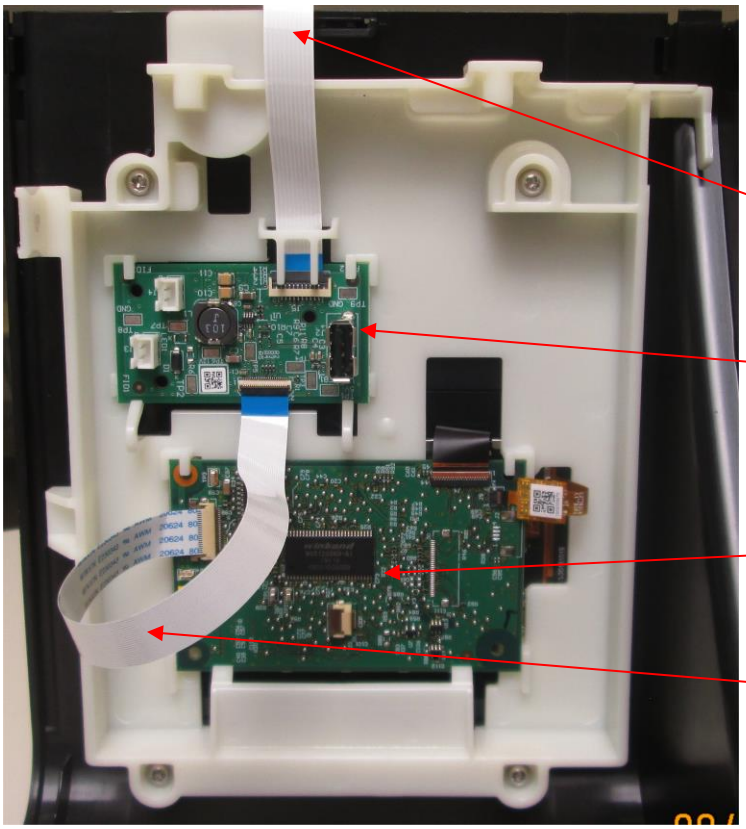


Touchscreen Face & Top Panel Assembly

Top & Front Panel Underside with UI Assembly

2. Gently pull out and up on the Touchscreen Face and Top Panel assembly from the K-3500 frame to remove the module from the brewer.

User Interface Assembly



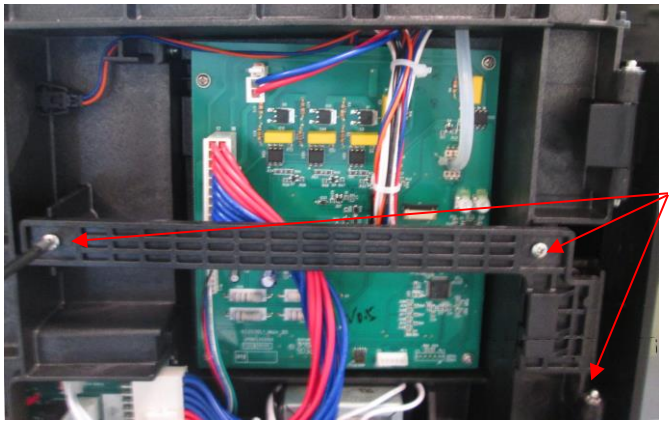
3. Carefully feed the FFC back through the brewer's frame and reconnect it to the main PCB.
4. Carefully refasten the assembly to the frame to complete the control panel module's replacement.

5. Conduct a Built In Test to insure the proper function of the brewer.

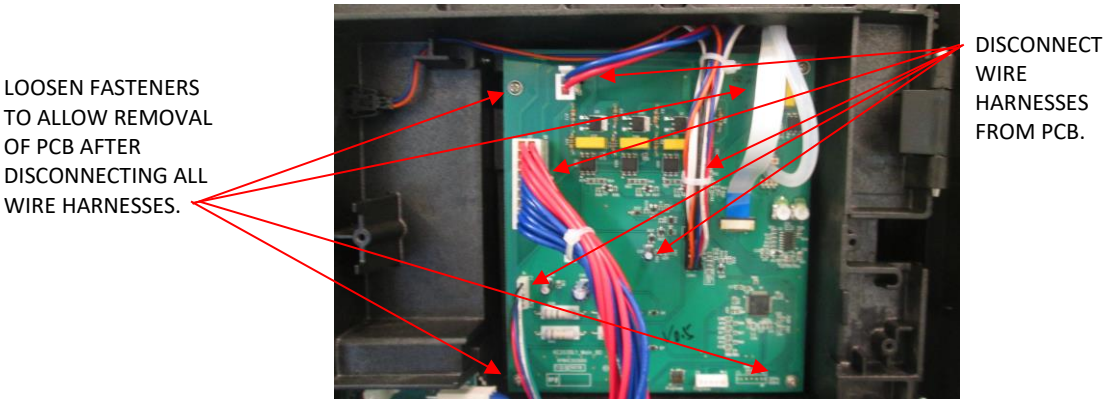
10. Main Processing Control Board Module [PCB]

The Printed Circuit Board (PCB) is located on the lower left side of the brewer.

Refer above to **Removing & Installing Modules**. After completion of panel removal, the technician must attach an **ESD** wrist strap to themselves and the metal base plate of the brewer.

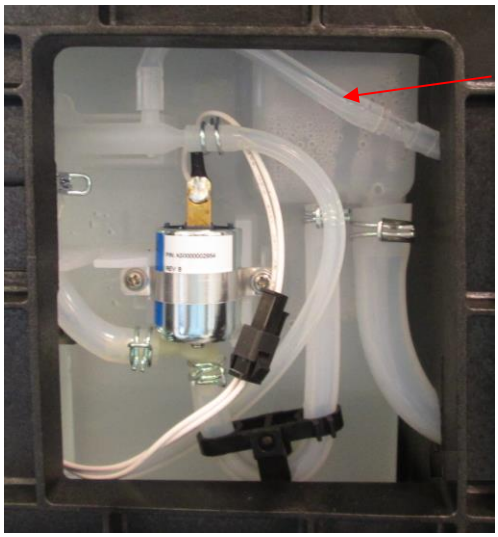


1. Remove the plastic protective bar in front of the Main PCB and disconnect the wire harness connections on the board.

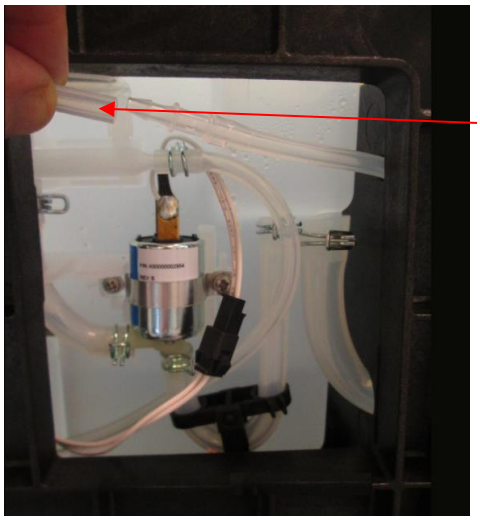


2. Remove the four screws holding the PCB to the chassis.

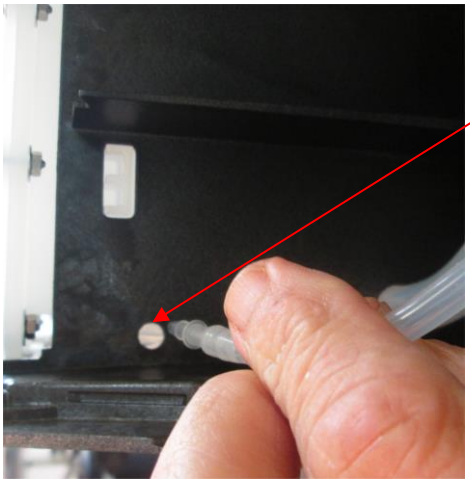
3. Follow Pressure Sensor tubing to the Cold Water Tank and disconnect it from the coupling.



PRESSURE SENSOR TUBING LOCATION AT CWT



DISCONNECT PRESSURE SENSOR TUBING AT PLASTIC UNION CONNECTION COUPLING.



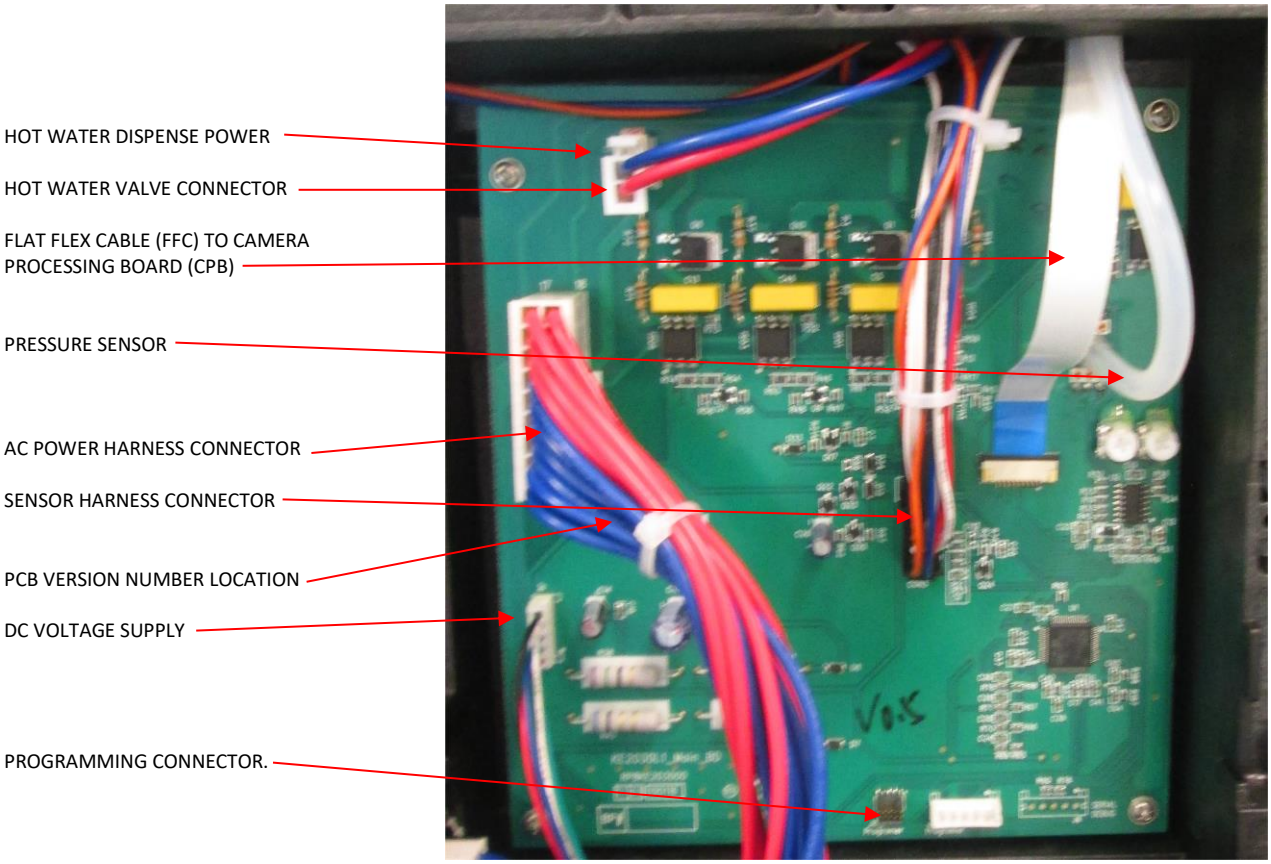
INSERTION POINT IN UNDERSIDE OF FRAME FOR PRESSURE SENSOR TUBING TO CWT ABOVE

4. The Main PCB can now be removed.

5. Install the new module using screws from step 2 and connect the appropriate wire connections, and reinstall the protective plastic bar.

6. Conduct a Built In Test to ensure the proper function of the brewer.

PCB Reinstalled



E. De-Scaling Your Brewer

Mineral content in water varies from place to place. Depending on the mineral content of your water, calcium deposits or scale may build up in your brewer. Scale is nontoxic but if left unattended can hinder brewer performance.
Regularly descaling your brewer every 3-6 months or 500 brews helps maintain the heating element, and other internal parts that come in contact with water. Calcium deposits may build up faster, making it necessary to descale more often. This brewer is equipped with sensors to detect when scale build up is interfering with the performance of the brewer. When this is detected, the brewer will alert you to descale.
Descaling Procedure Before you begin, you will need a large ceramic mug, fresh water, a Flojet pump or similar device, Keurig® Descaling Solution, and access to a sink. Do not use a paper cup. Ensure that there is no Pod in the Pod holder.

STEP 1: Disconnect the brewer from the water supply and power it off. Drain both the hot and cold water tanks. When empty, clip the drain tubes back into place and replace the drain plugs. Power the brewer back on. Connect a Flojet pump system to the brewer to add Keurig® Descaling Solution. After the brewer has heated, place a ceramic mug on the drip tray and run a brew cycle. When the brew process is complete, discard the contents from the mug into the sink. Let the brewer stand for at least one hour.

STEP 2: Repeat the brew process without a Pod at least 10 times, pouring the contents of the mug into the sink after each cycle.

STEP 3: Power off the brewer and drain both hot and cold water tanks. Reconnect the brewer to the filtered cold water supply to refill the brewer. Power on the brewer and perform several cleansing brews to remove any residual taste from the Keurig® Descaling Solution.

NOTE: The cleaning action of Keurig® Descaling Solution may result in a “foam” dispensed from the brewer. This is natural, as the solution is reacting with the scale inside. For a brewer that is heavily scaled, the brewer may not fill properly after the descaler is added. If this occurs, you may see only a small or no output dispensed, followed by the sound of air blowing out. If this occurs: • Turn off and unplug the brewer. • If there is Keurig® Descaling Solution in the water reservoir, discard the contents, rinse the water reservoir thoroughly and refill with water. • Plug the brewer back in, power on, and repeat the Step 3 Fresh Water Rinse cycle. The brewer should begin to function normally as the solution is rinsed out and the scale is removed. If problem persists, allow brewer to sit unplugged for at least 30 minutes before continuing with the rinse. For further information on descaling, please contact your Keurig® Authorized Distributor.
Mineral content in water varies from place to place. Depending on the mineral content of your water, calcium deposits or scale may build up in your brewer. Scale is nontoxic but if left unattended can hinder brewer performance.

Regularly descaling your brewer every 3-6 months or 500 brews helps maintain the heating element, and other internal parts that come in contact with water. Calcium deposits may build up faster, making it necessary to descale more often. This brewer is equipped with sensors to detect when scale build up is interfering with the performance of the brewer. When this is detected, the brewer will alert you to descale.
Descaling Procedure Before you begin, you will need a large ceramic mug, fresh water, a Flojet pump or similar device, Keurig® Descaling Solution, and access to a sink. Do not use a paper cup. Ensure that there is no Pod in the Pod holder.

STEP 1: Disconnect the brewer from the water supply and power it off. Drain both the hot and cold water tanks. When empty, clip the drain tubes back into place and replace the drain plugs. Power the brewer back on. Connect a Flojet pump system to the brewer to add Keurig® Descaling Solution. After the brewer has heated, place a ceramic mug on the drip tray and run a brew cycle. When the brew process is complete, discard the contents from the mug into the sink. Let the brewer stand for at least one hour.

Mineral content in water varies from place to place. Depending on the mineral content of the water in your area, calcium deposits or scale may build up in your brewer. Scale is nontoxic, but left unattended, it can hinder brewer performance. De-scaling your brewer helps maintain the heating element and other internal parts of the brewer that come in contact with water.

The brewer should be de-scaled every 6 months to ensure optimal performance. It is possible for calcium deposits to build up faster, making it necessary to de-scale more often.

This brewer is equipped with sensors to detect when scale buildup is interfering with the performance of the brewer. When this is detected, the brewer will alert you to perform a de-scaling procedure by generating one of the following messages.

- De-scale soon
- De-scale now

NOTE: Safety glasses and rubber gloves should be worn before proceeding with the de-scaling procedure.

1. De-Scaling Procedures:

a. PREPARE
   1. Make sure you have at least (80 ounces) of full citric acid solution such as CDCC Citric Acid Powder or similar product on hand. You will also need an empty sink and a ceramic cup (do not use a paper cup.) and a Flojet pump or similar.

   2. Disconnect the brewer from the water supply and power it off. Drain both the hot and cold tanks.

b. FILL AND CLEAN
   1. Enter the PRIME mode (enter Menu mode and answer YES to HAS BREWER BEEN DRAINED) and use a Flojet pump system to add de-scaling solution to the brewer.

      NOTE: The water temperature for dissolving the powder cannot be greater than 110° F.
      Damage to the Flojet pump may occur.

      Complete the PRIMING process.

   2. After it has primed and heated, place a ceramic cup in the Drip Tray and run a brew cycle. do not use a Pod Portion pack, just press the Brew Button. Pour the contents of the cup into the sink.

   3. Now let the brewer stand for at least one hour.

   4. Repeat the brew process, without Pods at least 10 times, pouring the contents of the cup into the sink after each cycle. We suggest using the largest brew size to speed the process. Remember to open and close the brew handle between each cycle so the blue Brew lights will flash.

   5. Power off the brewer and drain both hot and Cold-water tanks.

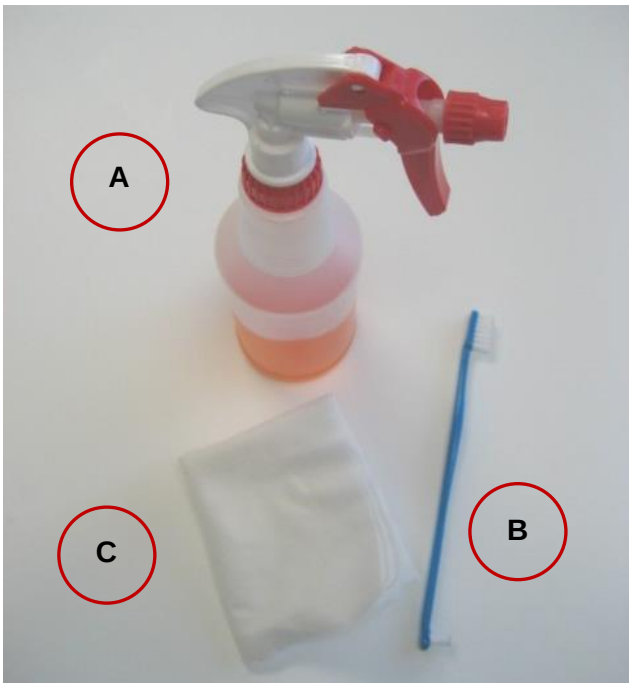
   6. Reconnect the brewer to the filtered Cold-water supply and follow the PRIME procedure to refill the brewer.

7. Once the prime process is complete, power off the brewer and drain both hot and Cold-water tanks again.

8. Power up the brewer and follow the PRIME procedure again, performing several (10) cleansing brews to remove any residual taste from the citric acid.

NOTE: If the LCD screen still alerts you to perform a de-scale after completing the procedure, repeat the de-scaling procedure.

F. Sanitizing & Cleaning the Puncture Mechanism



FOR PROPER SANITIZING / CLEANING OF THE PUNCTURE MECHANISM, THE FOLLOWING ITEMS ARE RECOMMENDED.

A. DISHWASHING LIQUID SOLUTION OR SOAP & WATER IN A SPRAY BOTTLE.

B. MINI SCRUB BRUSH FOR CRAMPED AND TIGHT AREAS [i.e. AS SHOWN, McMASTER-CARR PT NO. 7243T22].

C. CLEAN CLOTH FOR WIPING.

D. ACCESS TO A SINK (IDEALLY WITH FRUIT SPRAYER) OR A BUCKET OF WATER FOR RINSING. SEE IMAGES 15 AND 16.

A. Sanitizing/Cleaning the K-3500 Inlet Needle and Gasket

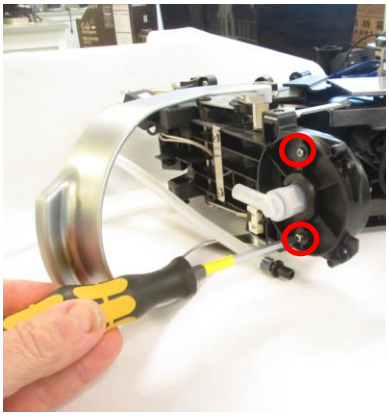
CAUTION: To avoid risk of injury, please be careful of the two sharp needles when cleaning the Pod Holder Assembly and Puncture Mechanism.

1. DEPRESS NEEDLE PLATFORM TO EXPOSE INLET NEEDLE AND THE INLET NEEDLE GASKET. LOOK FOR TEARS OR OTHER NON FUNCTIONING CONDITIONS.

2. WHILE DEPRESSING THE PLATFORM REMOVE STUBBORN PARTICLES BY USING BRUSH AND WATER.

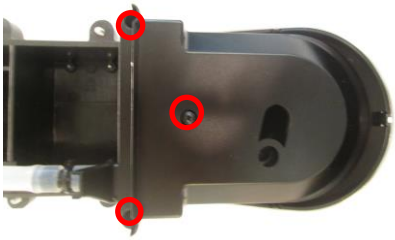
3. WIPE THE NEEDLE & GASKET AREA CLEAN USING A DRY CLOTH. PERFORM THREE CLEANSING BREWS (BREWS WITHOUT K-CUPS) TO RINSE OUT NEEDLE.

4. PM REMOVED AS DESCRIBED IN THIS MANUAL.



5. REMOVE UPPER PM ENTRANCE NEEDLE COVER BY REMOVING THE TWO SCREWS AS INDICATED

6. HERE THE PM IS SHOWN WITH THE PM ENTRANCE NEEDLE REMOVED.



7. TO REMOVE THE BOTTOM PM COVER, REMOVE THE THREE SCREWS INDICATED ABOVE.

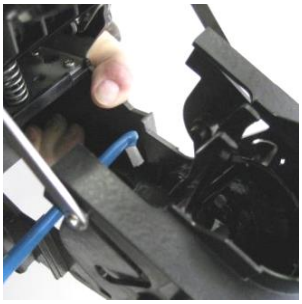
8. HERE THE PM IS SHOWN WITH THE BOTTOM PM COVER REMOVED.

9. THE POD HOLDER, LOWER RIGHT, SHOULD BE REMOVED AND SANITIZED AS DESCRIBED IN THE USE & CARE GUIDE.

10. THE MODULE FRAME SHOULD BE SPRAYED WITH A SOAPY SOLUTION OR MILD DETERGENT.

11. THE MODULE CAN BE MANEUVERED SO ALL AREAS CAN BE REACHED BY THE SPRAY.

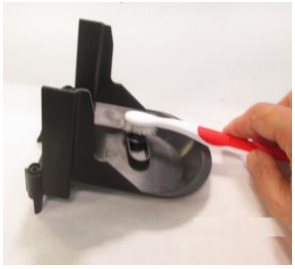
12. USE A SCRUB BRUSH TO REMOVE DEBRIS FROM THE MODULE.



13. USE THE DETAILING END OF THE BRUSH TO REACH INSIDE THE MODULE FRAME TO REMOVE DEBRIS.

14. A CLOTH CAN BE USED TO WIPE THE FRAME CLEAN & TO DRY IT AFTER RINSING UNDER A FAUCET, OR RINSING WITH A FRUIT SPRAYER, OR RINSING IN A BUCKET OF WATER.

15. USE THE SPRAY ON THE UNDER COVER.



13. USE THE SCRUB BRUSH ON THE UNDER COVER AS NECESSARY.

14. USE A CLOTH WIPE AS REQUIRED. RINSE UNDER FAUCET OR IN BUCKET OF WATER.

15. RINSE FRAME IN BUCKET TAKING CARE NOT TO WET ELECTRICAL COMPONENTS.

16. REMOVE FRAME FROM BUCKET ALLOWING WATER TO DRAIN.

17. MODULE CAN BE PLACED ON TOWEL TO ALLOW FOR FINAL DRAINING BEFORE WIPING. RE-ASSEMBLE MODULE TO BE RE-INSTALLED IN BREWER

IX. Product Warranty Information

A. Warranty

1. Limited Warranty

LIMITED ONE-YEAR WARRANTY Keurig Green Mountain, Inc. warrants to the original purchaser that its brewer will be free of defects in materials or workmanship under normal use for one-year from the date of purchase. Keurig, a Keurig Authorized Distributor or Service Agent will, at their option, repair or replace a defective brewer or brewer parts under this warranty without charge upon its receipt of proof of the date of purchase. If a replacement brewer is necessary to service this warranty, the replacement brewer may be new or reconditioned. If a replacement brewer or parts are sent, a new limited one-year warranty will be applied to the replacement brewer or parts. This warranty only applies to brewers operated in the United States and Canada. This warranty gives the original purchaser specific legal rights, and you may also have other rights that vary from state to state and, in the case of Canada, from province to province. If you obtained this brewer through sale or rental from a Keurig Authorized Distributor, you may also want to refer to your distributor's warranty policies. Only the use of Keurig® Pod brand pods and accessories will guarantee the proper functioning and lifetime of a Keurig® Pod brewer. Any damage to or malfunction of your brewer resulting from the use of non-Keurig® Pod brand pods and accessories may not be covered by this warranty or may result in a service fee if the damage or malfunction is determined to be caused by such use.

2. Warranty Exclusions

What Is Not Covered By The Limited Warranty? This Warranty does not cover consequential or incidental damages such as property damage and does not cover incidental costs and expenses resulting from any breach of this warranty, even if foreseeable.

Some states or provinces do not allow the exclusion or limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you depending on the state or province of purchase. Nor does this warranty cover damages caused by use of non-Keurig® Pod brand pods or accessories, services performed by anyone other than Keurig or its authorized service providers, use of parts other than genuine Keurig parts, or external causes such as abuse, misuse, inappropriate power supply, or acts of God.

Other Limitations: This Warranty is exclusive and is in lieu of any other express warranty, whether written or oral. In addition, Keurig hereby specifically disclaims all other warranties with respect to your K-1500 Brewer, including any implied warranty of merchantability or fitness for any particular purpose. Some states or provinces do not allow disclaimers of such implied warranties or limitations on how long an implied warranty lasts, so the above limitation may not apply to you depending on the state or the province of purchase.

3. Obtaining Warranty Service

How do you obtain Warranty Service? Keurig® brewers are high-quality appliances and, with proper care, are intended to provide years of satisfying performance. However, should the need arise for warranty servicing; simply call your Keurig Authorized Distributor (KAD) who originally sold you the brewer or your Keurig Authorized Service Provider (KASP) for full support.

To be re-connected with your KAD or KASP,
please call Keurig at: **1.888.CUP.BREW (287.2739)**

Keurig Green Mountain, Inc.
33 Coffee Lane Waterbury, VT 05676.

X. Certifications & Specifications

A. Regulatory Compliance

Expected Use:
The K-3500 is target for large offices. In this environment the expected use is (25) cups per business day.

Regulatory:
The K-3500 brewer is certified to perform in accordance:

- UL 197, 9th Edition, Commercial Electric Cooking Appliances
- UL EPH sanitation certification to NSF/ANSI 4, Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transport Equipment
- CAN/CSA – C22.2 No. 109 –M1981, Commercial Cooking Appliances

The UL Mark rating is affixed to the inside of the Waste Bin area of the Brewer.

ANSI / NSF 25 (applies to brewers F0009546 and higher)
Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transport Equipment

CAN/CSA C22.2 No. 109 – M1981
Commercial Cooking Appliances

B. Brewer Performance Specifications

Operation	Parameter	Specification	Comments
1.0 Noise	Noise level @ 5 inches	<65 dB	
1.1 Operational Environment	Operating temperature	40 to 95°F	
	Humidity	20 to 80%	Non-condensing
	Altitude	9000ft max.	@ 187 F brew temperature
1.2 Brewer Timing	Repeat brew cycle time (brew start to brew start) "Back to Back Time"	< 60 seconds	All brew sizes up to 12oz
			Nominal Voltage = 120V
			Nominal Inlet temp = 70°F
	Time to Ready from Cold Start	<5 minutes	Ambient temperature of 70°F
	Purge Time	4 seconds nominal	Reference
1.3 Contact Time	Brew Size: 8oz Regular	22 – 38 seconds	Time from beginning of coffee flow to display "Enjoy". Using GMOB (For Reference Only)
1.4 Delivered Water Volume in mL (Applies to Brew, Rinse, and Hot Water Dispense Modes)	Dispense Size: 4oz	89 -128 g	Meets Ppk of 1.0 Min.
	6oz	146 - 194 g	Meets Ppk of 1.0 Min.
	8oz	202 - 258 g	Meets Ppk of 1.0 Min.
	10oz	259 - 321 g	Meets Ppk of 1.0 Min.
	12oz	314 – 386 g	Meets Ppk of 1.0 Min.
1.4.1 Brew Time	4 oz. Regular (118 mL)	<60 s	Applies to Brew, Rinse and Hot Water Mode
	6 oz. Regular (177 mL)	<60 s	Applies to Brew, Rinse and Hot Water Mode
	8 oz. Regular (236 mL)	<60 s	Applies to Brew, Rinse and Hot Water Mode
	10 oz. Regular (296 mL)	<70 s	Applies to Brew, Rinse and Hot Water Mode
	12 oz. Regular (355 mL)	<90 s	Applies to Brew, Rinse and Hot Water Mode
	4 oz. Strong	<70 s	Applies to Brew and Rinse
	6 oz. Strong	<70 s	Applies to Brew and Rinse
	8 oz. Strong	<90 s	Applies to Brew and Rinse
	10 oz. Strong	<100 s	Applies to Brew and Rinse
	12oz. Strong	< 160 s	Applies to Brew and Rinse
1.5 Temperature	HWT Temperature	187.6° to 192.6°F	Nominal 192°F
			KAD adjustable 192°F to 187°F
	HWT temperature brew to brew variation	±2°F	Applies to Brew, Rinse and Hot Water Mode
	Water temperature @ entrance needle of Pod	194° ±7°F	Applies to Brew, Rinse and Hot Water Mode
	In-Cup Temperature	170°F min to 190°F Max.	Applies to Brew, Rinse and Hot Water Mode, Using GMOB, Applies to all sizes and strengths
1.6 Pressure	Brew pressure (normal brew)	2.5 psi ± 1.0 psi	
	Brew Over Pressure	4.4 psi	Plumbed or Flow-Jet
	Water Supply Conditions	40 to 125 psi 2.76 bar to 8.62 bar	Mountable in rear and not supplied
	Water Filter	Required for warranty	Approx. 5 years of operation
1.7 Brewer Life	Brew and Handle cycles	40,000 minimum	Cycle definition: Open PM and then close PM equals one cycle

	NTC endurance cycles	6,000 minimum	
1.8 Hot Water Tank	Volume	1400 ± 15 mL (47.34 oz)	(2) HWT's @ 700ml each
	Maximum Drain Time	4 minutes	
1.9 Cold Water Tank	Volume	450 ±60 mL (15.22 oz)	
	Maximum Drain Time	45 seconds	
2.0 Electrical	Voltage	105 to 125 VAC, 60Hz	
	Power Draw	1,400 Watts maximum	Total Brewer Power
	UL power rating	1,470W max. at 115V	
	Power cord and plug	15A (3-prong)	
2.1 Drip Tray & Plate	Volume	Minimum of 8oz	
	Removal	Easy to remove from brewer	Tactile indication of being in proper position
	Disassembly	Easy to disassemble	<1 pound of force
	Cleaning	Hand wash	
2.2 Physical size	Height	17.2 +/- 0.2 inches	
	Width	12.3 +/- 0.2 inches	
	Depth	21.3 +/- 0.2 inches	With water filter (19.5 without)
	Drip Tray to Funnel	5.7 +/- 0.2 inches	For use with Standard Cup
	Base Plate to Funnel	7.7 +/- 0.2 inches	For use with Travel Mug
	Brewer Weight	<40 lbs.	Empty (no water)
2.4 Safety	Brewing chamber	Must be closed for brewing	
	Hi-Pot Test Limits	1,250 Volts, 5 mA, 1sec	
	Shielding	PM has a "shield feature" to protect consumer from any fluid spray	
	Over Temp Protection	Auto-ResetThermostat	105°C trip 85°C reset
		Single event thermal fuse (TCO)	115°C blow temperature
2.5 Puncture Mechanism	Method of Puncture	Manual (Single Entrance and Exit Needle)	
	Pod Insertion	Manual (Top Load)	
	Pod sensing	IR Sensors Present	>28 cup internal bin
	Pod Removal	Automatic	External bin compatible
			Bin Full Sensors
	Force to Close PM	<4 lbf	
	Force to Open PM	<4 lbf	
	Handle Motion	From a fully open position, PM handle will not automatically close	
		PM has a tactile feel to present to the consumer that the PM Handle is fully opened or fully closed	
2.6 Descale compound compatibility	Compatible with Keurig Approved Descale Solution		
3.0 TFT Display	Color Touch Display	4.3" 480x800 Resolution	
	Screensaver Capability	User Selectable Images	
4.0 Plumbing	Cold Water Inlet	3/4 Inch Male Garden Hose Fitting	

XI. Accessory Appendix

A. Water Filter Kit [Part Number 5025]

Filter Kit **Filter Installed**

Keurig requires the use of a water filtration system for the K-3500. The Omnipure KQ8A filter is recommended. This filter has both a Charcoal filter medium for removing chlorine, taste and odor, plus phosphate for the reduction of lime build up inside the brewer.

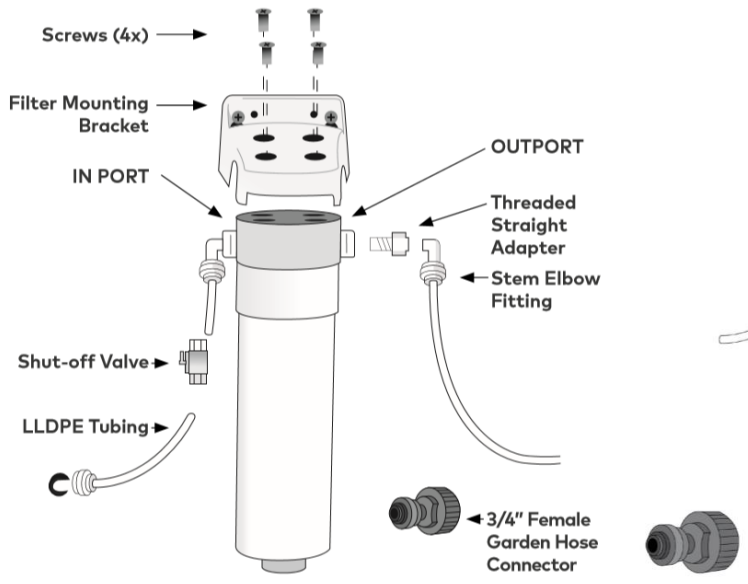
NOTE: The phosphate only slows down the build-up of lime. It does not eliminate it.

Keurig offers a filter kit for its brewers. The kit (Part Number **5025**) contains:

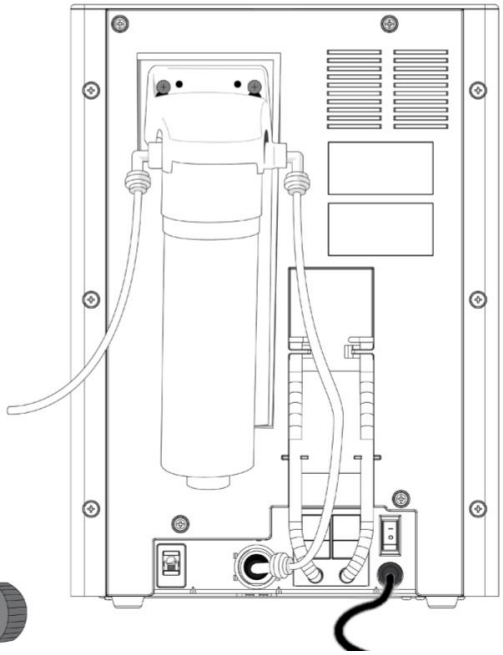
1 – Omnipure KQ8A filter
1 – Filter head
1 – Mounting bracket with screws

There is no water connection components provided in this kit. The type of connectors used to attach the water supply to the filter is left up to the distributor.

Filter Kit Components



Omnipure Filter Installed



B. Omnipure Filter Installation Instructions

1. Remove all pieces of packing tape from the brewer and drip tray. Remove the clear plastic film from the touchscreen.
   NOTE: An external filter (KQ8A, #5572) can be mounted on the rear surface of the brewer using the mounting screws provided.
2. Attach a threaded straight adapter to each of the ports on the Omnipure KQ8A water filter and tighten using an 11/16” (18mm) wrench. Make sure the connections are secure, but do not over tighten.
3. Attach the filter mounting bracket to the Omnipure KQ8A water filter using the four screws provided. **NOTE**: The top of the Omnipure KQ8A water filter has two ports labeled in port and out port. Make sure these ports are aligned with the filter mounting bracket.
4. Loosen the two mounting screws located on the upper-rear of the brewer and hang the filter kit assembly. Tighten the screws but be careful not to over tighten.
   NOTE: The filter kit assembly comes with ¼” FPT ports for both inlet and outlet and the plumbed water inlet to the brewer is ¾” female garden hose thread (Invensys solenoid valve). ¼” OD LLDPE (Linear Low Density Polyethylene) tubing is recommended (NSF compliant) between the filter kit assembly and the brewer. NSF compliant fittings such as High Density Polypropylene type are recommended.
5. Connect a stem elbow fitting to the import of the filter kit assembly by pushing the stem elbow fitting into the previously attached adapter. Push firmly until the connection is secure. Secure LLDPE tubing to the stem elbow fitting in the same fashion and connect it to the local water supply.
6. You may wish to install a shut-off valve between the water source and the Omnipure KQ8A water filter. To do this, cut some LLDPE tubing to size and connect it by pushing the tubing into the shut-off valve until secure.
7. Connect a long length of tubing to the out port of the filter kit assembly. Do not connect the brewer yet.

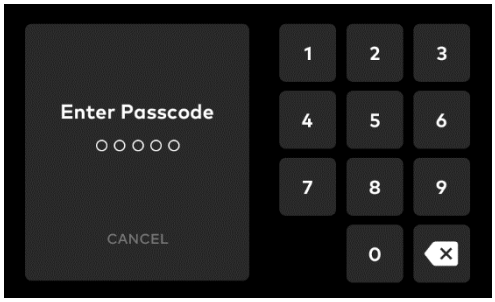
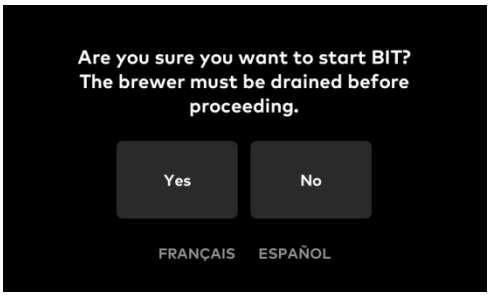
8. The Omnipure KQ8A water filter needs an initial flush to clear any carbon deposit. Bring the long length of tubing to a container or sink.
9. Turn on water supply and allow at least four gallons of water to flush through the filter. Turn off water supply.
10. Cut the tubing to the proper length and connect a stem elbow fitting to the cut end of tubing. Thread the ¾" female garden hose onto the brewer inlet valve located at the lower-rear of the brewer. Push the stem elbow fitting into it until secured firmly. Then, turn on water supply.

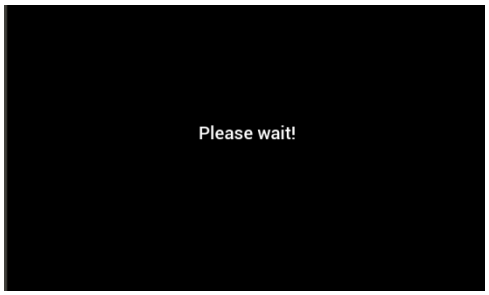
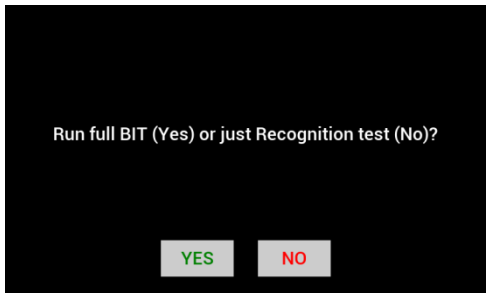
XII. Built In Testing

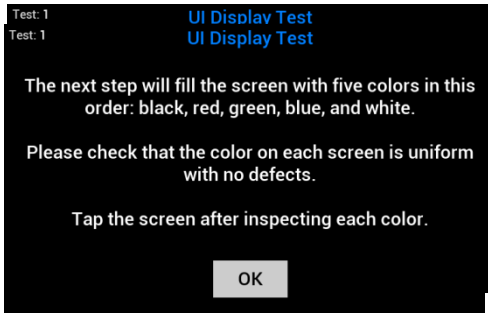
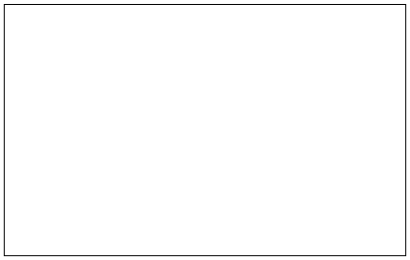
A. Manufacturing Built In Test [BIT]

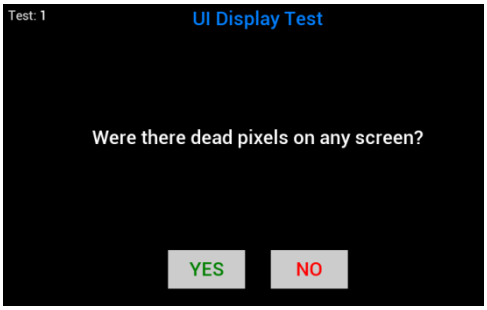
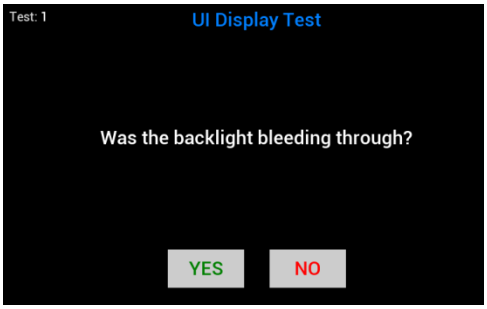
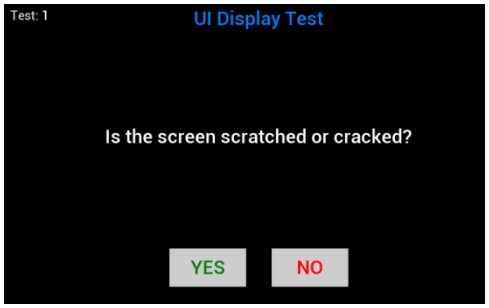
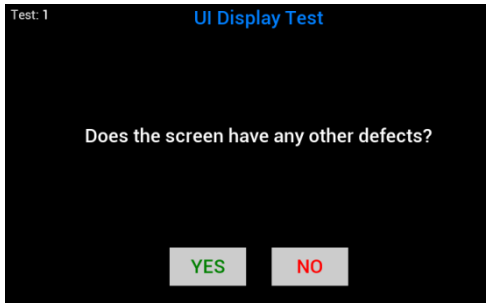
The K-3500 brewer has the ability of performing diagnostic tests to verify if most of the critical system elements are functioning properly. The table below illustrates the Built In Test in chronological order.

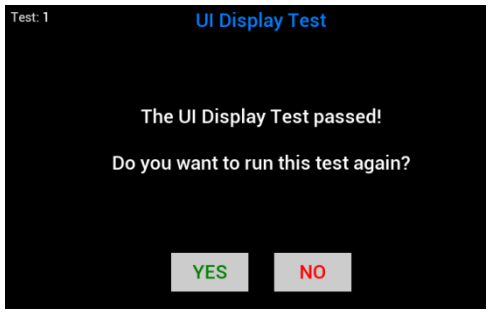
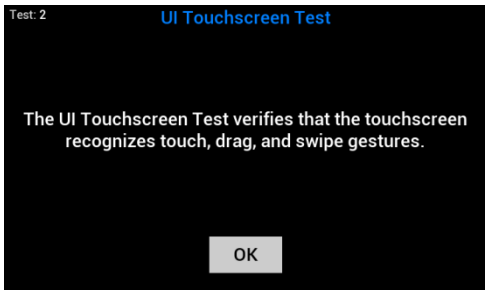
STARTING BIT		
Process	**User Action**	**Expected Outcome (Crank UI)**
Empty the brewer (if not already emptied)	Disconnect any water source from the back of the brewer. Unplug the two drain tubes in the back of the brewer and allow all of the water to drain. When brewer is entirely empty, plug the drain tubes. Do not connect a water source.	
Plug in the brewer	Plug the brewer to a power outlet	The brewer should boot up with the splash screen "Keurig Commercial K-3500". 

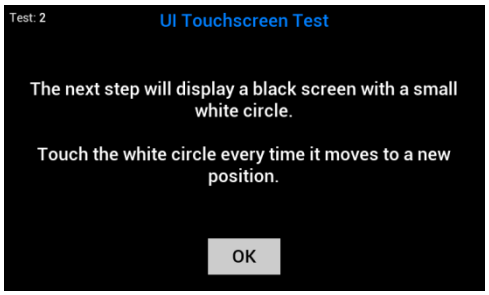
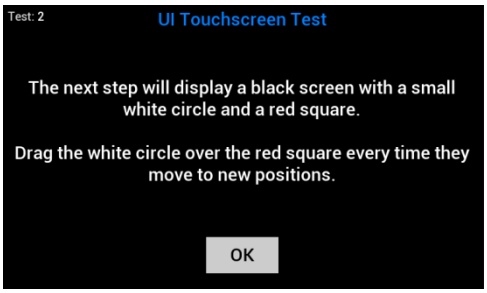
Start BIT	Press the icon in the top right corner of the screen. Note that the button will only be available for about 5 seconds.	After about a half minute, a small button will appear in the top right corner of the screen for about 5 seconds. 
	Enter the Technician passcode: **3**,**4**,**5**,**6**,**7** Press **Yes** when prompted to start BIT.	After BIT button pressed:  After correct passcode entered: 

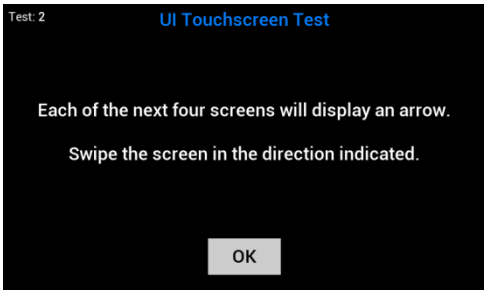
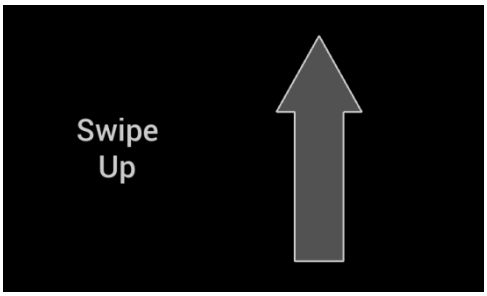
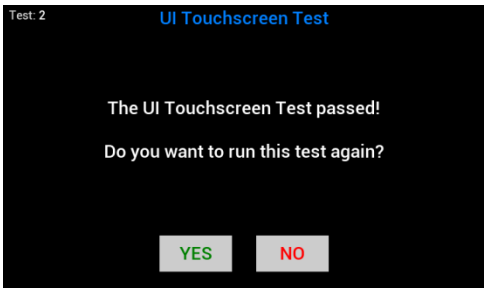
Transition to BIT Mode	Press **Yes** to run full BIT. At this time, there is no recognition test.	 

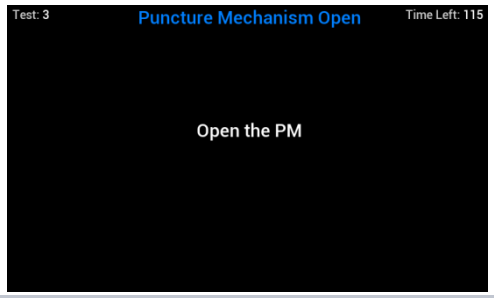
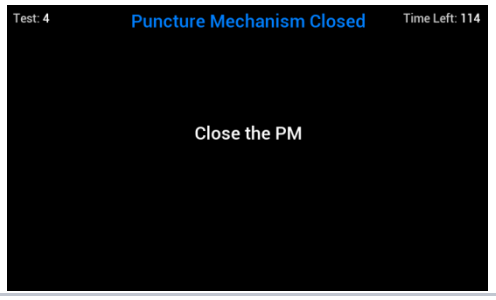
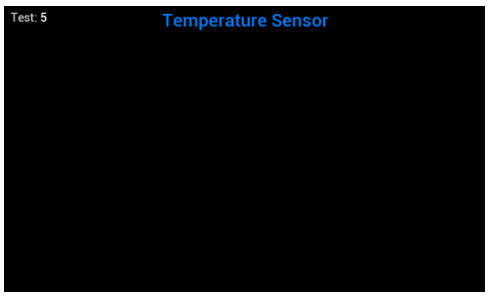
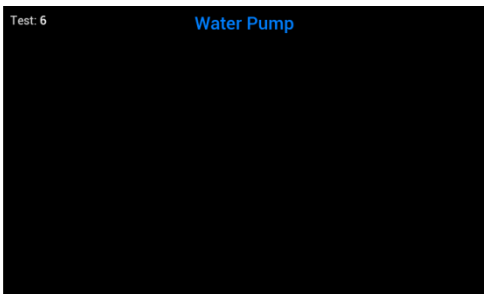
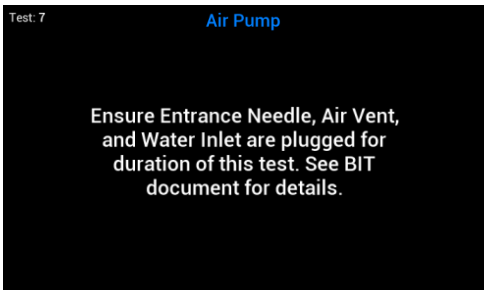
UI TESTS		
Test	**User Action**	**Expected Outcome (UI)**
UI Display Test	Read the text on the screen and follow the instructions. When the colored screens appear, tap the screen to proceed. Answer the questions with a **Yes** or **No**. When asked if you like to run the test again select **No** to continue with the rest of BIT.	     

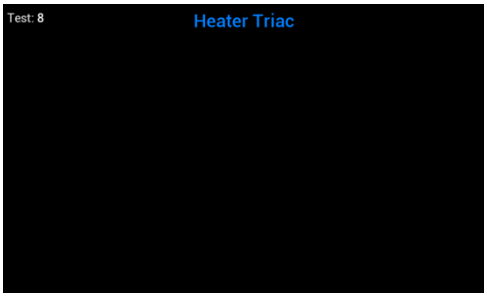
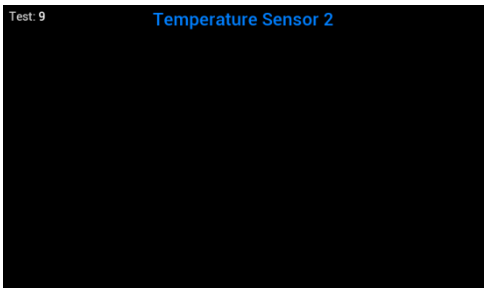
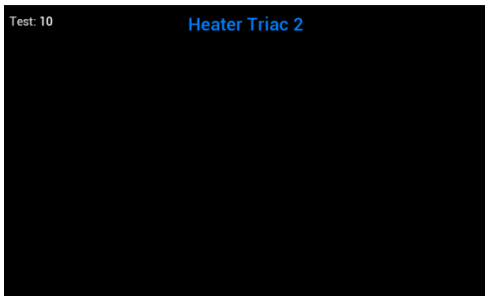
UI Display Test (cont.)	Read the text on the screen and follow the instructions.	   

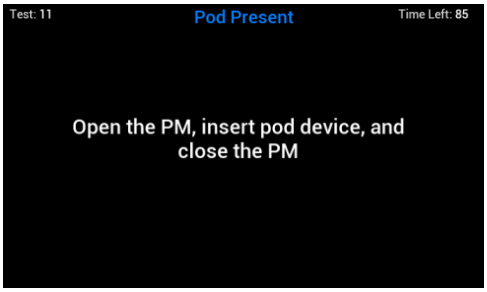
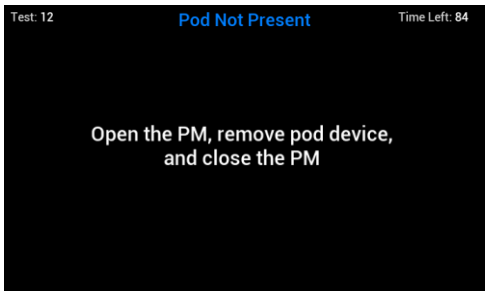
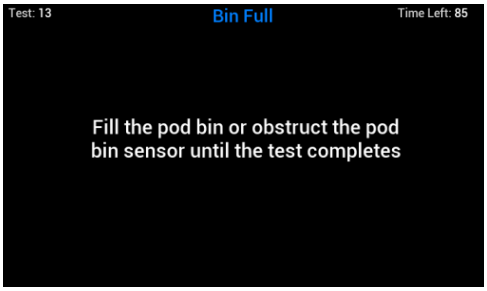
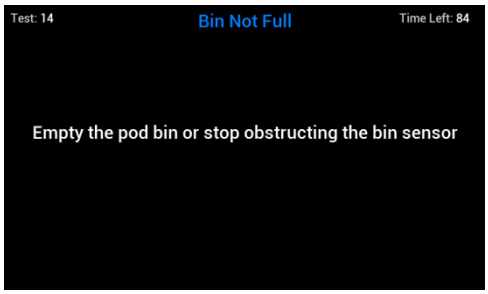
UI Display Test (cont.)	Press **NO** to continue	 

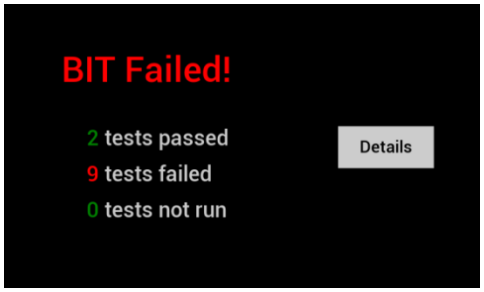
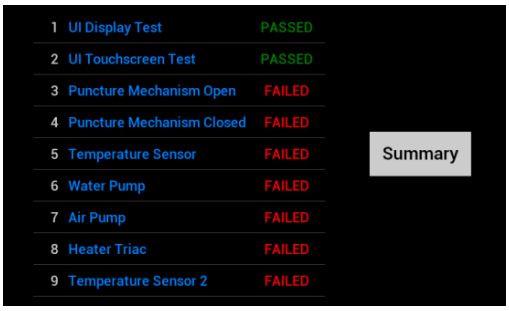
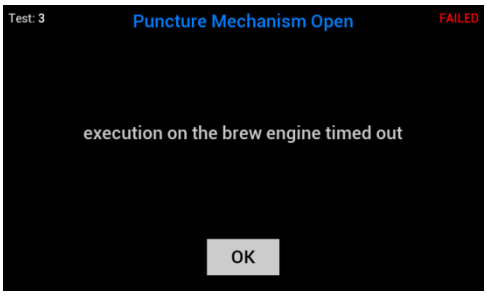
UI Touchscreen Test (cont.)	Read the text on the screen and follow the instructions. Press the circles on the screen to complete the touch test. Drag the circles to the red square to complete the drag test. Swipe on the arrows in the respective direction to complete swipe test. When asked if you like to run the test again select **No** to continue with the rest of BIT.	 An example of one circle test:  

UI Touchscreen Test (cont.)	Read the text on the screen and follow the instructions.	An example of one drag test:   An example of one swipe test:  

ARENAL BREW ENGINE TESTS		
Test	**User Action**	**Expected Outcome (Crank UI)**
Puncture Mechanism Open	Open the puncture mechanism	
Puncture Mechanism Open	Close the puncture mechanism	
Temperature	None	
Water Pump	None	
Air Pump	Block the entrance needle with a pod: 	

	Block the air vent above the pod bin:  Finally, ensure that the water inlet is capped:  Keep these air paths blocked until the test completes	
Triac	None	
Temperature 2	None	
Triac 2	None	

Pod Sensor Pod Present	Open the puncture mechanism, insert pod, and close the puncture mechanism	
Pod Sensor Pod Absent	Open the puncture mechanism, remove pod, and close the puncture mechanism	
Bin Sensor Bin Full	Open the bin door and obstruct the pod bin sensor Continue to obstruct the sensor until the test completes	
Bin Sensor Bin Not Full	Stop obstructing the pod bin sensor	
SANDSTONE TESTS		
Test	**User Action**	**Expected Outcome (Crank UI)**
Bulk Flash Test	None	None The UI must transition to the Brief report of all the tests.

BIT COMPLETION		
Brief Report	The user has the option to read the test details if needed.	Example of brief report page: 
Detailed Report	Select **Details**. The list can be scrolled to view all of the results. The User has the option to go back to the brief report if needed. To do so, select **Summary**. The BIT Summary Listing includes: 1. **UI Display Test** 2. **UI Touchscreen Test** 3. **Puncture Mechanism Open** 4. **Puncture Mechanism Closed** 5. **Temperature Sensor** 6. **Water Pump** 7. **Air Pump** 8. **Heater Triac** 9. **Temperature Sensor 2** 10. **Heater Triac 2** 11. **Pod Present** 12. **Pod Not Present** 13. **Bin Full** 14. **Bin Not Full** 15. **Bulk Flash**	
Additional Information about individual tests	To access additional information about each result, select **FAILED** or **PASSED** next to the test. To go back to the list, press **OK**.	Example of additional information: 

XIII. Revision Control

REVISION	ECN #	ISSUED BY	RELEASE DATE	REASON FOR CHANGE
A		MAD	SEPT. 16, 2019	INITIAL RELEASE