

# EXPOBAR “BREW TUS III”

*Supplemental Instructions*



**WHOLE LATTE LOVE™**

[www.wholelattelove.com](http://www.wholelattelove.com)

888.411.5282

***Congratulations*** on the purchase of your new Brewtus III R or Brewtus III V! The Expobar “Brewtus” is a very unique machine designed to provide you with the ultimate in brewing temperature control and, therefore, the best quality extraction out of your coffee.

Please read both the manufacturer and our supplemental instructions thoroughly before you start brewing.

***Note: Do not plug in the machine or do any other start up procedures until the boiler is properly primed by following the initial start up instruction.***

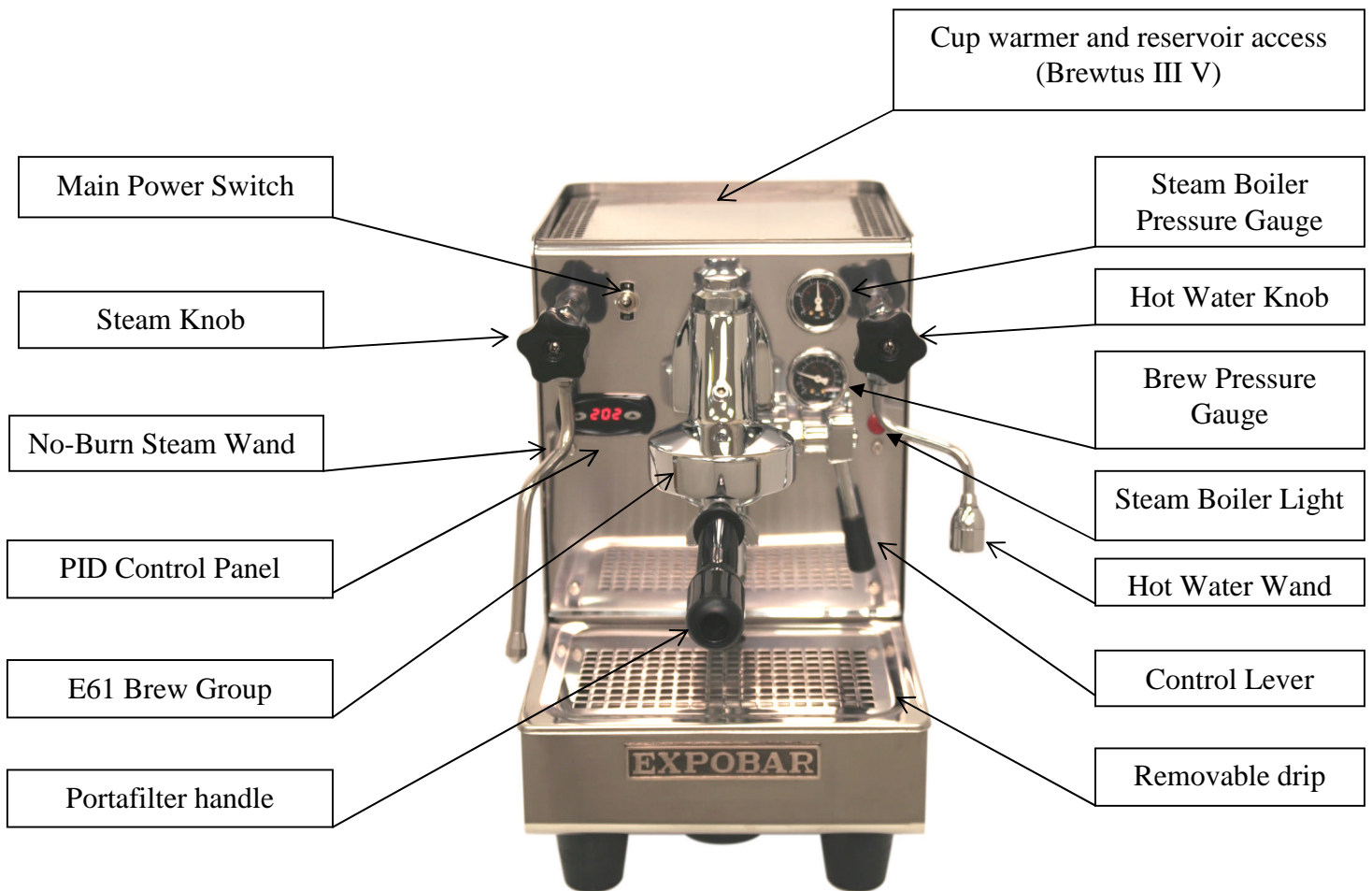
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# 1. Unpacking the machine.

The Brewtus III “V” and “R” are very heavy machines (over 60 lbs.) so please use caution not to hurt yourself when unpacking it. The best way to remove Brewtus from the box is to turn the box upside down, open the bottom four flaps, turn the box right side up and lift the box straight up. Then set the machine down on its side and remove the top layer of foam. Carefully remove the machine from the bottom layer of foam. NOTE: It is easier to have a second person helping during this operation as the machine is heavy and the bottom layer of foam may stick to the machine.

# 2. Description of the Controls and Programming



# Controls

## Control Lever

The lever on the front of the machine controls a valve inside the brew group and it also controls the pump for brewing. The lever has three positions--up, middle and down.

1. **Up:** When in the “up” position the pump turns on for brewing and the valve inside the brew group opens and allows water to flow over the coffee.
2. **Middle:** Do not use this position. When in the “middle” position, the pump is turned off but the pressure in the brew group has not been released so it’s important that you Do Not Remove the Portafilter until the lever is in the ‘down” position.
3. **Down:** When in the “down” position, the pump is turned off and any water pressure left on the coffee is released and deposited into the drip tray through the tube at the bottom of the brew group. **Always move the lever to the down position before removing the portafilter from the brew group.**

## Main Power Switch

The main power switch is located on the top left side of the front of the machine. When turned on the machine will automatically start heating up and the water level control system will make sure that the steam boiler is full of water. NOTE: When the main power switch is turned on, the pump may go one for a few seconds, even if the steam boiler is full.

## Steam Boiler Light

This light goes on whenever the heating element in the steam boiler is on. It is perfectly normal for this light to go on and off with or without any discernable pattern when the machine is in use.

## Steam Pressure Gauge

This pressure gauge shows the pressure inside the steam boiler. The pressure comes set from the factory at around 1.3 to 1.4 bar. This is the proper boiler pressure and there should be no need to make any adjustments. The needle on the pressure gauge will go down during steaming but will quickly rise up as the steam boiler heating element is activated.

## Brew Pressure Gauge

This pressure gauge will display brew pressure on the coffee.

## Steam Knob (Left side of machine)

When this knob is turned counter clockwise, the steam valve is opened and steam under high pressure will exit through the steam wand.

## Hot Water knob (right side of machine)

When this knob is turned counter clockwise, hot water and some steam will exit through the hot water wand. NOTE: Use caution when using this function as boiling water exiting from the hot water wand can cause severe burns.

**Steam Wand**

Use this wand for frothing and steaming your milk. The wand is insulated and is what we call a “No Burn” wand.

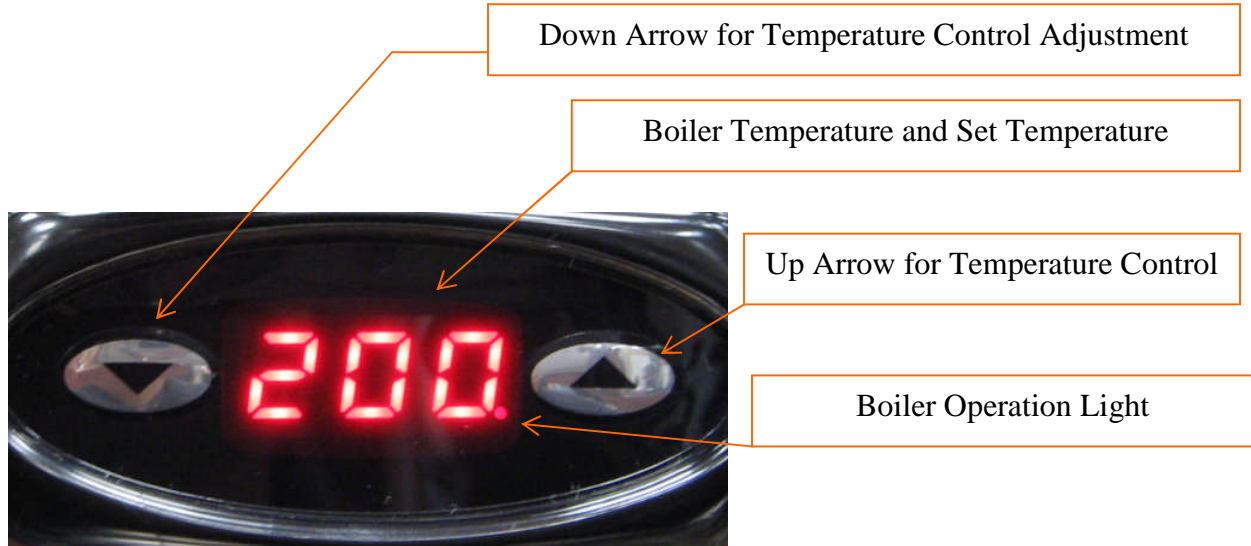
**E61 Brew Group**

The brew group will become very hot, so always use caution while working with the machine.



Optional Bottomless Portafilter with a triple shot basket (not included.)

## Control Panel with PID Temperature Control



**The PID controller was specially designed and programmed for the Expobar Brewtus III. It works in Degrees F and can be adjusted in one-degree increments.**

The PID control will display the current temperature inside the brewing boiler and will be used to adjust the temperature of the brewing boiler. It has no effect on the steam boiler, which is controlled by a pressure stat.

Display functions:

1. On start-up, the digital display will show the current temperature inside, less an offset factor of approximately 18 degrees.
2. The small LED light will blink as it sends power to the brew boiler.

NOTE: The steam boiler heats up first and will take approximately 8 to 10 minutes before the brewing boiler will turn on. Both Boilers will not operate at the same time.

### Changing the Brewing Boiler Temperature

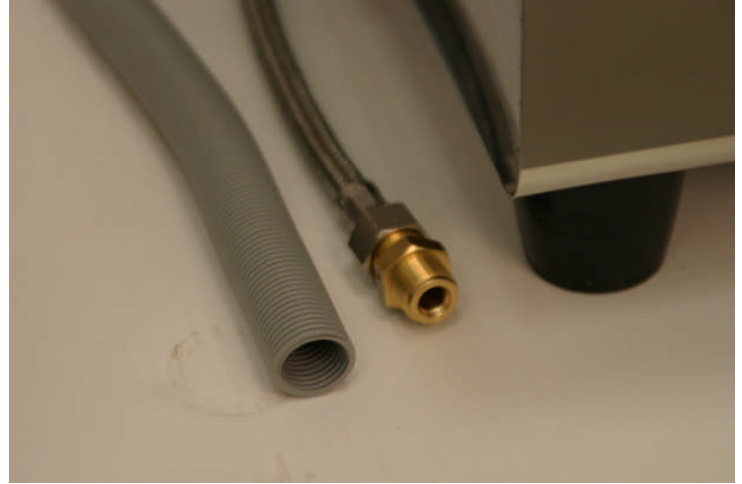
1. Push and release the “Down Arrow” (left button). The display will show “PRG”.
2. Push the “Up Arrow” and release. Then adjust the up and down arrows to set to your desired temperature.
3. Once the temperature is set, it may take up to 10 minutes before the new temperature is achieved.

### Steam boiler adjustments

We do not recommend making any adjustments to the steam boiler pressure. It is set to cycle between 1.2 and 1.4 bars.

### 3. Water and Drain Line Connections (Brewtus III R Only)

**Water Line Connection (On Brewtus-III-R)** The water line supplied with the machine is 3/8" braided stainless steel line that measures 52." You will need a 3/8" NPT female fitting to screw it into. Use Teflon tape for all threaded connections. Depending on your water quality, you may want a good water filter to condition your water to help with machine longevity. Remember: The taste of the coffee is affected by your water.



**Drain Line Connection (On Brewtus-III-R)** The drain line measures 57" in length from the drain pan, has an inside diameter of 3/4", and an outside diameter of 7/8". You will want to have an open drain line stand pipe for it to drop into. You will not want the end to be below the surface of the water in the stand pipe as it may back up. If you do not want to use a drain line, we do have drain pans without the hole in the bottom.



### 4. Accessories

**Included accessories:** portafilter with a double spout, single shot filter basket, double shot filter basket, tamper, rubber back flush disc and coffee scoop.

## 5. Initial Start-Up Instructions

### Brewtus III V (Vibration pump with reservoir)

(See next page if you have the Brewtus III R-Rotary Pump)

After the machine has been removed from the packaging, place it on a level surface.

1. Remove the white protective covering from the all parts of the machine.
2. Remove the reservoir from the top of the machine and rinse it out.
3. Fill the reservoir with water and place back into the machine. Make sure both rubber tubes are placed back into the reservoir. **NOTE: Do not use water that has had all of the minerals removed. Minerals are necessary for the sensors in the boiler to work properly.**
4. **Caution: Notice that the water inlet line has a water softener on it. Make sure that it fills with water and is not floating.**
5. Plug the machine into a wall socket that matches the three-pronged plug on the machine. It is important that the machine is grounded. If you have any questions regarding this, call us at 888.411.5282 and ask to speak to one of our trained technicians.
6. Turn on the main power switch and move the lever on the brew group to the “up” position. The pump will go on and fill both the steam boiler and the brew boiler. Leave the lever in the up position until there is a steady stream of water coming out of the brew group. Look into the reservoir and see if the water level is getting lower. If the water level is not going down, make sure that the water inlet line (the one with the water softener) is below the water level in the reservoir. If the water level is still not going down, turn off the machine and call Whole Latte Love at the number above.
7. Move the lever to the “down” position and let them machine heat up.
8. Always leave the empty portafilter in the brew group so that it will be hot when filling for the next shot
9. When the water in the reservoir gets low, the machine will turn itself off.

Note: It will take around 18 minutes for both the brewing boiler and steam boiler to reach operating temperatures. Please see the brewing tips section for information on how to get the best out of your new Brewtus III.



## **5. Initial Start-Up Instructions**

### **Brewtus III R (Rotary Pump)**

(See previous page if you have the Brewtus III V-Vibration Pump)

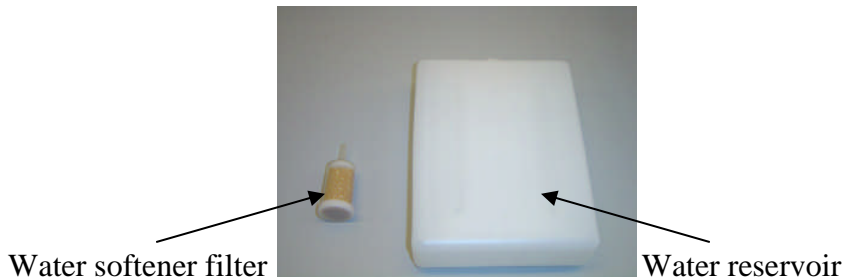
After the machine has been removed from the packaging, place it on a level surface.

1. Remove the white protective covering from all parts of the machine.
2. Connect the water line from the machine to your water line connection and turn on the water supply to the machine. Run the drain line from the bottom of the machine to your drain line.
3. Plug the machine into a wall socket that matches the three-pronged plug on the machine. It is important that the machine is grounded. If you have any questions regarding this please give Whole Latte Love a call at 888.411.5282 and ask to talk to someone in our technical department.
4. Turn on the main power switch and move the lever on the brew group to the “up” position. The pump will go on and fill both the steam boiler and brew boiler. Leave the lever in the “up” position until there is a steady stream of water coming out of the brew group. If the pump runs for more than 1 minute and no water comes out of the brew group, please turn off the machine and call Whole Latte Love technical support at the number above.
5. Move the lever to the “down” position and let the machine heat up.
6. Always leave the empty portafilter in the brew group so that it will be hot when using it to brew your next shot.

Note: It will take around 18 minutes for both the brewing boiler and steam boiler to reach operating temperatures. Please see the brewing tips section for information on how to get the best out of your new Brewtus III.

## 6. Water Softener (Brewtus III V only)

The Brewtus comes with a water softener that will help keep damaging minerals out of the boilers. There is nothing that has to be done on initial start-up to get the water softener ready for use. See the chart below for recommendations on when to recharge the water softener. Use the following recharging instructions.

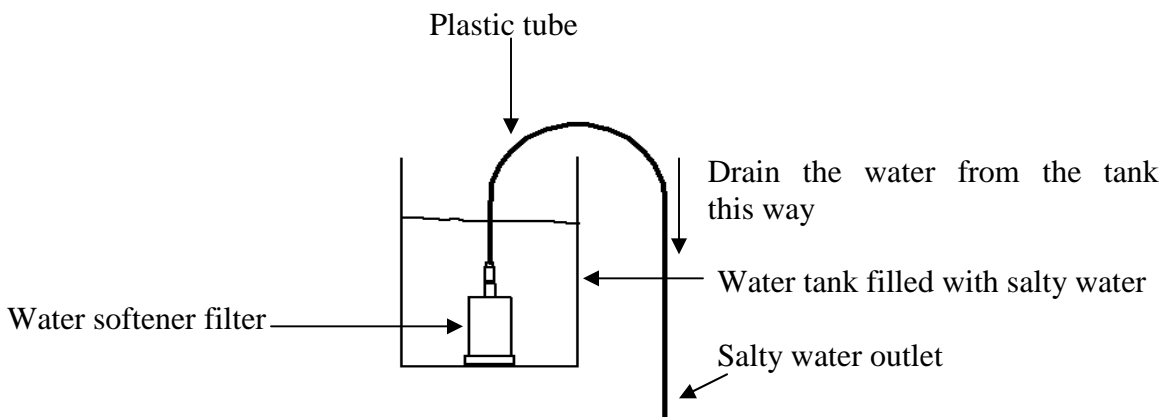


- Fill a container with water (same amount as the reservoir)
- Pour in 3 tablespoons of salt.
- Stir the salt into the water.
- Insert the water softener filter inside the reservoir.
- Drain the water from the reservoir through the water softener filter.

To drain the water from the reservoir:

- Place the plastic tube as is indicated.
- Suck in the tube until it fills with water.
- Press your finger over the inlet from the tube in order to avoid any air.
- While the tube is being pressed, place the inlet from the tube downwards (as indicated). Wait until the reservoir is completely empty.

Once the water reservoir is empty, fill it again with water (without salt) and repeat the process, in order to clean the water softener filter.



Water Hardness	Litres of softened water, depending on its hardness (In French Degrees)					Salt
	20	30	40	60	80	Grams
Maximum Volume of water softened by filter	11	9	8	7	5	300

## 7. Coffee Preparation

### What is crema?

Crema is creamy foam that is on top of your espresso and is the essence of what espresso is all about. The crema houses the multitude of aromas and flavors that are extracted from the beans. The color will vary with the beans that are used and will vary from a medium golden brown to a dark golden brown

### *Golden Rule*

The Golden Rule is a simple formula that if you read it, understand it, and follow it, you will be brewing commercial quality espresso in no time.

*“A double shot of espresso should equal 2 to 2.5 fluid ounces, have approximately 14 grams of ground coffee in the filter basket, and take approximately 25 seconds from the moment you start the pump until you reach the appointed liquid volume. A single shot of espresso should equal 1 to 1.5 fluid ounces, have approximately 7 grams of ground coffee in the filter basket and take approximately 20 seconds.”*

Your best shots are always double shots due to the chemistry involved in extracting the flavors and aromas from the coffee. Use the two shot filter basket, loosely fill the filter basket with coffee and tamp with around 30 pounds of pressure. Put the portafilter in to the machine; turn on the brew switch to start the pump and time how long it takes to dispense 2 to 2.5 ounces of espresso into your cup.

If the coffee comes through too fast, grind your coffee a little finer and try it again. If it comes through too slow, grind your coffee a little more coarse and try again. The tamp pressure and the coffee volume stay the same, the only thing that changes is your grind setting.

If you don't have your own grinder so you can't vary how fine or coarse the coffee is ground. You will then have to vary your tamp pressure according to the shot timing. If the water runs through the coffee too fast tamp a little harder. If too slow, tamp a little lighter.

## 8. Advanced Brewing and Operational Techniques

1. It will take about 18 minutes for both boilers to show on the digital display and pressure gauge that they have reached the set temperature. At this point, the brew group hasn't had enough time to properly preheat itself. If you want to brew right away, we recommend doing 3 separate blank shots of 4 ounces each to preheat the brew group and portafilter. To do a blank shot, place your portafilter into the brew group and raise the control lever to the "up" position and run 4 ounces of water through it. If the temperature falls below the set point, wait for it to heat back up and then repeat this procedure. Do this for a total of three times.
2. If the machine has been on for over 35 minutes and sitting unused for over 5 minutes, it is recommended that you run 2 ounces of water through the brew group.
3. After programming the machine to brew at a different temperature, it may take up to ten minutes for the boiler temperature to balance out.
4. The "Brewtus" has two 1.7-liter boilers: one for brewing and one for both steaming and dispensing of hot water. When the Brewtus is turned on, the steam boiler will automatically fill with water. The brewing boiler must first be filled by lifting the Control Lever and leaving it in the "up" position until the water is flowing out of the brew group in a steady stream. When the steam boiler is full, the heating element in the steam boiler will be energized and the steam boiler will start to heat up. When the steam boiler reaches operating pressure (approximately 1.3 bars on the gauge), the heating element in the steam boiler will turn off and the heating element in the brewing boiler will turn on. As the brewing boiler heats, the small LED on the digital display will flash and will display the current temperature of the boiler. Both the steam boiler and brewing boiler will take approximately 8 minutes to heat up.

## 9. Steaming and Frothing

Place the steam arm above the tray and open the steam knob a little so that any build-up of condensed water is removed from the arm. Close the steam knob. Put the steam arm into the liquid you'd like heated and open the steam knob.

When you finish the steaming or frothing, put the steam arm over the tray and open the knob to clean inside the steam arm. Close the knob and wipe the steam arm with a soft damp cloth.

### FROTHING TECHNIQUES

#### **What is frothed milk?**

When you froth milk, you inject air into it while steaming. The thickness and texture of the froth will vary with the technique used. Frothing is always done when the milk is at its coldest. Keep the tip near the surface of the milk so that you will hear a hissing sound as the air is being injected into the milk. The longer you froth, the thicker the froth will be. If you want creamy froth (micro foam), only froth until you are at around 110° F and then steam the rest of the way. Never steam or froth over 160° F. Skim milk will froth very easily and create a thick froth. The higher the fat content, the creamier and sweeter the froth will be.

#### **What is steamed milk?**

Steamed milk is heated, but not frothed. In other words, you don't inject any air into the milk while heating it. The key to this is to keep the tip of the wand buried in the milk so that it does not let in any air. Never steam or froth over 160 F.

## 10. Hot Water Dispensing

Place a cup under the hot water outlet, open the water knob and then close when you have the required quantity of water. You can use the hot water for pre-heating cups prior to brewing, as well as for tea and Americanos.

NOTE: Use caution as some steam will come out with the water and may splash or spray.

# 11. Cleaning Brewing Components

Cleaning the brew head on the lever-style machines is necessary for optimal taste and brewing pleasure. There are three different processes that are done to accomplish this task: backflush with water only, backflush with cleaner, and hand-cleaning the shower screen. Under normal household conditions, we recommend that you backflush your machine with water about every 10 to 14 days and with cleaner about 6 times a year. It is also recommended that you remove the shower screen, inspect and clean it, along with the brew group behind the shower screen, as often as necessary.

To prepare for a backflush cycle, your machine must be up to brew temperature and pressure.

## **Backflushing with WATER ONLY:**

1. Install the single shot filter basket into the portafilter and place the rubber backflush disc in the single shot filter basket with the nipple side facing up, or use a stainless steel blind filter basket.
2. Raise the Control Lever for 5-10 seconds, or until the pressure builds up. Then move the lever to the down position to release the pressure.
3. You will notice a pressurized stream of water released into the drip tray a moment after you turn the lever to the “down” position. This is the backpressure release, or the backflush. Check the water in the drip tray. Is it dirty? If so, repeat the process until the released water is clean.

## **Backflush With Cleaner:**

It is recommended that you backflush 6 times a year with a cleaner such as Urnex Cafiza (a cleaner we recommend). Add 1 tablespoon of the espresso machine cleaner to the blind filter basket/backflush disc and follow the procedure above. It may take 5 cycles or more to completely clean the machine. Rinse the brew group thoroughly and backflush 4 times without cleaner to make sure that there is no cleaner left.

## **Cleaning the Brewing Components by Hand:**

Cleaning the brewing surfaces on the lever machines is done as follows:

*Note: The cleaning of the brew head should be done while the machine is cold to avoid burns.*

1. First you must remove the shower screen on your machine. The shower screen is located at the same place the portafilter installs into the machine. Using a flat head screwdriver, wiggle the screen out. You will have to work a little on one side, then the other side, to get the screen out. The screen and gasket will come out together.
2. Separate the screen from the gasket as the solution can damage plastic and rubber parts. *Note: Remember what side of the gasket faces up.*
3. Add two tablespoons of cleaner to a container filled halfway with hot water. Soak the shower screen, shot baskets and portafilter head in the solution for about 10 minutes. Take care not to soak the portafilter handle; as the solution may damage the plastic.
4. After cleaning thoroughly, rinse all parts with fresh clean water.
5. Reassemble in reverse order, and you're ready to brew some delicious espresso.

## **12. Cleaning the Housing**

Use a non abrasive cleaner and a soft cloth.

Do not forget to disconnect the machine from the electrical supply before cleaning.

## **13. Trouble Shooting Guide**

### **The machine does not turn on:**

Make sure the power is turned on and the machine is plugged in.

Make sure that there is power to the outlet in the wall.

Make sure there is water in the reservoir (Brewtus III V only)

### **Coffee comes out too quickly:**

See the Golden Rule. The coffee probably has to be ground finer or fresher coffee needs to used.

### **Coffee comes out too slowly.**

See the Golden rule. Coffee may be ground too fine.

Clean the brew group as described in the cleaning instructions.

Make sure the reservoir is full of water (Brewtus III V only).

### **Coffee is not hot enough:**

Make sure that the cup and all the brewing components are preheated by doing a blank shot as explained in the “Advanced Brewing and Operational Techniques” section.

### **Pump runs but no water is sucked into the machine.**

The pump needs to be primed or the machine needs service. Call Whole Latte Love at 888-411-5282 for instructions.

### **Water leaks around the portafilter:**

Make sure the group gasket is clean.

The gasket may be old and need replacing.

Check to see if there is too much coffee in the filter basket.



# 14. Recipe

## Espresso

Espresso is pressure-brewed coffee. A properly brewed espresso with fresh coffee will have a thick golden crema on top and not taste bitter or sour.

1. A single shot of espresso consists of approximately 7 grams of ground coffee and 1 to 1.5 ounces of liquid.
2. A double shot of espresso consists of approximately 14 grams of ground coffee and 2 to 2.5 ounces of liquid.

## Café Latte

A Latte is made of  $\frac{2}{3}$  steamed milk and  $\frac{1}{3}$  espresso.

1. Steam a pitcher of milk.
2. Fill your cup about  $\frac{2}{3}$  of the way with steamed milk.
3. Add a couple spoonfuls of froth.
4. Brew your espresso and mix together.

## Cappuccino

A Cappuccino is traditionally served in a 7 oz cup. The drink is comprised of equal amounts of espresso, steamed milk and frothed milk.

1. Steam and froth a pitcher of milk.
2. Brew your espresso into your cappuccino cup.
3. Add steamed milk by holding back the froth with a spoon.
4. Spoon the froth on top.

## Ristretto

Also known as the “little one” and is the strongest espresso of the family. The Ristretto uses the same amount of ground coffee as a regular espresso but uses less water. The name is derived from the “restricted use of water”.

1. Prepare to brew an espresso using your normal amounts of ground coffee.
2. Stop the extraction just short of the “Golden Rule.”

## Café Mocha

Adding some hot chocolate milk to an espresso and you’ve got a Mocha!

1. Steam some milk.
2. Add a squirt of chocolate syrup to the milk and mix it well.
3. Brew your espresso and pour it into a larger glass or mug.
4. Add the hot chocolate milk.
5. Top it off with some whipped cream or chocolate shavings.

## Café Crema

A Café Crema is a long espresso. Instead of stopping the shot at the normal amount of time for your single or double shot, let the pump run until you have a cup of coffee.

## Café Americano

Brew a proper espresso and then add hot water.

## Espresso Macciato

This is an espresso with a wee bit of froth on top.

# 15. Coffee Education

## **What is Espresso?**

Espresso is “Pressure brewed coffee”, which means that the coffee is brewed under pressure. The pressure can be created by either a pump, piston or through steam pressure. Your Expobar is a Pump style of espresso machine, which is the best type available. The pressure is necessary to create the crema, which is the golden-colored creamy foam on top of the espresso.

## **What is Crema?**

Crema is the golden layer of foam that you will find on top of your espresso. The crema is what holds many of the unique flavor characteristics of your espresso.

## **SCAA’s (Specialty Coffee Association of America) definition of Espresso**

Single shot: 7 Grams of ground coffee and 1 to 1.5 ounces of liquid espresso

Double shot: 14 grams of ground coffee and 2 to 2.5 ounces of liquid espresso.

## **Basic Bean info**

There is no such thing as an espresso roast. There is no such thing as an espresso bean. The beans used for brewing espresso will be either a blend of certain varieties of beans that will produce the flavor characteristics that the roaster is looking for, or a single origin bean that has good flavor characteristics for Espresso.

Some people like a dark roast and some people like a light or medium roast. The color of the roasted beans has nothing to do with the brewing equipment used. A dark roast coffee can be used for drip or espresso. What will make it taste good is the blend of beans used. The blend used for espresso will be different than the blend used for drip coffee makers.

## **Arabica and Robusta Beans**

### **Arabica**

Arabica is grown at higher elevations and is more expensive because it is harder to farm. It is generally agreed that the Arabica is the higher quality bean.

### **Robusta**

Robusta is grown at the lower elevations and is a bean with a higher acidity. Some roasters may add some robusta beans to give the espresso an edge, and also because robusta beans work well for milk based drinks. The robusta may also be used to help give the coffee a thicker crema.

## **Steaming and Frothing**

There is a difference between steamed and frothed milk. Steamed milk is milk heated with steam from a steam wand. Frothed milk is also heated, but air is injected into the milk to create froth. Different techniques can be used to create either creamy or foamy froth. Low fat milk froths easier and creates a more airy froth. Milk with a higher fat content requires more technique to create froth and will create a creamier and sweeter froth.

## Basic Terms

**Filter Basket** -The stainless steel basket that holds the ground coffee. Most machines come with a single and a double shot.

**Portafilter** - The handle that holds the filter basket.

**Shower screen** - The part of the machine where the water exits the brew group. It distributes the hot brewing water onto the coffee.

**Brew group** - The part of the machine that holds the shower screen and the portafilter attaches into.

**Drip grate** - The area you place the cups on when brewing.

**Drip tray** - Catches any spilled coffee and is located under the drip grate.

**Extraction** - When you brew coffee or espresso, you extract the flavors out of the coffee.

**Flavor Characteristics** - These are the many unique flavors that you can taste in a cup of Espresso or coffee.

## Five Basic drinks

1. Espresso: See the SCAA definitions above
2. Café Crema: This is a long espresso. Instead of turning off the pump when you get to a proper single shot or double shot, keep the pump running until you get a full cup of coffee. The actual volume of the café crema can be whatever we choose. The more water through the coffee, the weaker it is. A Café Crema would be classified as an over extraction.
3. Café Americano: Brew a proper single or double shot and add hot water. This is the best full cup of coffee that you can make.
4. Café Latte: Consists of one-third espresso and two-thirds steamed milk.
5. Café Cappuccino: Equal amounts of espresso, steamed milk and frothed milk.

## Extraction information

Your Expobar machine is designed to brew a proper single or double shot according to the Specialty Coffee Association of America's (SCAA) definition. With a proper shot of espresso, you extract the flavors out of the coffee that the roaster intended. If you take more water through than a proper shot calls for, you extract some of the undesirable flavors, which will make it bitter. When brewing a shot, you can see how at the end of the extraction the flow gets lighter in color. This lighter color is the sign of an over extraction and will cause the bitter flavor. For this reason, a Café Americano will taste better than a Café Crema. This is because a Café Americano is a proper shot of espresso mixed with hot water. The coffee is not over extracted. Because of the three types of coffee you can make, espresso, café crema and Café Americano, you may find that you will never need a drip machine again. One of the best full cups of coffee you can ever have is a Café Americano.

## 16. Cautions

- **THERE ARE NO USER SERVICEABLE PARTS INSIDE THE MACHINE. REFER SERVICE TO A QUALIFIED TECHNICIAN.**
- **DO NOT TRY TO PUT ANYTHING INSIDE THE MACHINE THROUGH THE VENTS.**
- **PLEASE CHECK THE WATER LEVEL IN THE TANK FREQUENTLY.**
- **DO NOT LET CHILDREN TOUCH OR OPERATE THE MACHINE. IT CAN BE VERY DANGEROUS AND COULD CAUSE INJURY.**
- **DO NOT USE THE MACHINE WITH WET HANDS.**
- **TO DISCONNECT FROM THE ELECTRICAL SUPPLY, PLEASE USE THE PLUG AND NOT THE POWER CORD.**
- **PLEASE REFER TO A QUALIFIED TECHNICIAN FOR ANY PROBLEMS OR QUESTIONS.**

The manufacturer reserves the right to make any changes to the machine for improved performance without prior notice.