
EGRO 55 SERIES TECHNICAL MANUAL



SWISS COFFEE SYSTEMS

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TABLE OF CONTENTS:

SECTION 1: INTRODUCTION

SECTION 2: INSTALLATION

SECTION 3: PROGRAMMING

SECTION 4: ELECTRICAL

SECTION 5: HYDRAULIC

SECTION 6: ADJUSTMENTS AND MAINTENANCE

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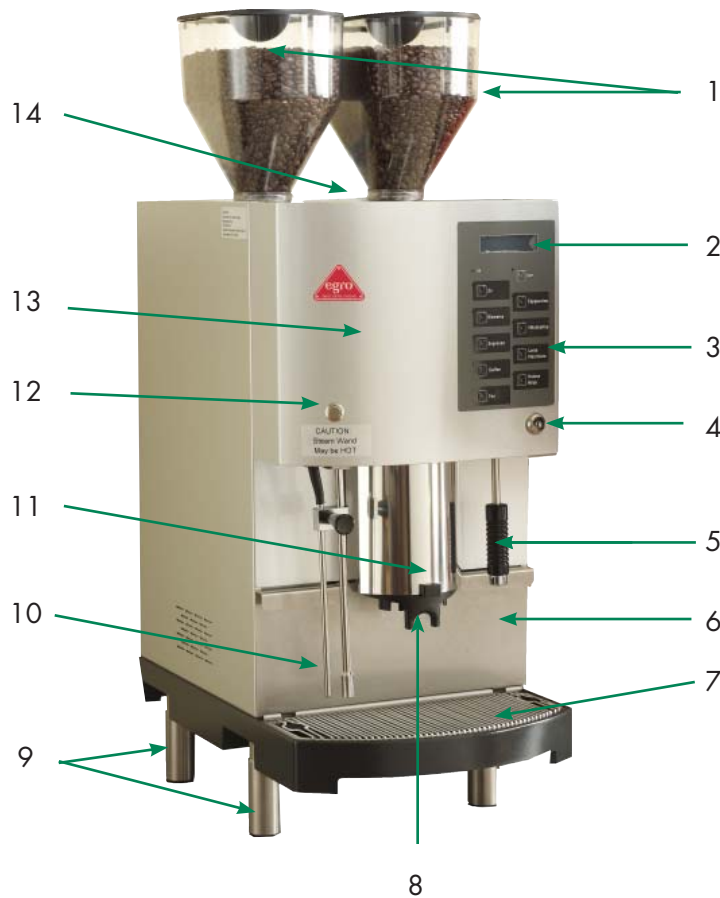
SECTION 1: INTRODUCTION AND OVERVIEW

TABLE OF CONTENTS: SECTION 1

	<i>Page</i>
1.1 MACHINE OVERVIEW.....	2 - 3
1.1a. Model 5511- identifies parts of machine.....	2
1.1b Model 5513 - identifies parts of the machine and the Model KS Fridge.....	3
1.2 SAFETY PRECAUTIONS.....	4
1.3 PRE-INSTALLATION REQUIREMENTS.....	5 - 6
1.3a Pre-install requirements for Model 5511.....	5
1.3b Pre-install requirements for Model 5513 with KS fridge.....	6

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1.1a MACHINE OVERVIEW: MODEL 5511



MODEL 5511

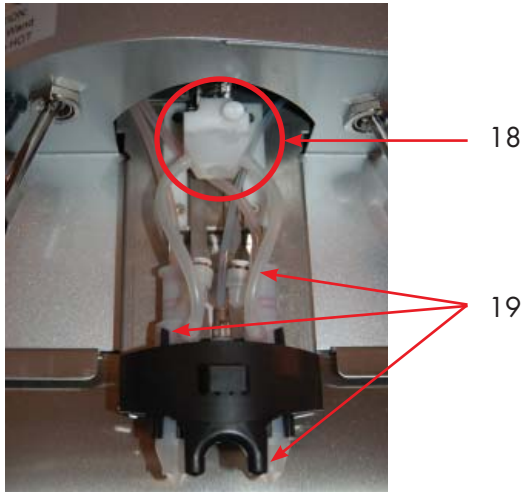
#	ITEM
1	Bean Hoppers (capacity 2.8 lbs of coffee beans)
2	Display screen
3	Key pad
4	Programming key
5	Hot water spout
6	Grounds drawer door + access to main power & water switches
7	Drip tray
8	Coffee outlet
9	Legs
10	Temperature Sensitive (TS) Steam Wand
11	Stainless steel outlet cover
12	TS Steam wand activation button
13	Front door to machine
14	Cleaning tablet access door

1.1b. MACHINE OVERVIEW: MODEL 5513

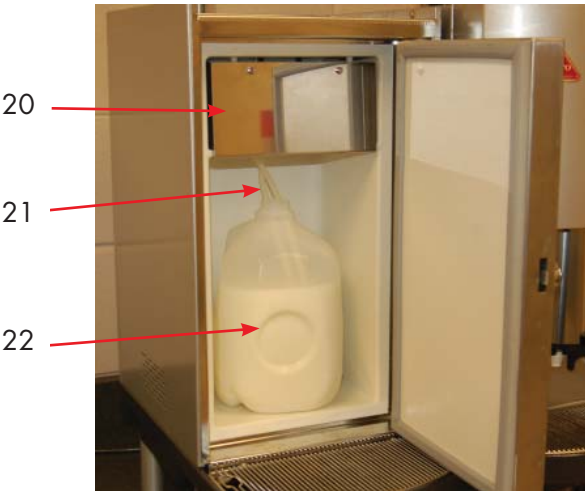


MODEL 5513

CLOSE-UP OF MACHINE PARTS



CLOSE-UP OF FRIDGE PARTS



#	ITEM
Model 5513 includes items 1-14 as described on the previous page PLUS the following items...	
15	Above the counter Model KS refrigerator
16	Model KS fridge door latch
17	Model KS fridge door
18	AFV (Air Foam Valve)
19	Frother heads
20	Milk pump housing
21	Hoses to Milk gallon
22	Standard US gallon of Milk

1.2 SAFETY PRECAUTIONS

GENERAL SAFETY RULES

Do not leave packing materials (plastic bags, expanded polystyrene, nails, cardboard, etc.) within the reach of children, as these items are a potential source of danger.

Verify that the electrical data of the machine corresponds with the electrical supply network before connecting the machine to the power source. *PLEASE NOTE: Egro Model 55 series machines require 208V 30amp main power supply. If you are located in a area which experiences fluctuations in power which cause the main power supply to drop below 208V, it is highly recommended that you install a power booster in line with the Egro 55 series equipment.*

Electrical adaptors, multiple sockets, and or extensions should not be used.

Request a detailed description of the available power from an electrician. The electrical outlet must have the following safety features:

- Dedicated ground
- Wiring suitable for wattage capacity
- Circuit breaker

Install the machine on a water repellent surface (laminated, steel, ceramic etc.). Keep the machine away from heat sources (oven, stove, fireplace, etc.) and away from extreme cold, the temperature should not fall below 41° F.

Do not leave the machine exposed to harmful environmental elements, such as rain, snow, or humidity.

Do not obstruct the drain on the drip tray. Be sure drain tray is clean and waste can easily flow into the drain tube.

Store the packed machine in a dry warm place. Do not store where the temperature may fall below 41° F. Do not stack heavy items on the packaging.

In case of emergency, such as the machine catching on fire, unusual noises coming from the machine, overheating etc, maintain your personal and the safety of those around you FIRST. When it's safe, immediately disconnect the power and close all water taps.

Use only authorized spare parts in order to avoid compromising the safety and proper functioning of the machine.

Equipment installed incorrectly can cause damage to people and items for which the manufacturer cannot be responsible.

1.3a PRE-INSTALLATION REQUIREMENTS FOR EGRO MODEL 5511

ALL REQUIREMENTS ARE NECESSARY FOR EACH MACHINE INSTALLED
(TWO MACHINES = DOUBLE COUNTER SPACE, 2 ELECTRICAL LINES, 2 WATER LINES, 2 DRAINS ETC...)



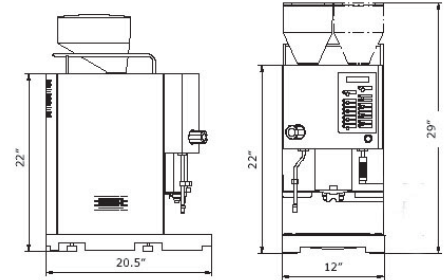
COUNTER TOP REQUIREMENTS

Counter must be able to support 150lbs (300lbs for 2 machines).

Counter space available must be 18"W x 26 1/2"D x 39"H*.

Counter needs a 3 1/2 inch access hole for electrical lines, water, and/or drain hoses. Hole should be located in the center of where the machine will be placed.

* These dimensions include 6" of clearance on all sides of the machine.

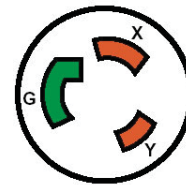


ELECTRICAL REQUIREMENTS

NEMA L6-30R (220 volt - 30 amp) receptacle is required.



PLEASE NOTE: Egro coffee machines do not use a neutral line. A dedicated ground wire is required for proper performance.



L6-30R

 = Ground
 = Hot leg

WATER REQUIREMENTS

Machine requires a cold water line with a male 3/8" NPT fitting and a manual shut off valve (within in 4ft. of machine).

Water should be installed in accordance with local laws.

Hardness of water going to espresso machine should be tested and should be less than 3 GPG or the warranty of the machine may be voided.



PLEASE NOTE: A water filtration and softening system can be purchased through Rancilio or a high quality espresso equipment filtration system may be used, however all pre-installed systems are subject to inspection and approval by a certified Rancilio technician.



DRAIN REQUIREMENTS

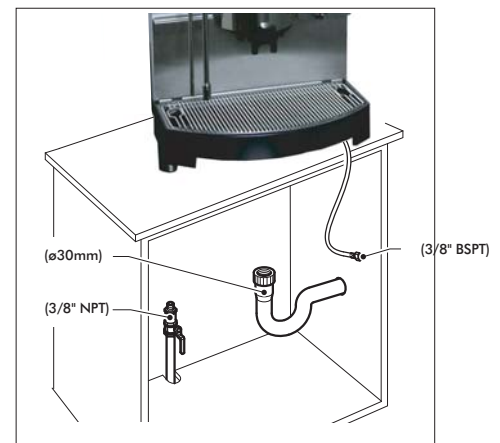
Machine requires a 1 inch (inter diameter) drain pipe installed .

Connection for drain hose must be 12 inches below counter top and less than 4 feet from the intended location of the machine.

Drain must be installed in accordance with local laws.

COFFEE REQUIREMENTS

On installation day you must have 2lbs of each types of coffee (i.e. 2lbs of regular espresso beans & 2lbs of decaf espresso beans) you are serving.



1.3b PRE-INSTALLATION REQUIREMENTS FOR EGRO MODEL 5513 WITH A MODEL KS FRIDGE

ALL REQUIREMENTS ARE NECESSARY FOR EACH MACHINE INSTALLED
(TWO MACHINES = DOUBLE COUNTER SPACE, 2 ELECTRICAL LINES, 2 WATER LINES, 2 DRAINS ETC...)



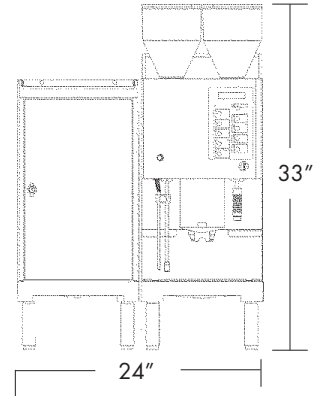
COUNTER TOP REQUIREMENTS

Counter must be able to support 200lbs.

Counter space available must be 30"W x 26 1/2"D x 39"H*.

Counter needs a 3 1/2 inch access hole for electrical lines, water, and/or drain hoses. Hole should be located in the center of where the machine will be placed.

* These dimensions include 6" of clearance on all sides of the machine.

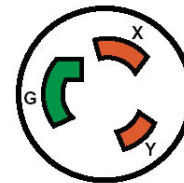


ELECTRICAL REQUIREMENTS

NEMA L6-30R (220 volt - 30 amp) receptacle is required.

120V standard grounded receptacle is required for the Model KS Fridge.

PLEASE NOTE: Egro coffee machines do not use a neutral line. A dedicated ground wire is required for proper performance.



L6-30R

 = Ground
 = Hot leg

WATER REQUIREMENTS

Machine requires a cold water line with a male 3/8" NPT fitting and a manual shut off valve (within in 4ft. of machine).

Water should be installed in accordance with local laws.

Hardness of water going to espresso machine should be tested and should be less than 4 GPG or the warranty of the machine may be voided.

PLEASE NOTE: A water filtration and softening system can be purchased through Rancilio or a high quality espresso equipment filtration system may be used, however all pre-installed systems are subject to inspection and approval by a certified Rancilio technician.



DRAIN REQUIREMENTS

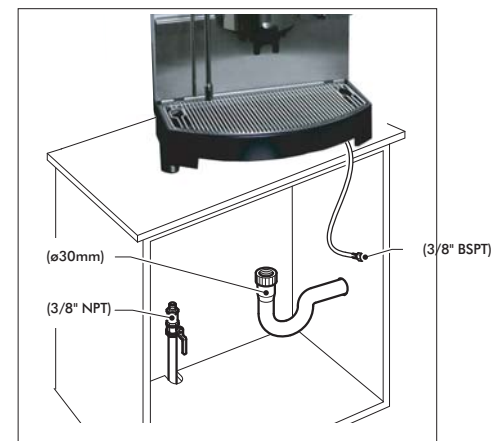
Machine requires a 1 inch (inter diameter) drain pipe installed.

Connection for drain hose must be 12 inches below counter top and less than 4 feet from the intended location of the machine.

Drain must be installed in accordance with local laws.

COFFEE REQUIREMENTS

On installation day you must have 2lbs of each types of coffee (i.e. 2lbs of regular espresso beans & 2lbs of decaf espresso beans) you are serving.



SECTION 2:

INSTALLATION

TABLE OF CONTENTS: SECTION 2

	<i>Page</i>
2.1 INSTALLATION OVERVIEW.....	2
2.2 - 2.12 STEP BY STEP INSTRUCTIONS FOR INSTALLATION	3 - 12
2.2 Install feet on machine and KS fridge (for model 5513).....	3
2.3 Install bean hoppers.....	3
2.4 Connect water to machine.....	4
2.5 Connect drain hoses.....	5 - 6
2.5A Connect the machine's drain hose to house drain.....	5
2.5B Connect fridge (for model 5513) drain hose to house drain.....	6
2.6 Connect fridge (for model 5513) to the machine.....	6 - 7
2.7 Power up fridge (for model 5513).....	7
2.8 Connect machine to power.....	8
2.9 Turn machine on.....	8
2.10 Depressurize steam boiler.....	9
2.11 Adjust grinders.....	9 - 10
2.12 Calibrate machine to beans.....	10 - 12

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2.1 INSTALLATION OVERVIEW



PACKAGE CONTENTS : EGRO 5511

When unpacking the Egro 5511, the following items should be included:

- (2) Bean hoppers with covers
- (2) Programming keys
(located in plastic bag tied to hot water spout)
- (1) Drain hose
- Cleaning guide
- Quick-start guide

Located inside the plastic grounds tray, behind the ground drawer door.

- (2) Metal bean hopper slide gates
- Silicone tubing
- (1) Plastic T-fitting
- (4) 5" Feet
- (1) Service card
- Cleaning tablets - (1 jar)



PACKAGE CONTENTS : EGRO 5513

EVERYTHING THAT IS INCLUDED WITH THE MODEL 5511 PLUS:

- (2) frother head assemblies
- Operating and cleaning manual

KS FRIDGE (MODEL 5513)

- (2) legs
- Drain hose
- Wheel of air restrictors
- Milk cleaning solution
- Keys to fridge

TOOLS NEEDED

The following tools are need for installing the Egro 55 series:

- Phillips screwdriver (P1 x 3)
- Standard 3/16 screw driver
- Small crescent wrench
- 3mm Allen wrench
- 8mm Allen wrench
- Utility knife or something similar
- Gram scale

In addition, the following tools may be needed for servicing the Egro 55 series:

- Allen wrenches (7,8,10,12,13,14,20,21,22 mm)
- Needle nose pliers, with hole

2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.2 INSTALL FEET ON MACHINE AND KS FRIDGE (WITH MODEL 5513)

The Egro 55 Series machine comes with riser feet to provide adequate space to easily clean beneath the machine. The Egro Model 5511 comes with 4 feet, and the 5513 with a KS Fridge comes with 8 feet, four for the machine and four for the fridge.

PLEASE NOTE: It is recommended that two people perform that steps below.

INSTALLING THE FEET:

 **TIP:** The Egro rubber on the bottom of the legs is slightly different in the front and the back. One set of rubber feet bottoms is smoother than the other. You may wish to use these in the back of the machine, so that sliding the machine on a counter top will be easier.

1. Locate the four or eight (with fridge) feet provided.
2. Slowly tilt the Egro 55 machine or KS fridge to the right, and screw in two legs (one front and one back) to the bottom left side.
3. Carefully tilt the machine onto the newly installed legs and screw in the remaining two legs to the bottom right side.



EGRO FOOT

2.3 INSTALL BEAN HOPPERS

INSTALLING THE HOPPERS:

1. Locate the two bean hoppers provided with the machine.
 2. Slide the hoppers down into the rubber grinder collars located on the top of the machine.
-  **TIP:** If necessary gently rock the grinders front to back while pressing downward into the rubber collar.

PLEASE NOTE: No screws or other fasteners are required for installation.

3. After installing the hoppers, fill them with fresh coffee beans.
 - Fill LEFT HOPPER with REGULAR BEANS
 - Fill RIGHT HOPPER with DECAF BEANS



TOP VIEW OF
MACHINE WITH
GRINDER COLLARS
CIRCLED



2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.4 CONNECT WATER LINE TO MACHINE

PLEASE NOTE: You will need a 3/8" NPT to 3/8" BSPT fitting to connect the incoming water supply to the water connection of the Egro 55 series machine.

The incoming water supply line, to the machine should be a male 3/8" NPT fitting. The water connection on the Egro 55 machine is 3/8" BSPT.

WARNING: A water softener/filter for incoming water supply is REQUIRED. Your warranty will be voided if you do not keep the water to the machine at less than 3 Grains Per Gallon or less.

1. Flush the water softener/filter with approximately 3 gallons of fresh water.
2. Connect the softener/filter system to the Egro 55 series machine.

This section is intentionally left blank.

2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.5A CONNECT THE DRAIN LINE TO THE HOUSE DRAIN (MODEL 5511)

STEPS TO CONNECT THE EGRO MODEL 5511

ATTACHING THE SILICON HOSE

1. Remove the right side panel of the machine, by removing the two screws on top of the machine. Lift the right-side panel straight up to remove it.
2. Locate the brew valve solenoid on the back-right side of the machine, beneath the hot water boiler (smaller boiler).
3. Attach the provided silicon tubing to the bottom of the brew valve and route it down through the hole in the bottom of the machine.

*PLEASE NOTE: Make sure the silicon tubing is **firmly attached** to the brew valve. During the cleaning cycle pressure will increase, which may cause the tube to become disconnected if it not securely attached.*

INSTALLING DRIP TRAY DRAIN HOSE

4. Locate the provided drain hose. Using a utility knife, cut a 4" piece from the hose.
5. Attach this 4" piece to the barbed drain tray fitting, located on underneath the machine.

INSTALLING THE T-FITTING

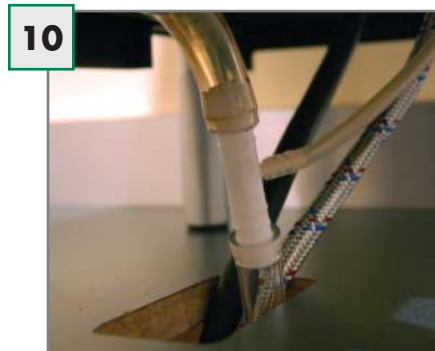
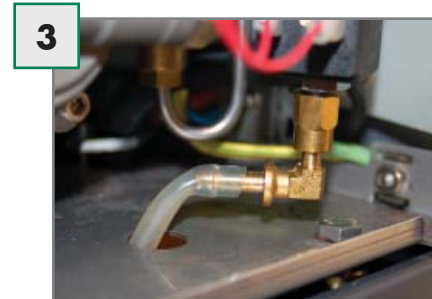
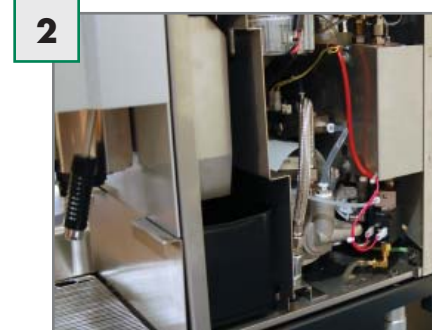
6. Locate the plastic T-fitting provided.
7. Attach the silicone tube to the small connector of the T-fitting.
8. Attach the other end of the drip tray drain hose (4" piece) to one of the large T-fitting connectors.
9. Attach the remaining drain hose to the other large T-fitting connector.

FINAL INSTALLATION OF DRAIN HOSE ASSEMBLY

10. Route the drain hose down from the machine to the floor drain in a continuous downward slope.

PLEASE NOTE: The floor drain must be at least 30mm (1.2") in diameter

11. Replace the right-side panel of the machine



2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.5B CONNECT THE DRAIN LINE TO THE HOUSE DRAIN ON THE MODEL 5513

FOLLOW STEPS 1 - 9 AS DESCRIBED FOR INSTALLING THE DRAIN HOSE OF A MODEL 5511. PLUS FOLLOWING THESE STEPS...

CONNECTING THE DRAIN HOSE OF THE KS FRIDGE

12. Locate the drain hose provided with the KS fridge

13. Attach the hose to outlet on the underneath of the drip on the KS fridge and route the drain hose to the floor drain.

2.6 CONNECT THE KS FRIDGE TO THE MACHINE (MODEL 5513 ONLY)

Follow the steps below for Egro Model 5513 with the KS fridge only.

PREPARATION

1. Place the KS fridge on the left side of the machine.

2. Remove the right side panel of the fridge and locate the 5 hoses which are looped and connected to the side of fridge for shipping.

3. Push the coffee outlet all the way down and remove the Stainless Steel outlet cover, by gently squeezing on the sides and lifting up and out.

4. Open the door of the machine by removing the locking screw with a Phillip's head screwdriver.

CONNECTING MILK LINES

5. Identify the two milk lines, they are the longer clear small plastic hoses. Route them...

5a. through the hole of the right side panel of the fridge and...

5b. through the hole on the left side panel of the machine and..

5c. through the bracket on the machine door and...

5d. through the outlet brackets and...

5e. down to the frother heads

6. Connect the milk lines to the side of the top section of the frother head assembly.



Tip: Be sure the milk line restrictors are in place in the end of the milk hoses. These are installed at the factory, double check they have remained in the hose end during shipping.

1



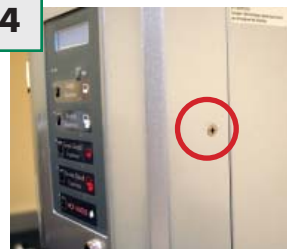
2



3



4



5c



5c



6



2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.6 CONNECT THE KS FRIDGE TO THE MACHINE (MODEL 5513 ONLY) - CONTINUED

CONNECT MILK RINSING LINE

7. Locate the milk rinsing line in the fridge. This is the clear shorter teflon hose. Route it through the hole on the right side panel of the fridge and through the hole on the left side panel of the machine. Connect it to the hose with quick connect.

CONNECT FRIDGE WIRING

8. Locate the 3 wires need for the fridge. Route these wires through the hole of the right side panel of the fridge, and through the hole of the left side panel of the machine, wire connectors in the machine. Match the connectors. Be sure to correctly match wire colors of the plugs for the pumps (white wires to white wires, blue wires to blue wires).

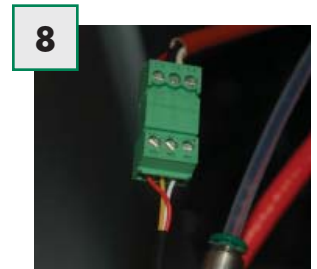
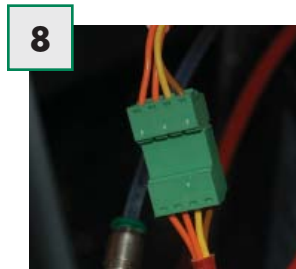
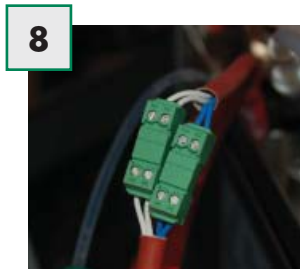
FINAL STEPS

9. Replace the left side panel on to the machine.

10. Replace the right side panel of to the fridge.

11. Gently push the two unit together, be sure that an slack in the hoses is pushed either into the fridge or the machine. Push wires and hoses into machine. Do not pinch the hoses or wires between the machine and fridge.

12. Replace the stainless steel outlet cover.



2.7 POWER UP THE KS FRIDGE (MODEL 5513 ONLY)

1. Plug in the fridge to a 120V 15 amp outlet.

2. Open the fridge door and turn on the fridge.



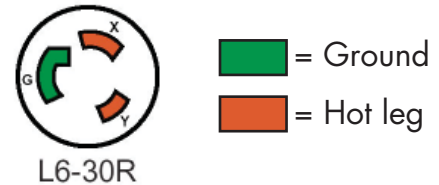
2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.8 CONNECT THE MACHINE TO POWER SUPPLY

PLEASE NOTE: The Egro 55 series machine requires a NEMA L6-30R receptacle. The optimal voltage supply is 230V. An acceptable range of voltage is 208V - 250V. If the power supply does not produce 208V of steady voltage, a voltage booster is required. If the power is above 250V, a buck'n boost transformer may be required.

The Egro machines do not use a neutral line. A dedicated ground wire is required for proper performance.

1. Locate the power cable of the machine.
2. Plug machine into NEMA L6-30R receptacle.



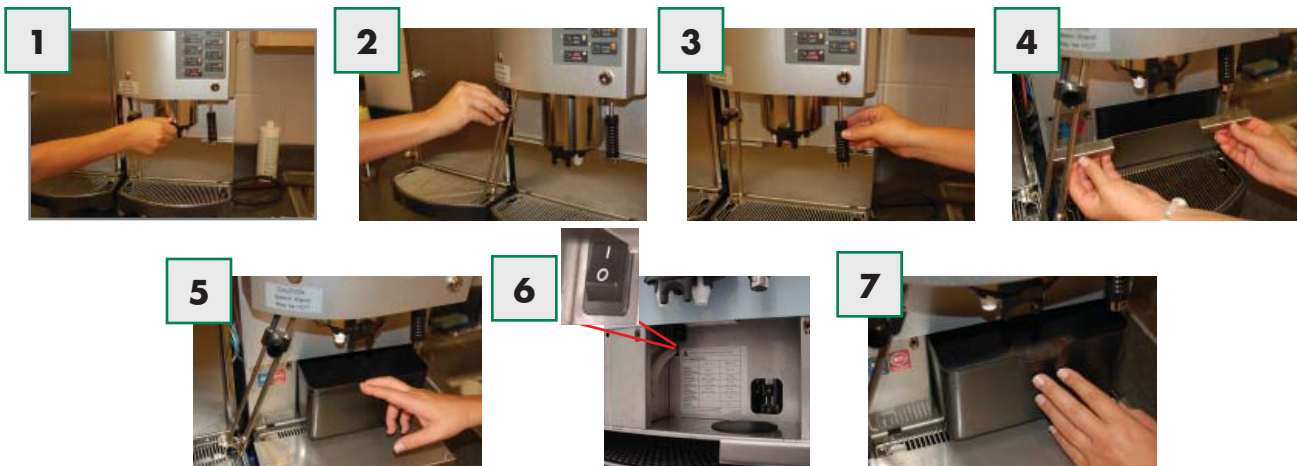
2.9 TURN THE MACHINE ON

WARNING: BE SURE THAT THE MAIN WATER SUPPLY TO THE MACHINE IS TURNED ON.

1. Raise the coffee spout to the highest position.
2. Move the steam wand to the left.
3. Move the hot water outlet upward.
4. Open the ground drawer door.
5. Remove the plastic ground drawer.
6. Flip the power switch to the on (I) position.
7. Replace the ground drawer and close ground drawer door.

ATTENTION: DO NOT ATTEMPT TO PROGRAM THE MACHINE UNTIL THE MACHINE IS READY.

When the machine is turned on, it must go a heating and rinsing initialization. During this time do not enter programming otherwise an error may occur. You may enter programming after the screen reads "Please Select".



2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.10 DE-PRESSURIZE STEAM BOILER

PLEASE NOTE: This step is very important because the steam boiler MUST depressurize before it can function correctly.

FOR EGRO 55 SERIES MACHINES WITH THE TS WAND FOLLOW THESE STEPS:

1. After turning on machine, press the TS wand activation button.
2. After steam begins to exit the wand, press the TS wand activation button again to stop the flow of steam.

FOR EGRO 55 SERIES MACHINES WITH iSTEAM[®] WAND FOLLOW THESE STEPS:

1. After turning on the machine press the Latte button until steam does not escape any longer.

WARNING: do not try and to program the Egro 55 series machine, while it's depressurizing.



TIP: If Error 93 appears on the display screen, turn the machine off - wait 10 seconds and then turn it back on.

2.11 ADJUST GRINDERS

This is the first step to customizing the machine to the roast of beans to be served. This will need to be done using the beans that will be served.



TIP: Pull a shot first and see how machine is pouring prior to adjusting the grind.

STEPS FOR ADJUSTING GRINDER WITHOUT GRINDER ADJUSTMENTS INSTALLED

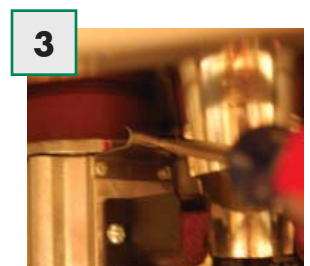
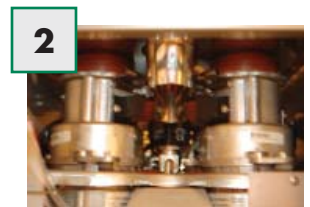
1. Remove the screw holding the front door closed. Swing the door open.
2. Find the grinders on the inside of the machine. On the top of both grinders you will find an adjustment plate.
3. Insert a flat head screwdriver into the slot on the adjustment plate. Apply a gentle downward pressure on the screw driver to lift the plate free of the notches that are holding it in place.
PLEASE NOTE: do no over-bend.
4. Turn the collar on the top of the grinder to adjust the grind.

Finer grind = Turn collar clockwise

Courser grind = Turn collar counter clockwise

5. Make sure that the adjustment plate is securely held in place by the notches before removing the screwdriver from the slot.

Please note: While one notch is a seemingly small adjustment, it can greatly affect the resulting grind. Use small turns, one notch at a time, to adjust the grinder burrs until the correct grind is reached.



2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.11 ADJUST GRINDERS -- CONTINUED

STEPS FOR ADJUSTING GRINDER WITH AN INTERNAL GRINDER ADJUSTMENTS INSTALLED

1. Using a Phillips head screwdriver remove the screw which locks the door and swing the door open.

WARNING: do not loose this screw.

2. Choose the grinder which needs to be adjusted. Turn the knob 1/2 turn to 1 full turn roation, close the door and test a product.

KEY TO ADJUSTMENT

For the RIGHT grinder:

Finer grind = Turn the knob clockwise

Courser grind = Turn the knob counter-clockwise.

For the LEFT grinder:

Finer grind = Turn the knob counter-clockwise

Courser grind = Turn the knob clockwise



2.12 CALIBRATE MACHINE TO BEANS (DIALING IN 10 GRAMS)

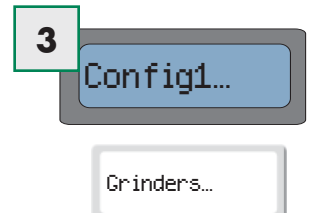
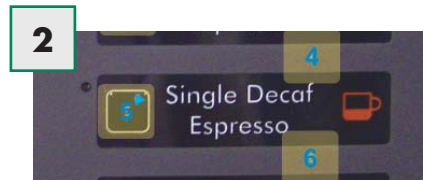
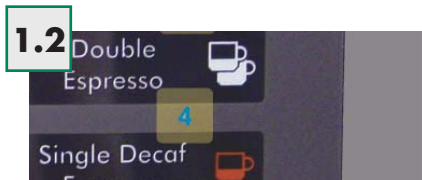
PLEASE NOTE: This step requires you to enter programming. Please refer to section 3 of this manual for guidance in how to enter programming and how to navigate in the programming mode.

This step is critical to the proper function of the Egro 55 series machines. It gives the machine an accurate starting point to produce all drinks. It is unique to the roast of espresso or coffee beans. If you change the roast of beans used in the machine you will need to adjust this calibration by repeating the steps outlined below.

You will need your gram scale to complete these steps. Please perform these steps before programming any drink parameters.

REFER TO SECTION 3 FOR COMPLETE INSTRUCTIONS ON HOW TO ENTER THE PROGRAMING MODE

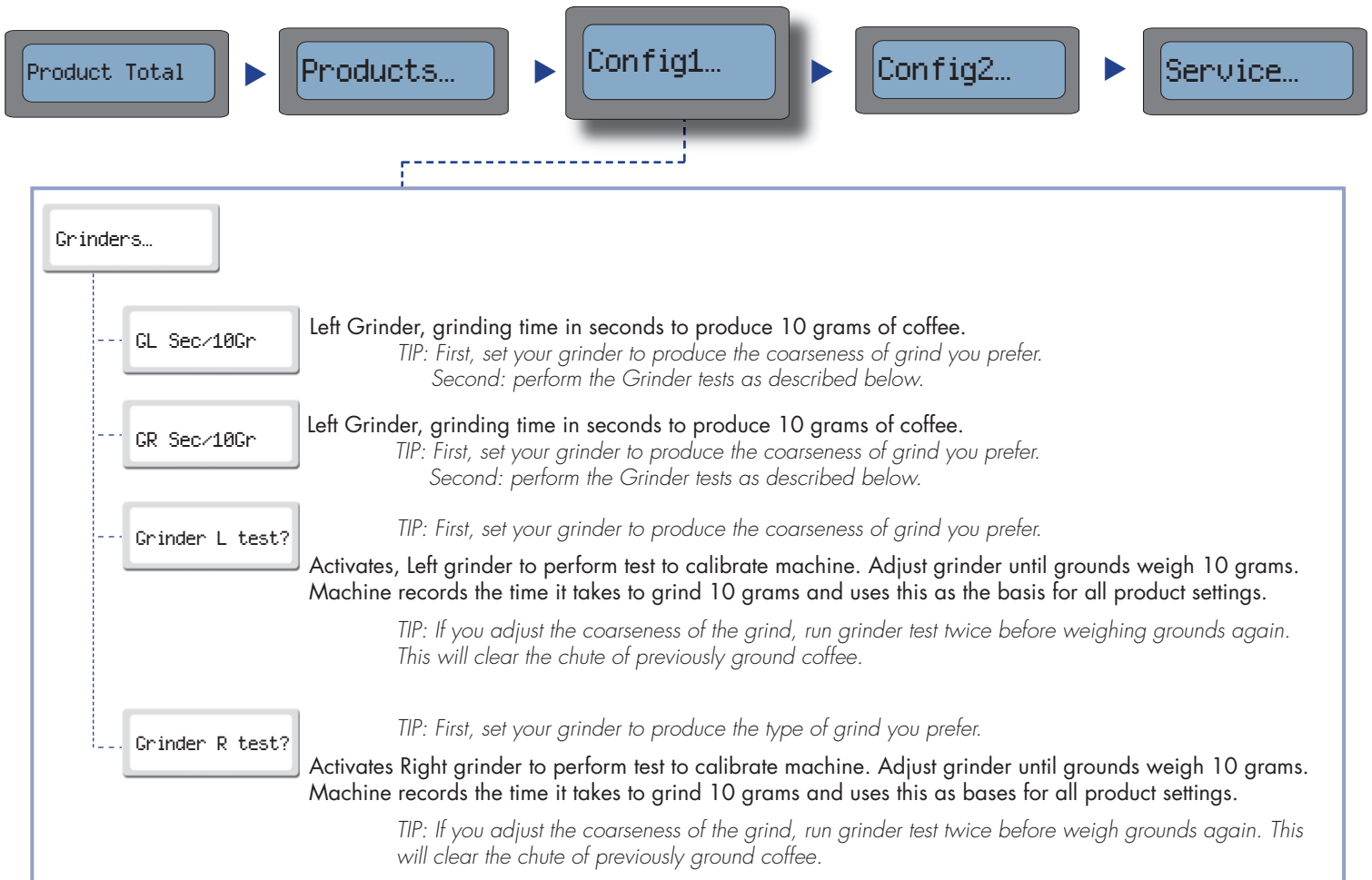
1. Enter programming menu as described in Section 3.3.
 - 1.1 Insert programming key, turn clockwise 1/4 turn
 - 1.2 Press the number 4 button on the key pad
 - 1.3 Enter the PIN code 1849, but pressing the 1, 8, 4 and 9 buttons
2. Scroll (using button 5) to the Config 1 menu and press enter (button 1).
3. Enter the Grinders submenu by pressing button 1.



continued on next page

2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.12 CALIBRATE MACHINE TO BEANS (DIALING IN 10 GRAMS) - CONTINUED



4. You have accessed the Grinders submenu. There are four options in the grinder menu; they are described in the diagram above.

5. Place an empty clean paper cup or light container on your gram scale and tare the scale.

6. Scroll (using the number 5 button) to the **Grinder L test?**

7. Remove the screw holding front door in place, and swing the door open.

8. GRINDER LEFT TEST

8.1 Place a cup under the left grinder chute to catch the grinds. Press the ENTER button (button number 1) to activate the grinder and start the test. Run three tests and discard the coffee grounds.

8.2 Conduct a fourth test and weigh it using your gram scale.

PLEASE NOTE: Always use the fourth grinder test after each adjustment to ensure that the grounds weight is accurate.



continued on next page

2.2 - 2.12 INSTALLATION INSTRUCTIONS: STEP BY STEP GUIDE

2.12 CALIBRATE MACHINE TO BEANS (DIALING IN 10 GRAMS) - CONTINUED

8.3 If the weight is not 10 grams, then scroll back (using the number 3 button) until the screen reads, GL Sec/10Gr.

8.3

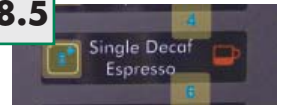
GL Sec/10Gr

8.4 Press ENTER or button 1 to make adjustments to the grinding time of the left grinder.

8.5 Use the + and - (buttons 7 and 9) to make adjustments to the grind time. If the weight is less than 10g increase the grind time, if the weight is more than 10 grams decrease the grind time.

PLEASE NOTE: Adjust time by small increments. Just one or two tenths of a second can greatly affect the resulting weight.

8.5



8.6 Press ENTER (button 1) to save the changes.

8.7 Scroll forward (button 5) to the Grinder I test? again. And repeat the test as described in 8.1 to 8.6 until the grinds ground = 10 grams.

9. GRINDER RIGHT TEST (the right grinder calibration is the same as the left, however it uses the grinder r test? and Gr sec/10g programming features in the config 1/grinders menu)

9.1 Scroll (using the number 5 button) to the Grinder R test?

9.1

Grinder R test?

9.2 Place a cup under the right grinder chute to catch the grounds. Press the ENTER button (button number 1) to activate the grinder and start the test. Run three tests and discard the coffee grounds.

9.3 Conduct a fourth test and weigh it using your gram scale.

PLEASE NOTE: Always use the fourth grinder test after each adjustment to ensure that the grounds weight is accurate.

9.2



9.4 If the weight is not 10 grams, then scroll back (using the number 3 button) until the screen reads, GR Sec/10Gr.

9.3



9.5 Press ENTER or button 1 to make adjustments to the grinding time of the right grinder.

9.6 Use the + and - (buttons 7 and 9) to make adjustments to the grind time. If the weight was less than 10g increase the grind time, if the weight was more than 10 grams decrease the grind time.

PLEASE NOTE: Adjust time by small increments. Just one or two tenths of a second can greatly affect the resulting weight.

9.7 Press ENTER (button 1) to save the changes.

9.8 Scroll forward (button 5) to the Grinder R test? again. And repeat the test as described in 9.1 to 9.8 until the grounds equal 10 grams.

9.4

GR Sec/10Gr

YOU MAY NOW MOVE TO PROGRAMMING EACH PRODUCT FOR THE UNIQUE TASTE PROFILE OF YOUR CUSTOMER.

SECTION 3: PROGRAMMING

TABLE OF CONTENTS: SECTION 3

	<i>Page</i>
3.1 INTRODUCTION TO PROGRAMMING.....	2 - 6
3.1a Keypad definitions.....	2 - 3
3.1b Changing operating mode: how to enter programming mode.....	4
3.1c Programming menu overview.....	5 - 6
3.2 CUSTOMER MONITORING MODE - OPERATING MODE 3.....	3 - 7
3.3 PRODUCT MENU: HOW TO SET DRINK PARAMETER IN PROGRAMMING MENU.....	8 - 11
3.4 CONFIG 1 MENU.....	12 - 13
3.5 CONFIG 2 MENU.....	14 - 17
3.6 SERVICE MENU.....	18 - 21
3.7 GUIDE TO LED ON MAIN BOARD.....	22
3.8 ERROR LIST.....	23 - 24
3.9 PARAMETER QUICK INDEX.....	25 - 28
3.10 ALPHABETICAL LIST OF PARAMETERS INDEX.....	29

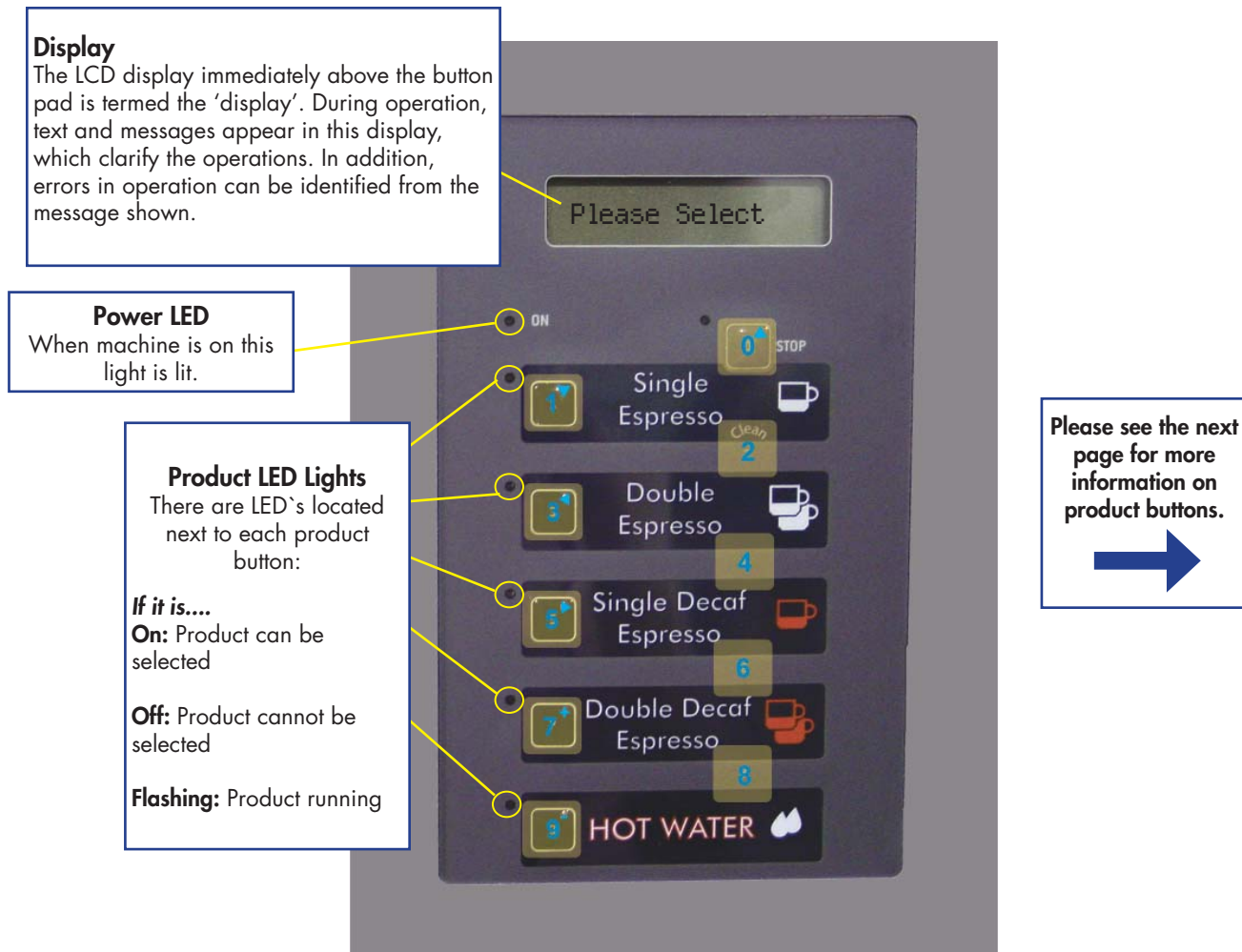
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3.1 INTRODUCTION TO PROGRAMMING:

3.1a. KEY PAD DEFINITIONS

All programming of the Egro equipment is done from the keypad. The buttons are labeled with small gray numbers. These numbers represent the corresponding product number.

PLEASE NOTE: On the standard 5511 machine the second row of numbers (product numbers 2, 4, 6 and 8) are located to the right and are not labeled by black push buttons, however they are labeled by small gray numbers. See photo diagram below for more information.



Example keypad shown is from a MODEL 5511

3.1a. KEY PAD DEFINITIONS

Each product button on the key pad represents a type of product in the programming. For example, button number 1 contains all the settings for the single espresso.

Buttons 0, 1, 3, 5, 7 and 9 (all the buttons on the left side of the key pad) also have functional programming abilities such as Enter, Esc, Scroll up, scroll back, scroll forward, increase by 1 and decrease by 1). Please see the photo diagram below for further details.

BUTTON 1 = PRODUCT 1

Button number 1 is equal to product 1. In this example, product 1 is a Single Espresso.

In the programming mode:

Button 1 = ENTER

BUTTON 3 = PRODUCT 3 & 11

Button number 3 is equal to product 3. In this example, product 2 is a Double Espresso

In the programming mode:

Button 3 = BACK

BUTTON 5 = PRODUCT 5 & 13

Button number 5 is equal to product 5. In this example, product 5 is a Single Decaf Espresso

In the programming mode:

Button 5 = FORWARD

BUTTON 7 = PRODUCT 7 & 15

Button number 7 is equal to product 7. In this example, product 7 is a Double Decaf Espresso

In the programming mode:

Button 7 = + OR INCREASE BY 1

BUTTON 9 = PRODUCT 9

Button number 9 is equal to product 9. Product 9 is always Hot Water

In the programming mode:

Button 9 = - OR DECREASE BY 1

BUTTON 0 = STOP BUTTON

Button number 0 is always the stop button.

In the programming mode:

Button 0 = ESC

(Also cancels changes, returns you to previous menu, or aborts)

BUTTON 2 = PRODUCT 2 & 10

Button 2 on the standard 5511 model is only used to choose the coffee cleaning program.

BUTTON 4 = PRODUCT 4 & 12

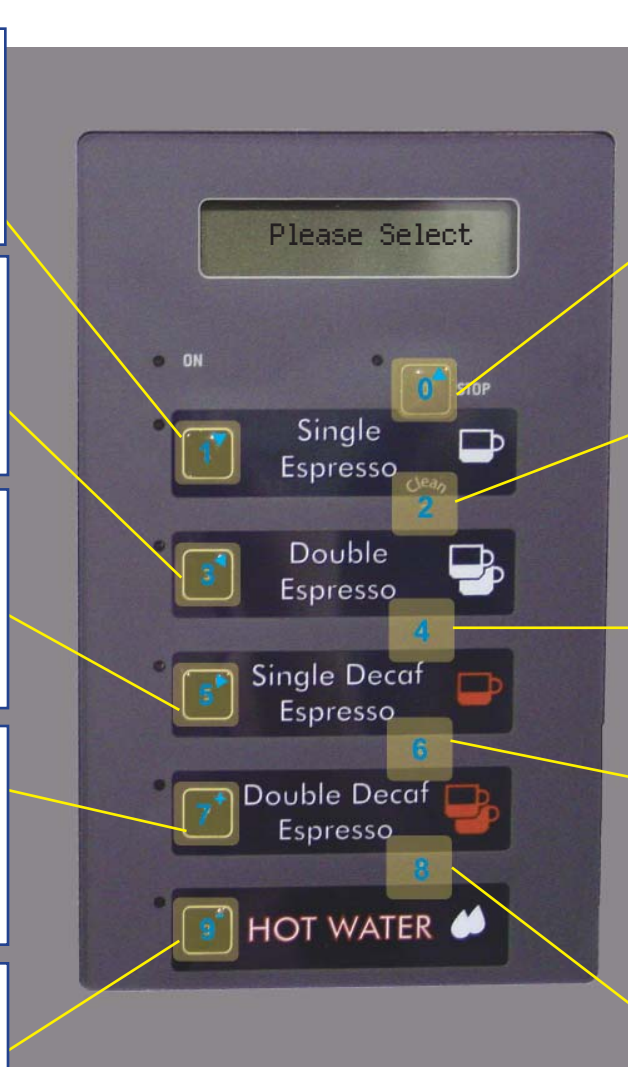
Button 4 on the standard 5511 model is only used when entering the PIN code for advanced programming of the 5511.

BUTTON 6 = PRODUCT 6 & 14

Button 6 on the standard 5511 model is not used.

BUTTON 8 = PRODUCT 8 & 16

Button 8 on the standard 5511 model is only used when entering the PIN code for advanced programming of the 5511.



Example keypad shown is from a MODEL 5511

3.1b. CHANGING OPERATING MODE: HOW TO ENTER PROGRAMMING MODE

'Mode' refers to a specific style of operation of the machine. The machine operates in a different manner in each mode or, alternatively, other operations are carried out.

The machine is equipped to operate in six different modes; modes 4 and 5 can only be accessed by the service technician and are protected by a PIN code: The current mode is indicated when the key is inserted in the mode selector and turned 1/4 turn clockwise.

CHANGE THE OPERATING MODE

To change the Operating Mode of the machine you need the programming key. Two copies of the programming key are provided with each machine.

1. Insert the programming key into the lock on the front of the machine.
2. Turn the key clockwise (to the right) 1/4 turn
3. Press the appropriate button of the mode you would like (0,1,2,3,4 or 5).

ENTER PROGRAMMING MODE:

1. Turn Key.
2. Press button #4.
3. Enter PIN CODE... 1849 by pressing the 1, 8, 4, and 9 button on the keypad.



MODES

M_0: Standby

M_1: Normal

M_2: Regist.

M_3: Product

M_4: PIN...

M_5: Heaters

EXPLANATIONS OF MODES

Mode 0: *Standby mode:* this mode deactivates all buttons of the machine.

Mode 1: *Normal mode:* this is the normal operating mode.

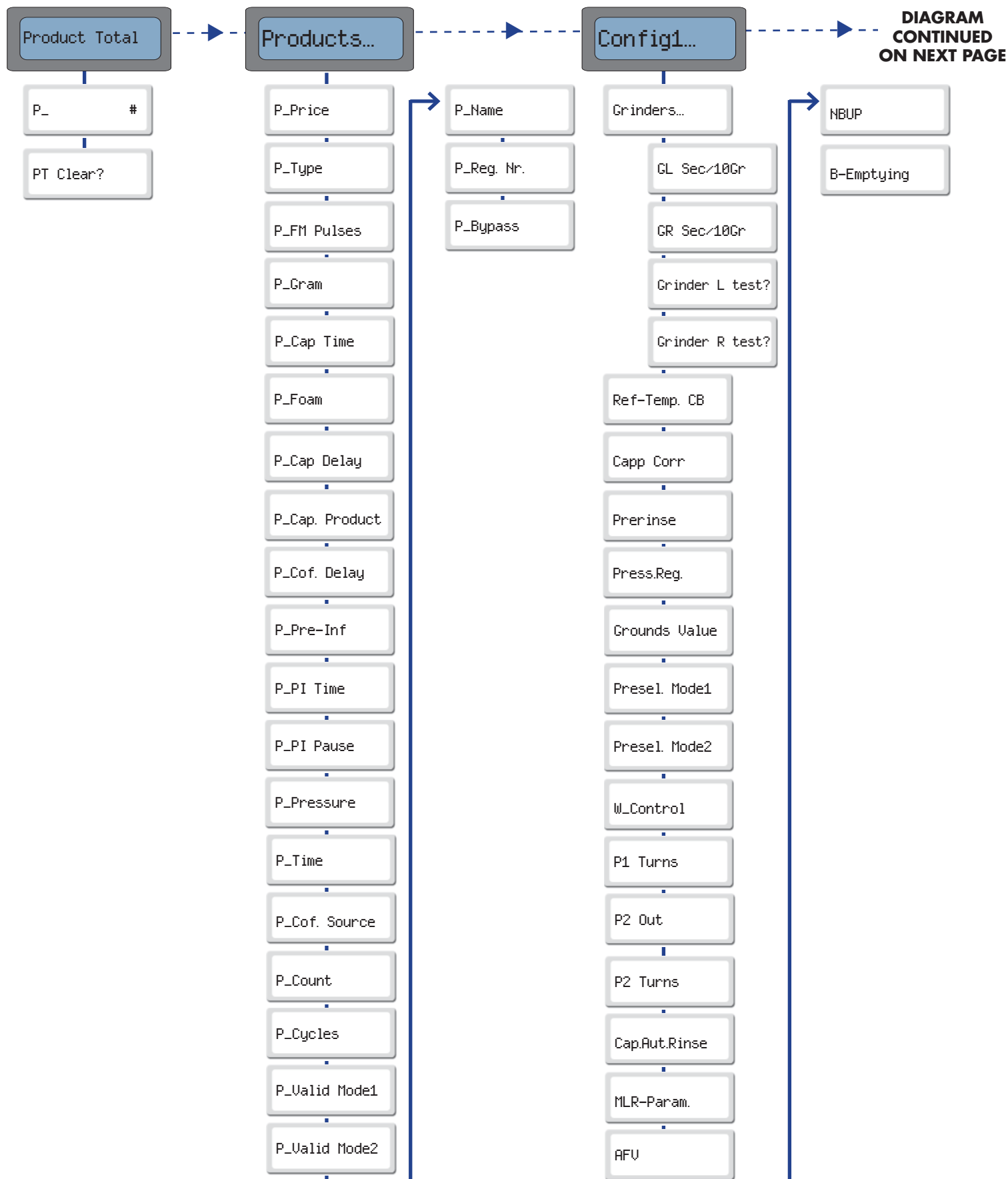
Mode 2: *Register mode:* this mode is used when the machine is connected to a cash register system.

Mode 3: *Customer manager mode:* this mode is used to check product totals and to change simple parameters for each product, such as, grams and water volume.

Mode 4: *Technical menu mode...*: this mode is for advanced programming and diagnostic testing. Please do not access this mode unless you have been properly certified, by Rancilio through either a Train the Trainer Course or a Service Technician Course.

Mode: 5: *Heaters OFF:* this mode is used by technicians to turn off the heating elements of the boilers, so they may safely service the equipment.

3.1c. PROGRAMMING MENU OVERVIEW



3.1c. PROGRAMMING MENU OVERVIEW -- CONTINUED



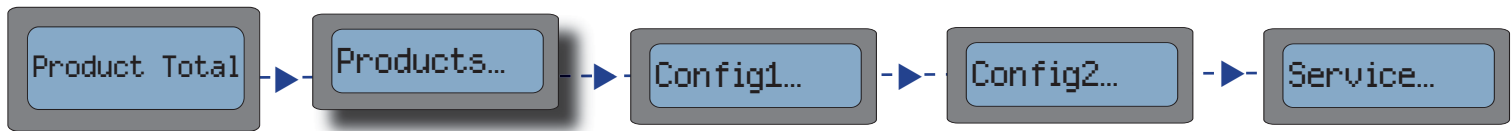
3.2 CUSTOMER MONITORING MODE -- OPERATING MODE 3

The Product total menu allows customers to easily monitor the total number of products that have been produced using the Egro 55 series machine.

1. Change the operating mode of the machine to, **MODE 3** (Customer Monitoring mode or Product Total menu)

- 1.1 Insert key turn to the right.
- 1.2 Press number 3 button on the key pad.

PROGRAMING MENU DIAGRAM



P_ # Shows the product total for each product button that is programmed.
Example: P1 87, in this example the machine has produced 87 for product button number 1, which is most often the single espresso button.
To change the product total that is displayed use the + (number 7) button.

PT Clear Clears the product total figure. To activate press the enter or number 1 button. The display will prompt you to confirm your decision to clear the product total, by displaying PT Clear?. To confirm the clear press the number 1 button again.

3.3 PRODUCT MENU: HOW TO SET DRINK PARAMETERS IN PROGRAMMING MODE

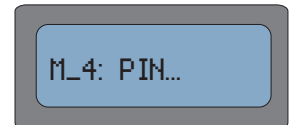
The Products menu allows for the custom programming of each drink product individually. Every setting that can have an influence on the taste, quality and consistency of the drink may be fine-tuned using the Products menu.

Each product button on the key pad represents a type of product in the programming. For example, on a Model 5511 button number 1 typically contains all the settings for the single espresso.

PROGRAMMING PRODUCT SETTINGS IN THE PRODUCTS MENU:

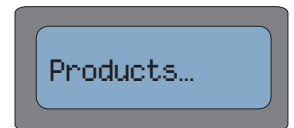
1. Change the operating mode of the machine to, **MODE 4**.

- 1.1 Insert key turn to the right.
- 1.2 Press number 4 button on the key pad.
- 1.3 Enter Pin code... 1849 by pressing the 1, 8, 4, and 9 buttons.



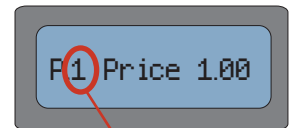
2. Enter the **PRODUCTS...** menu

- 2.1 Using the #5 button scroll to the PRODUCT menu.
- 2.2 Enter into the menu by pressing the #1 button.



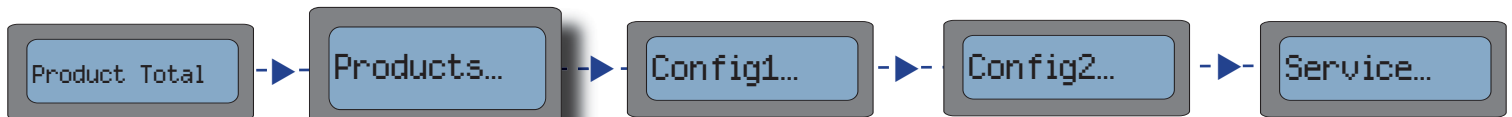
3. Choose the appropriate product number

- 3.1 Using + (7) or the - (9) buttons to choose the appropriate product number of the product that you would like to program the settings. For example, Single Espresso is typically product #1 or button #1.
Please note: The product number will be displayed next to the "P" on the machines display.



Displays the product number

PROGRAMING MENU DIAGRAM



P_Price

NOT USED IN USA. Amount recorded for one drink cycle.

P_Type

Defines product type, Coffee or Tea
0 = Coffee
1 = Tea (Hot Water)

P_FM Pulses

Number of flow meter pulses. Defines the amount of water. (Options: 1 - 1000+)
TIP: 80 pulses = approximately 1 oz of water

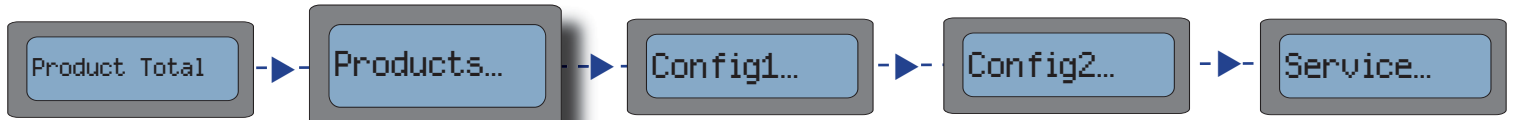
P_Gram

Amount of ground coffee used, in grams.
(Options 0.1g - 16g) For example, a single shot may require 10 grams, so the setting would be 10.

3.3 PRODUCT MENU: HOW TO SET DRINK PARAMETERS IN PROGRAMMING MODE

DESCRIPTION OF PRODUCT SETTINGS/PARAMETERS: --- CONTINUED

PROGRAMING MENU DIAGRAM



P_Cap Time

This setting determines the quantity of steamed milk that is delivered to produce cappuccinos and lattes.

**USED FOR
MODEL 5513
ONLY**

P_Foam

Setting for the type of milk to be delivered:
0 = steamed milk only (for lattes)
1 = steamed milk with foam (for cappuccinos)

**USED FOR
MODEL 5513
ONLY**

P_Cap Delay

Time delay (in seconds) after the button is pressed, before the milk is delivered.
(Options 0.1s to 99.9s)

**USED FOR
MODEL 5513
ONLY**

P_Cap. Product

Defines the control of milk foaming heads:

1 = left frother head only (milk pump 1)

2 = right frother head only (milk pump 2)

3 = both, left and right frother heads (both pumps are working together)*

4 = cold milk only

5 = 30% cold milk 70% steamed and frothed milk

6 = 30% steamed milk 70% steamed and frothed milk

7 = 70% steamed milk 30% steamed and frothed milk

* Recommended setting for fastest milk delivery

**USED FOR
MODEL 5513
ONLY**

P_Cof. Delay

Time delay (in seconds) after button is pressed before coffee is delivered.

TIP: Use this setting to help create clean looking cappuccinos (i.e. coffee with clean white milk foam, helps eliminate the mixing of coffee and milk during delivery)

**USED FOR
MODEL 5513
ONLY**

P_Pre-Inf

Turn pre-infusion on or off. *TIP: Pre-infusion is the expansion of coffee grounds by adding a small quantity of water to the grounds in the brewing chamber before brewing takes place.*

0 = Pre-infusion is ON

1 = Pre-infusion is OFF

P_PI Time

Pre-infusion filling time, in seconds. Amount of water that is used. ONLY VALID IF PRE-INFUSION IS TURNED ON. (Options: 0.1s - 9.9s)

Recommended setting = 0.1s - 0.5s

P_PI Pause

Expansion time for wet coffee. ONLY VALID IF PRE-INF IS TURN ON.
(Options: 0.1s - 9.9s)

Recommended setting is 1.0s - 4.0s.

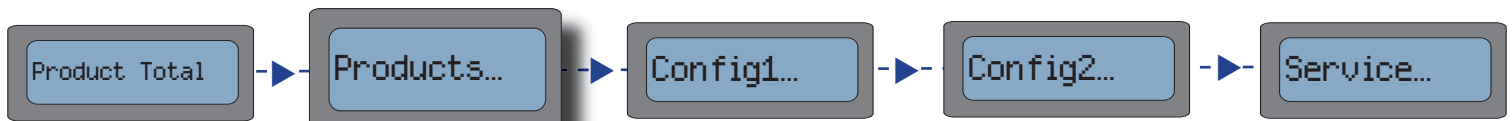
P_Pressure

Tamping pressure for coffee grounds.
(Options: 4 - 16)

Recommended settings: 4 - 7 for single espressos and 8 - 12 for double espressos

3.3 PRODUCT MENU: HOW TO SET DRINK PARAMETERS IN PROGRAMMING MODE

PROGRAMING MENU DIAGRAM



P_Time

NOT RECOMMENDED, MAY CAUSE ERRORS.

Brewing time control or auto-adjust tamping control, modifies the tamping pressure if the brewing time does not correspond to this set value. (Only valid if Pressreg., in Config1 menu is turned ON (=1).)

P_Cof. Source

Specifies which bean hopper supplies the coffee for the drink.

0 = manual (center grounds chute)

1 = left hopper

2 = right hopper

P_Count

Specifies how many drinks to record when the button is pressed.
(Options: 0 - 19)

P_Cycles

NOT TYPICALLY USED IN USA. Specifies the number of consecutive brewing cycles made when button is pressed. For example, to produce a pitcher of coffee may require more than one cycle.
(Options: 1 -19)

Recommended settings is 1.

P_Valid Mode1

Enables or disables button.

0 = button enabled

1 = button disabled

P_Valid Mode2

Enables or disables second level of all buttons. Enables products 10-14.

0 = button enabled

1 = button disabled

TIP: use this button to unlock the second level of all buttons, when a DECAF option is needed. ONLY VALID WHEN "SHIFT" IS TURNED ON IN CONFIG2 MENU.

P_Name

Sets which product name will be displayed on the screen when the drink is being made.
(See Product Name Listing on page 10 of this section.)

P_Reg. Nr.

NOT USED IN USA. Sends drink price to specified register.
(Options 1 -39) Only valid if machine is operating in Mode 2.

P_Bypass

Percentage of fresh hot water that is delivered after the coffee has been brewed.
(Options 0 - 99)

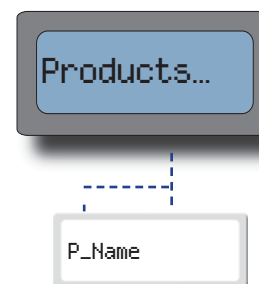
Example: For an 8oz Americano, or approx. 640 FM pulses, the Bypass setting could be set to 75. Which means that the machine would use 160 pulses to brew the coffee and add 480 pulses of fresh water after the brewing was finished.

3.3 PRODUCT MENU: PRODUCT NAME LIST

Following is list of settings that correspond to the product name that will be displayed on the machine's display screen when the user presses the product button.

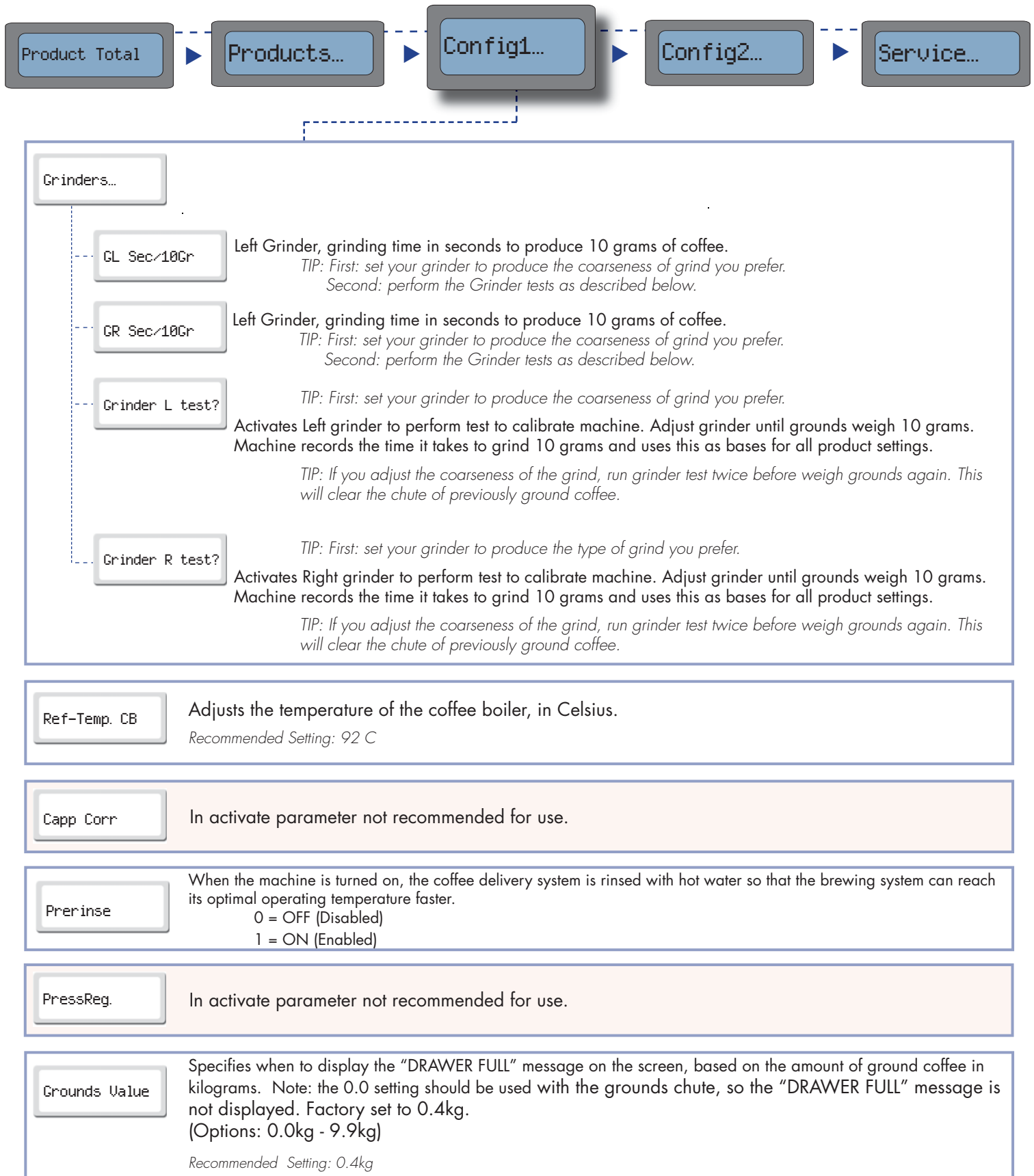
NUMBER	PRODUCT NAME
0	Empty
1	Ristretto
2	Espresso
3	2x Ristretto
4	2x Espresso
5	Coffee
6	2x Coffee
7	Decaffeinated
8	2x Decaffeinated
9	Tea
10	Cappuccino
11	2x Cappuccino
12	Macchiato
13	2x Macchiato
14	Coffee with milk
15	2x Macchiato
16	Coffee with milk
17	2x Milk Foam
18	Hot Milk
19	2x Hot Milk
20	White Coffee
21	2x White Coffee
22	House Coffee
23	2x House Coffee
24	Espr. macchiato
25	2x Espr. macchiato
26	Jug
27	2x Jug
28	Pot
29	2x Pot
30	Cof. in Glass
31	2x Cof. in Glass
32	House coffee
33	2x House Coffee
34	Cap. in Glass
35	2x Cap. in Glass
36	Cold Milk
37	2x Cold Milk

NUMBER	PRODUCT NAME
38	Americano
39	2x Americano
40	Caffe' Lungo
41	2x Caffe' Lungo
42	Decaf. s. Capp.
43	Decaf m. Capp.
44	Decaf. l Capp.
45	Decaf. s. Latte
46	Decaf. m. Latte
47	Decaf. l. Latte
48	Decaf Espresso
49	Frothed Milk
50	Steamed Milk
51	Barista cold
52	Barista hot
53	
54	Hot Water
55	Small Cappuccino
56	Medium Capp.
57	Large Cappuccino
58	Small Latte
59	Medium Latte
60	Large Latte
61	Long Black
62	2x Long Black
63	SM Long Black
64	MD Long Black
65	Latte
66	2x Latte
67	LG Long Black
68	Flat white
69	Caffe' Latte
70	2x Caffe' Latte
71	2x Flat White
72	SM Flat White
73	MD Flat White
74	LG Flat White



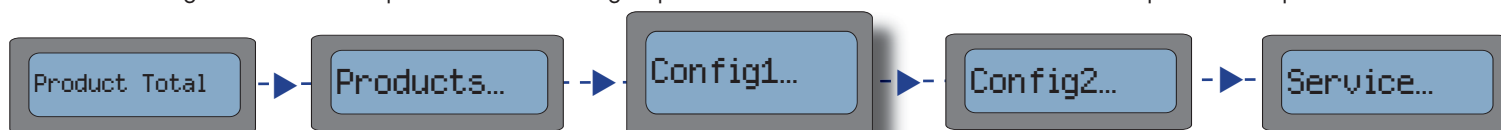
3.4 CONFIG 1 MENU

Config 1 Menu contains parameters for making adjustments to the machine that do not effect the specific drink parameters.



3.4 CONFIG 1 MENU

Config 1 Menu contains parameters for making adjustments to the machine that do not effect the specific drink parameters.



Presel. Mode1

Specifies the total number of drinks that can be queued or preselected in modes 1 and 2.
PLEASE NOTE: 1 = No drink queuing possible. (Options 1 - 16)

Presel. Mode2

In a self service application this parameter must always be set to =1.

W_Control

Enables or disables the minimum brew-time functions. If the brewing time is too slow, a "CHECK WATER" message will appear on the display screen.
0 = Disabled
1 = Enabled

P1 Turns

DO NOT CHANGE! Factory setting of the position of the top brewing piston.

P2 Out

Cap.Aut.Rinse

Defines the time for starting the automatic rinsing programme after the last milk beverage has been made. (Only available with the automatic milk rinsing option)
Min. value 0 – Max. Value 30
0 = switched off
1 - 15 = time interval in minutes

**USED FOR
MODEL 5513
ONLY**

MLR-Param.

Contains a list of submenu that changes the MLR (Milk Line Rinsing parameters to accommodate for longer milk delivery lines. (For example, with an under counter fridge.)

**USED FOR
MODEL 5513
ONLY**

Corr. Time

Increases the cap. Time (correction time) after the automatic MLR-rinse

Rinsing Time

Rinse time can be used to increase water rinsing of the milk pipes by MLR max. 9.9 seconds

Blowing out time

Blow out time can be used to increase the time that air is blown through milk pipes by MLR max. 9.9 seconds.

AFV

Air Foam Valve (AFV): this setting needs to be set if the AFV is present on the 5513 machine. AFV is the removable mechanical check valve located just above the frother heads (beneath the SS slider cover).

AFV = 0 Air foam-valve not present
AFV = 1 Air foam-valve present

**USED FOR
MODEL 5513
ONLY**

NBUP

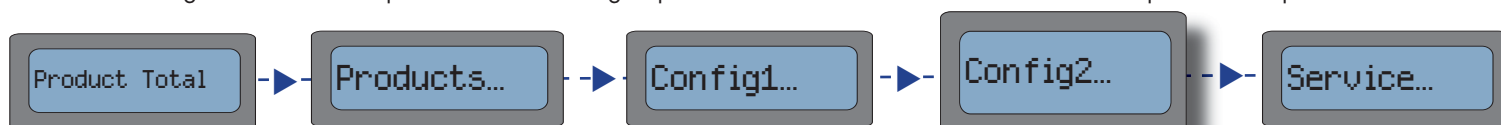
APPLIES ONLY TO MACHINES THAT HAVE VERSION 2.10 OR HIGHER SOFTWARE.
Notifies the machine if the new generation brewing unit is present in the machine.
0 = Not present
1 = New brew unit present

B-Emptying

APPLIES ONLY TO MACHINES THAT HAVE VERSION 2.10 OR HIGHER SOFTWARE
Enables or disables steam boiler emptying feature. If enabled the steam boiler will be emptying during the coffee cleaning and filled up again at the end of the coffee cleaning program.
0 = Disabled
1 = Enabled (boiler will empty)

3.5 CONFIG 2 MENU

Config 2 Menu contains parameters for making adjustments to the machine that do not effect the specific drink parameters.



Language

Specifies which language.
(Options German, English, French, and Japanese)

Decimal Point

NOT USED IN USA. Specifies the number of spaces after the decimal point in drink places.
0 = no spaces
1 = Two spaces

Periph. Type

NOT TYPICALLY USED IN USA. Specifies what type of peripheral is connected.
0 = None 2 = Card System 6 = CCI/CSI
1 = Coins 4 = Card system and coins 7 = POS

Card System

NOT TYPICALLY USED IN USA. Identifies which card type is being used. The serial number of the card reader is input here to identify the corresponding card type. ONLY VALID IF Periph. Type = 2.

C_Value

NOT USED IN USA. Values of the 6 coins accepted.
(Options: 0.0 - 9.99)

Steam Boiler

Enables or disables the steam boiler.
0 = disabled
1 = enabled
Recommended Setting: 1

Power

DO NOT CHANGE! Specifies the power rating of the steam boiler. **MUST BE SET ON 3 IN USA AND CA!**
1 = 2kw boiler (10a fuse) **3 = 3kw boiler (16a fuse)**
2 = 2.5kw boiler (13a fuse)

Watertank

Enables or disables a portable water tank function. Enable this setting if the water supplied to the machine has no line pressure (such as, on a cart where water is supplied from a portable water source).
0 = disabled
1 = enabled

Power Version

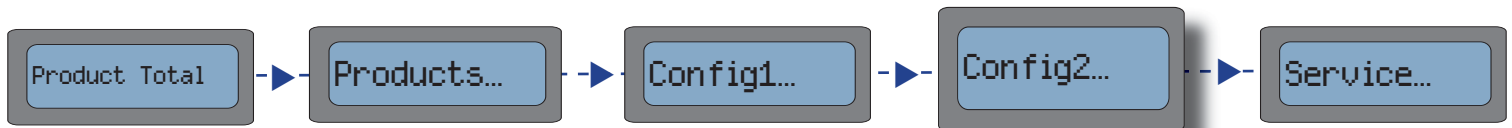
Enables or disables the power save version. When the power version is enabled, both boilers are heated simultaneously.
NOTE: in order to save this setting you will need to enter PIN code: 240874
0 = 1 phase with 16A
1 = 1 phase with 30A
Recommended setting: 1 enabled

Save to Card?

Saves all settings in Products, Config1 and Config2 menus to a service card.
ONLY VALID WITH A CARD READER ATTACHED TO THE MACHINE.

3.5 CONFIG 2 MENU

Config 2 Menu contains parameters for making adjustments to the machine that do not effect the specific drink parameters.



Load Card?

Uploads the settings from a service card to the Products, Config1, and Config2 menus of the machine.
ONLY VALID WITH A CARD READER ATTACHED TO THE MACHINE.

Load Defaults

Overwrites the current settings in Products, Config1 and Config2 with factory default settings.
DO NOT USE OR YOU WILL HAVE TO REPROGRAM THE ENTIRE MACHINE!!

Price=> CCI

NOT USED IN USA! Enables or disables loading of drink prices into a CCI peripheral.
0 = Disabled
1 = Enabled

Shift

Enables or disables the Shift (#1) button. Enable when DECAF is an option.
0 = Disabled
1 = Enabled

Choko

NOT USED IN USA! Enables or disables the Choko function.
0 = Disabled
1 = Enabled

MB_Sensor

Enables or disables the Milk sensor, Bean sensor, and Grounds counter feature. *NOTE: ONLY the Grounds counter feature is available in the USA. It measures the grounds in the brew chamber, if there is not enough to brew the selected drink it displays a "Check Beans" message.*

Applies to software versions 1.0 - 2.09

- 0 = Grounds counter feature Enabled
- 1 = Milk, Bean sensor and Grounds counter enabled
- 2 = Only Milk sensor enabled

Applies to software versions 2.10 and greater

- 0 = Grounds counter feature Enabled
- 1 = Milk, Bean sensor and Grounds counter enabled
- 2 = Nothing activated
- 3 = Milk sensor only

IMS Beeper

Turns beeper ON or OFF.
0 = ON
1 = OFF

**USED FOR
MODEL 5513
ONLY**

R-Mode 2

NOT USED IN USA! Enables or disables cleaning when machine's in operating mode 2.
0 = rinsing disabled
1 = rinsing enabled

MLR_Type

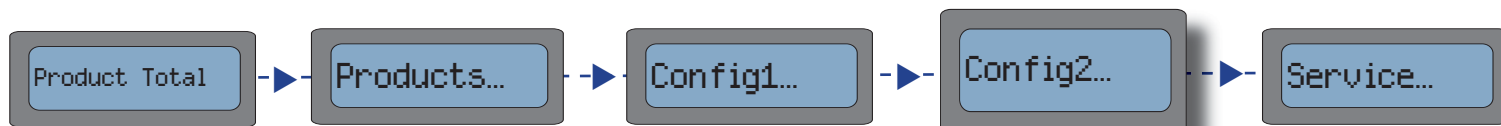
Specifies which MLR (Milk Line Rinsing) System is being used.

- 0 = none MLR
- 1 = MLR 1. Older generation rinsing with Hose cleaning
- 2 = MLR 2. Older generation rinsing without Hose cleaning
- 3 = MLR 3. Used with European under-counter solution
- 4 = MLR 4. Use with USA cool box solution – pipes are flushed with water without steam
- 5 = MLR 5. Used KS 6 above counter fridge -- RECOMMENDED SETTING**

**USED FOR
MODEL 5513
ONLY**

3.5 CONFIG 2 MENU

Config 2 Menu contains parameters for making adjustments to the machine that do not effect the specific drink parameters.



C-Request

Cleaning request function. Use this feature to set a cleaning alert after a specified number of drinks have been produced. The alert will remain on the screen until the cleaning has been carried out.

0 = No cleaning alarm

1 - 1000 = number of drinks before alert is displayed

S-Filling

Specifies whether the steam boiler should be filled with or without using the machines pump. If the water line is not pressurized, or it does not have enough pressure this should be set to 0.

0 = Fills with machine's pump

1 = fills without machine's pump

PT-Clear

Enables or disables the erase function in the product counter menu.

0 = Erasing not possible

1 = Erasing possible

Auto-Steam

Identifies the type of steam wand that is present on the machine.

SOFTWARE VERSIONS 1.00 - 2.09

0 = NO TS wand present

1 = TS wand is present

SOFTWARE VERSIONS 1.00 - 2.09

0 = NO TS wand present

1 = TS wand is present with steam pressure control

2 = TS wand without steam pressure control

3 = iSteam wand present

Ref. Temp. AS

Specifies the temperature in Celsius at which the TS wand will shut off.
(Options: 40 - 99 C)

iButton Foam

ISTEAM SETTINGS: ONLY VALID WHEN ISTEAM WAND IS PRESENT

iButton Foam: This submenu contains the programming for the temperature and emulsion levels of the cappuccino button or left side button on the iSteam wand.

Temperature

Use this parameter to set the final temperature of the steamed and frothed milk for the cappuccino button on the iSteam wand. This temperature is in Celsius.

E-degree

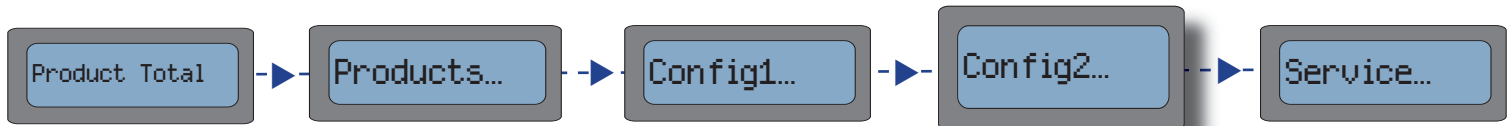
Use this parameter to set the emulsion level or foaming level associated with the cappuccino button on the iSteam wand. **OPTIONS: 0 - 6.** PLEASE NOTE: For all settings 1, 2, 3, 4, and 5, the iSteam will add air to the steaming process and shut air off prior to reaching the final temperature. For example, if you set this parameter to 5 the iSteam will begin steaming with air infused, shortly before it reaches it's final temperature it will stop infusing air and simply steam. This will result in possibly less foam, but the foam may be "tighter".

0 = no foam or no air during steaming

6 = maximum foaming or air from the beginning to the end of steaming

3.5 CONFIG 2 MENU

Config 2 Menu contains parameters for making adjustments to the machine that do not effect the specific drink parameters.



ISTEAM SETTINGS: ONLY VALID WHEN ISTEAM WAND IS PRESENT

iButton Milk

iButton Milk: This submenu contains the programming for the temperature and emulsion levels of the latte button or right side button on the iSteam wand.

Temperature

Use this parameter to set the final temperature of the steamed and frothed milk for the latte button on the iSteam wand. This temperature is in Celsius.

E-degree

Use this parameter to set the emulsion level or foaming level associated with the latte button on the iSteam wand. **OPTIONS: 0 - 6.** PLEASE NOTE: For all settings 1, 2, 3, 4, and 5, the iSteam will add air to the steaming process and shut air off prior to reaching the final temperature. For example, if you set this parameter to 2 the iSteam will begin steaming with air infused and stop infusing air after a few seconds of steaming. Full power steaming will continue and the result will be a steamed frothy milk with a touch of foam.

0 = no foam or no air during steaming

6 = maximum foaming – air infused steam from the beginning to the end of steaming

iSteamCorrFct

ONLY VALID WITH SOFTWARE 2.10 OR HIGHER

This setting can be used to compensation for any calibration issues with the iSteam or TS wand temperature probes. Use this setting to correct any differences between the actual final temperature of the milk and programmed final temperature. **OPTIONS: 0 - 20.**

Fahrenheit

Specifies how temperature will be displayed.

0 = Celsius

1 = Fahrenheit

Tea/Steam

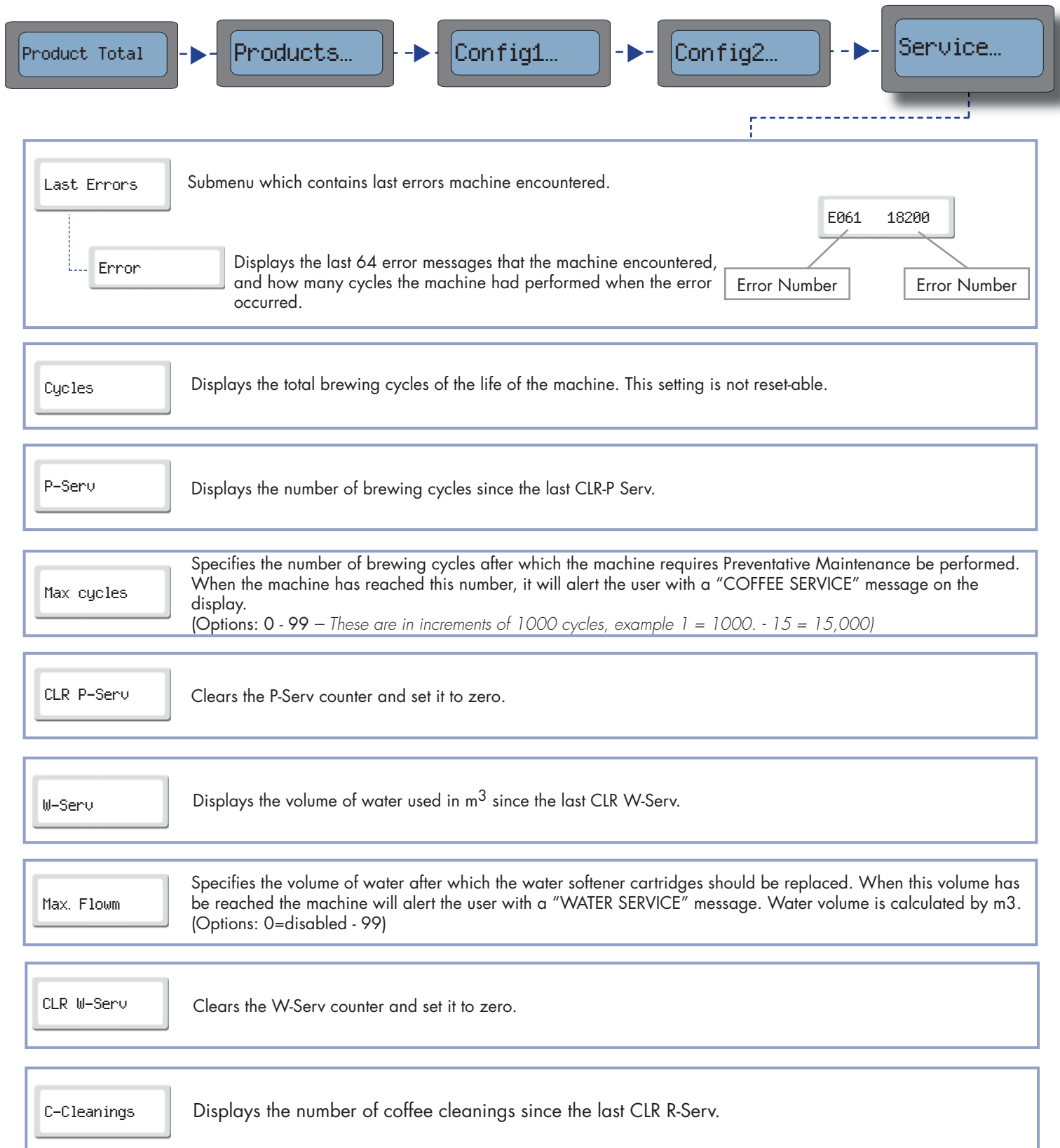
Enables or disables pressure switch during hot water delivery.

0 = Pressure switch disabled

1 = Pressure switch enabled (default setting)

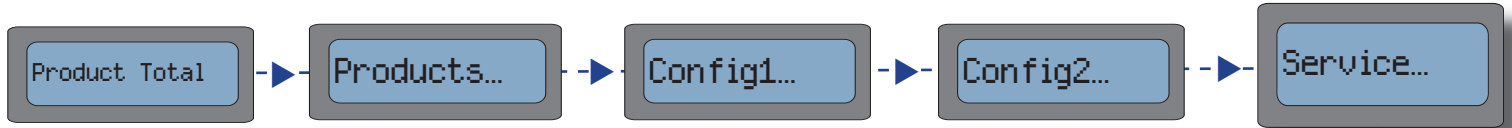
3.6 SERVICE MENU

Service menu is for maintenance and diagnostics. It contains information as well as component diagnostic tests.



3.6 SERVICE MENU

Service menu is for maintenance and diagnostics. It contains information as well as component diagnostic tests.



M-Cleanings

Displays the number of milk cleanings since the last CLR P-Serv.

CLR Error

Clears the error history list.

Monitor...

Contains a list of submenu tests that can be used to diagnose a problem.

Valve test..

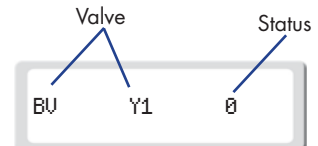
Function: Individually activates valves to test the electrical connections to these valves.

Buttons used to select valve: + and -

Start/Stop: Use button #1

Status: 0 = Valve idle

1 = Valve active



Display	Valve	Jack on Control Board	LED (red)
BV Y1 0	Brewing valve	J10/1-2	9
TEA Y2 0	Hot water valve / Steam added	J10/3-4/5-6	10
ST-FILL Y3 0	Steam boiler refill valve	J10/7-8	11
CAP_1 Y4 0	Steam valve for Capp. left	J10/9-10	12
CAP_2 Y5 0	Spare (Capp. right)	J10/11-12	13
Bypass Y6 0	Bypass valve (optional)	J10/13-14	14

Heater test..

Function: Switches on heaters manually.

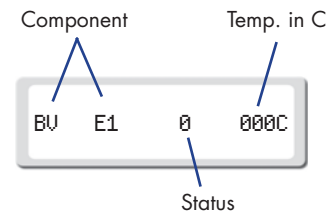
Buttons used to select: + and -

Start/Stop: Use button #1

Status: 0 = Heater off

1 = Heater on

Display: Current temperature in Celsius



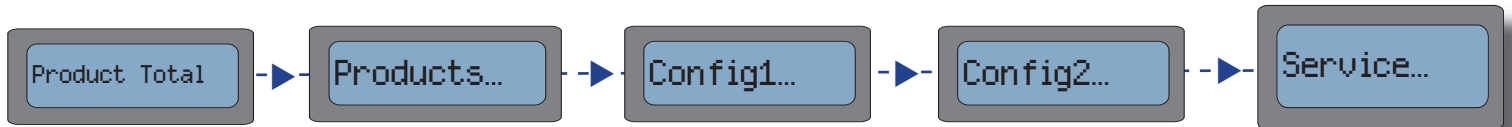
Display	Component	Jack on Control Board	LED (red)
C E1 0 000C	Brewing valve	J5/1-2(+24V=) SSR	7
S E2 0 OK	Steam boiler heater OK = temp. reached, pressure switch open	J5/3-4 (+24V=) SSR	8
S E2 0 NOK	Steam boiler heater NOK = temp. not reached pressure too low.	J5/3-4 (+24V=) SSR	8

PLEASE NOTE: the measuring range of the temp. display is 0 C - 118 C. Higher temps. are displayed as 199 C.



WARNING: Heaters must be switched off manually. There is no automatic OFF switch.
DO NOT OVERHEAT!!

3.6 SERVICE MENU



Monitor...

Contains a list of submenu tests that can be used to diagnose a problem.

AC Motor Test..

Function: Manually control the AC motor.

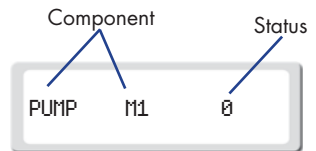
Buttons used to select: + and -

Start/Stop: Use button #1

Status: 0 = ON

1 = OFF

Display	Motor	Jack on Control Board	LED (red)
PUMP M1 0	Water pump motor	J12/1-2	4
G_l M2 0	Left grinder	J17/1-2	5
G_r M3 0	Right grinder	J18/1-2	6



DC Motor Test..

Function: Manually controls the DC motors.

Buttons used to select: + and -

Motion: Use < and > buttons

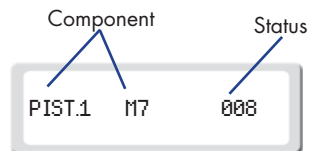
Move to home position with >

Status: No. of turns from home position

Home position P1:S15

Home position P2:S17

Display	Motor	Jack (peak to peak)
PIST.1 M7 008	Spindle motor 1 (Piston (P) 1)	J2 1-2 (24V=)
PIST.1 M7 008	Spindle motor 2 (Piston (P) 2)	J3 1-2 (24V=)



Niveau Test..

or

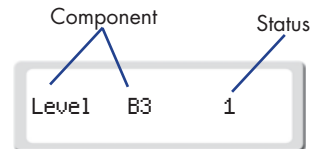
Level Test..

Function: Checks the water level sensor in the steam boiler.

Components: Level sensor B3 (J11/5)

Status: B3 = 1 below water level (level OK)

B3 = 0 above water level (level too low)

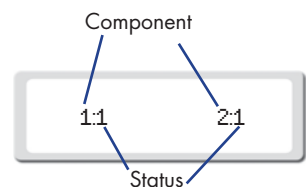


POS SW Test..

Function: Activate the end switches.

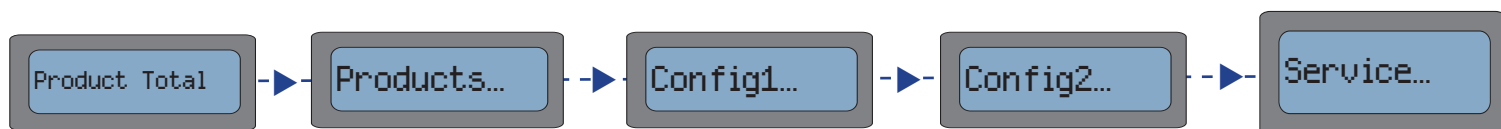
Procedure:

1. Bring the component into the position where the sensor is active (see following table)
2. Activate the function
3. Check the switch signal



Switch	Switch Type	Jack (peak to peak)	Position for Status = 1
1	Pressure switch for steam boiler	J9/6-7	0 = Temperature reached 1 = Pressure switch closed (Pressure too low)
2	Micro-switch for grounds drawer	J15/1-2	0 = Cover is open 1 = Grounds drawer door is in place

3.6 SERVICE MENU



Monitor...

Contains a list of submenu tests that can be used to diagnose a problem.

FlowM Test

Function: Check the flow-meter.

Start/Stop: Use button #1

Display: Continuous display of FM signal.

100 FM-IMP. = approx. 0.5 dl. or 1.5oz

Flow meter P1 (coffee)

0 0 99

ADDITIONAL I/O

OUTPUTS...

Function: Checks the 24V DC outputs.

Buttons used to select: + and -

Start/Stop: Use button #1

Status: 1 = component activated

0 = component not activated

Component

Status

MP1

0

Display	Component	Jack on Control Board	LED (red)
MP 1 0	Milk pump M4 (left milk frother head)	J46/1-2	3
MP 2 0	Milk pump M5 (right milk outlet/milk)	J46/3-4	4
CWV 0	Cold water valve for automatic milk rinse	J45/12-11	10
AP 0	Air pump	J45/10-9	?
SV 0	Steam valve for automatic milk rinse	J45/10-9	9
AFV 0	Air foaming head valve	J45/8-7	8
RES 2 0	Spares	J45/4-1	6-5
RES 3 0	Spares	J45/4-1	6-5
ASV 0	Steam valve for auto steam	J19/6-5	?

Inputs...

Signal Inputs (Press + Button)

Function: Check the eight 24V DC inputs.

Status: 1 = signal active

0 = signal not active

Status

0 0 0 0 1 1 0 0

Bean Sensor

Milk Sensor

Cool Down...

Function: Cool down the machine for safe repairing. Flushes the boiler with cold water. The brew valve is open.

Start/Stop: Use button #1

Cooling...

3.7 GUIDE TO LED ON MAIN BOARD

3.7a LED LIST FOR R1 MAINBOARD

LED 1	24 Volt (green continuous)
LED 2	5 Volt (green continuous)
LED 3	Run mode (green flashing)
LED 4	Pump
LED 5	Left grinder
LED 6	Right grinder
LED 7	Coffee boiler
LED 8	Steam boiler
LED 9	Brew valve
LED 10	Tea valve
LED 11	Steam filling valve
LED 12	Cappuccino valve left
LED 13	Cappuccino valve right
LED 14	Spare
LED 4 -14	Red (On = active)

3.7b LED LIST FOR R2 MAINBOARD

DL 1	24 Volt (green continuous)
DL 2	5 Volt (green continuous)
DL 3	Run mode (green flashing)
DL 4	Pump
DL 5	Left grinder
DL 6	Right grinder
DL 7	Coffee boiler
DL 8	Steam boiler
DL 9	Brew valve
DL 10	Tea valve
DL 11	Steam filling valve
DL 12	Cappuccino valve left
DL 13	Cappuccino valve right
DL 14	Bypass Y6
DL 15	Steam valve for TS steam ASV
DL 16	not in use
DL 17	iFaom (iSteam capp.)
DL 18	iMilk (iSteam latte)
DL 19 - 25	not in use
DL 26	Res 2
DL 27	Res 3
DL 28	Air vavle AFV

DL 29	Reversing valve SV
DL 30	Air pump AP
DL 31	Cold water valve Y10
DL 32	Milk pump MP2
DL 33	Milk pump MP1

3.8 ERROR LIST

3.8 ERROR MESSAGES: When the machine has encounters a problem with one of it's components it will give the end user an error message. Technicians can check the list of errors the machine has encountered and the number of cycles the machine had performed when the error occurred. SEE PAGE 18 OF THIS SECTION FOR MORE DETAILS ON HOW TO ACCESS THE ERROR LIST.

NO.	DESCRIPTION	SOLUTION
1	Error in EEPROM	Turn machine off, wait 30 seconds and turn on again.
31	Coffee boiler could not be refilled.	a. Check main water supply and pump - is there water going to the machine? b. The pump pressure is too high, greater than 10 bar c. Brew valve Y1 does not close - check in monitor menu d. Flowmeter P1 is faulty - check using monitor menu e. Expansion/non-return valve is blocked f. Boiler inlet is blocked - remove inlet and visual check
33	Steam boiler could not be refilled.	a. Check main water supply and pump - is there water going to the machine? b. Level sensor B3 is calcified or has electrical fault - check using monitor menu c. Valve Y3, has a mechanical or electrical fault - check using monitor menu d. Non return valve or inlet pipe is blocked - remove and visual check
41	Coffee boiler does not heat up	a. Check temperature fuse F11 b. Check semiconductor element K1 c. Check Heater/Connection X2 d. Check temperature sensor NTC B1 / Connection J11 Pin 1/2 e. Check and make sure one phase of the power supply is not missing
43	Steam boiler does not heat up	a. Check temperature fuse F21 b. Check semiconductor element K2 c. Check Heater/Connection X2 d. Check pressure switch S13 using monitor menu e. Check and make sure one phase of the power supply is not missing
61	No signal from Flowmeter P1	a. Flowmeter is clogged or not responding - check using monitor menu b. Expansion or non-return valve is clogged - visually check c. Coffee boiler, inlet or outlet is blocked - visually check d. Brew valve (Y1) is blocked - check using monitor menu e. Sieve from upper or lower piston is blocked - visual check f. Flow limiter from brewing piston is blocked
71	Brew duration is greater than 90 seconds	a. Coffee is set to grind to fine - adjust grinder to courser setting b. Sieve from upper or lower piston is blocked - visually check c. Check piston height from brew piston P2 (Config. 1 menu P2 height) d. Flow rate or pressure from water pump to low - increase pump pressure
73	Delivery time for tea takes too long	a. Pipe or sieve is blocked - visually check
81	No signal from upper piston	a. No signal from limit switch S15 (upper piston motor P1) - check in monitor menu b. Upper piston P1 is jammed - visually check c. Upper spindle motor M7 /limit switch is faulty - check in monitor menu d. Check cable connections M7 to J2 e. Grounds ejector arm is blocking the movement of upper piston - visually check
82	No signal from lower piston	a. Lower piston P2 is jammed - visually check b. Spindle motor M8 limit switch S17 is faulty - check in monitor menu c. Check cable connections M8 to J3
91	Upper Piston P1: Time to pressure > 8 seconds P1: Time to ejection > 5 seconds	a. Upper piston P1 is jammed - visually check - use monitor menu b. No signal from upper spindle motor M7/Revolution counter S14 - use monitor menu c. Check cable connections M7 to J2
92	Lower Piston P2: Time to pressure > 8 seconds P2: Time to ejection > 5 seconds	a. Lower piston P2 is jammed - visually check - use monitor menu b. No signal from lower spindle motor M8 / Revolution counter S16 c. Check cable connections M8 to J3

3.8 ERROR LIST - CONTINUED

3.8 ERROR MESSAGES -continued

NO.	DESCRIPTION	SOLUTION
93	Lower piston (P2) can not reach it's maximum height.	a. Check lower spindle motor (M8) - use monitor menu b. Revolution counter (S16) is faulty
94	Lower piston (P2) height has exceeded it's maximum height during brewing. (Motor exceeded 100 revolutions)	a. Check lower piston spindle motor - use monitor menu b. Revolution counter (S16) is faulty c. Increase upper piston height (P1) by 2 in Config 1 menu, P1 Turns parameter
97	No signal from upper piston (P1) limit switch (S14)	a. Check the upper spindle motor (M7) - use the monitor menu b. Revolution counter (S14) is faulty c. Check fuse F5
98	No signal from lower piston limit switch (S14).	a. Check the lower spindle motor (M8) - use the monitor menu b. Revolution counter S16 is faulty
111	Short circuit on temperature sensor for coffee boiler (NTC B1)	a. Check wiring to sensor b. Check the J11 Pin 1/2 connection on the mainboard
121	Failure of the temperature sensor for the coffee boiler (NTC B1)	a. Check wiring to sensor b. Check the J11 Pin 1/2 connection on the mainboard

3.9 PARAMETER QUICK INDEX

PRODUCT SETTINGS

PRODUCT SETTINGS: COFFEE

PARAMETER	DESCRIPTION	MENU	PAGE
P_Bypass	% of H ₂ O delivered after brewing for Americanos	Products...	10
P_Coffee Source	Specifies which hopper supplies coffee	Products...	10
P_FM Pulse	Quantity of water delivered during brewing	Products...	8
P_Grams	Quantity of coffee used	Products...	8
P_Pre-Inf	Pre-infusion on or off	Products...	9
P_PI_Pause	Expansion time for pre-infusion	Products...	9
P_PI_Time	Amount of water used during pre-infusion	Products...	9
P_Pressure	Tamping pressure	Products...	9
P_Time	Brew time auto adjust feature - do not use	Products...	10

PRODUCT SETTINGS: MILK (5513)

PARAMETER	DESCRIPTION	MENU	PAGE
P_Cap Delay	Time delay after button is pressed before milk is delivered.	Products...	9
P_Cap Product	Defines which frother heads delivers milk	Products...	9
P_Cap Time	Quantity of milk delivered	Products...	9
P_Cof Delay	Time delay after button is pressed before coffee is delivered	Products...	9
P_Foam	Defines type of foam (Capp or latte)	Products...	9

PRODUCT SETTINGS: GENERAL

PARAMETER	DESCRIPTION	MENU	PAGE
P_Count	Specifies # of drinks recorded when button is pressed	Products...	10
P_Cycles	Specifies # cycles that run when button is pressed	Products...	10
P_Name	Defines name to be displayed when button is pressed	Products...	10 - 11
P_Price	Sets price of product	Products...	8
P_Reg. Nr.	Sends drink price info to specified cash register	Products...	10
P_Type	Defines coffee or tea	Products...	8
P_Valid Mode 1	Enables button	Products...	10
P_Valid Mode 2	Enables second level of button (shift level)	Products...	10

MACHINE SETTINGS

MACHINE SETTINGS: COFFEE

PARAMETER	DESCRIPTION	MENU	PAGE
NBUP	Notifies machine that new generation brew group is installed	Config 1...	13
Pre-Rinse	Activates pre-rinising feature	Config 1...	12
Ref-Temp CB	Define coffee boiler temperature	Config 1...	12

3.9 PARAMETER QUICK INDEX

MACHINE SETTINGS

MACHINE SETTINGS: GRINDER CALIBRATION

PARAMETER	DESCRIPTION	MENU	PAGE
<i>Grind Time</i>			
Left -- GL Sec/10Gr	Defines grind time to grind 10 grams with left grinder	Config 1...	12
Right -- GR Sec/10Gr	Defines grind time to grind 10 grams with right grinder	Config 1...	12
<i>Grinder Calibration/Test</i>			
Grinder L test?	Activates left grinder to calibrate	Config 1...	12
Grinder R test?	Activates right grinder to calibrate	Config 1...	12

MACHINE SETTINGS: MILK (5513)

PARAMETER	DESCRIPTION	MENU	PAGE
AFV	AFV present or not	Config 1...	13
Capp_Auto Rinise	Sets the time after milk drink is made to begin the auto milk line rinse	Config 1...	13
Capp. Correction	Not an active parameter	Config 1...	12
MLR_Parameter	Submenu which contains Correct time, Rinsing time, & Blow out time for MLR	Config 1...	13
MLR_Type	Defines the generation of MLR in machine	Config 2...	15

MACHINE SETTINGS: GENERAL

PARAMETER	DESCRIPTION	MENU	PAGE
B_Emptying	Enables or disables steam boiler emptying feature.	Config 1...	13
Decimal Point	Specifies the number of spaces after the decimal point in drink places.	Config 2...	14
Fahrenheit	Specifies how temperature will be displayed.	Config 2...	17
Language	Specifies which language.	Config 2...	14
P1 Turns	DO NOT CHANGE! Factory setting of the position of the top brewing piston.	Config 1...	13
P2 Out	DO NOT CHANGE! Factory setting of the position of the top brewing piston.	Config 1...	13
Power	DO NOT CHANGE! Specifies the power rating of the steam boiler.	Config 2...	14
Power Version	Enables or disables the power save version.	Config 2...	14
Pre-Sel Mode 1	Specifies the total number of drinks that can be preselected in modes 1 and 2.	Config 1...	13
Pre-Sel Mode 2	Specifies the total number of drinks that can be preselected in modes 1 and 2.	Config 1...	13
S-Filling	Specifies whether the steam boiler should be filled using the pump.	Config 2...	16
Shift	Enables or disables the Shift (#1) button. Enable when DECAF is an option.	Config 2...	15
Steam Boiler	Enables or disables the steam boiler.	Config 2...	14
R_Mode 2	Enables or disables cleaning when machine's in operating mode 2.	Config 2...	15
Tea/Steam	Enables or disables pressure switch during hot water delivery.	Config 2...	17
Water Tank	Enables or disables a portable water tank function.	Config 1...	14

MACHINE SETTINGS: ACCESSORY SETTINGS (NON OF THESE SETTINGS ARE TYPICALLY USED IN THE USA AND CANADA)

PARAMETER	DESCRIPTION	MENU	PAGE
Card System	Identifies which card type is being used.	Config 2...	14
C_Value	Values of the 6 coins accepted.	Config 1...	14
Periph Type	Specifies what type of peripheral is connected.	Config 2...	14
Price => CCI	Enables or disables loading of drink prices into a CCI peripheral.	Config 2...	15

3.9 PARAMETER QUICK INDEX

SENSORS, ALERTS, AND COUNTERS

PARAMETER	DESCRIPTION	MENU	PAGE
C-Cleaning	Displays number of times the coffee cleaning program has been run since last CLR-R-Serv	Service...	18
CLR_Error	Clears error history	Service...	19
CLR_P_Serv	Clears PM service counter	Service...	18
CLR_W_Serv	Clears water service counter	Service...	18
C_Request	Cleaning alert: Set # of cycles machine performs before giving a cleaning alert	Config 2...	16
Cycles	Total number of produced on machine since manufacturing date	Service...	18
Grounds Value	Specifies number of cycles before displaying grounds drawer full alert	Config 1...	12
IMS Beeper	Turns beeper on or off	Config 2...	15
Last Errors	List last 64 errors that the machine has encountered	Service...	18
MB_Sensor	Enables or disables milk and coffee sensors	Config 2...	15
M_Cleanings	Displays number of milk cleanings since last CLR P Serv	Service...	19
Max_cycles	Specifies number of cycles before PM service alert is shown	Service...	18
Product_total	Shows the total number of products produced since last PT_Clear	Mode 3...	7
PT_Clear	Enables or disables product counter menu clear function	Config 2...	16
Water Control	Enables or disables the minimum brew-time functions. If the brewing time is too slow, a "CHECK WATER" message will appear on the display screen.	Config 2...	13
W_Serv	Specifies the number of cycles before the water service message is shown	Service...	18

STEAM WAND SETTINGS

TS WAND (Auto-shut off) SETTINGS

PARAMETER	DESCRIPTION	MENU	PAGE
Auto Steam	Defines which type of TS wand is installed on the machine	Config 2...	16
Ref. Temp AS	Specifies temperature in Celsius at which TS wand will automatically shut off	Config 2...	16

ISTEAM SETTINGS

PARAMETER	DESCRIPTION	MENU	PAGE
iCorrect Fct	Can be used to compensate for difference between programmed and actual final shut off temperatures	Config 2...	17
iButton Foam	This submenu contains the programming for the temperature and emulsion levels of the cappuccino button or left side button on the iSteam wand.	Config 2...	16
iButton Milk	This submenu contains the programming for the temperature and emulsion levels of the latte button or right side button on the iSteam wand.	Config 2...	17

3.9 PARAMETER QUICK INDEX

TECHNICIAN SUPPORT MENUS

COMPONENT MONITORING

PARAMETER	DESCRIPTION	MENU	PAGE
AC Motors	Manually control the AC motors.	Service/Monitor...	20
Additional IO	Checks the 24V DC outputs.	Service/Monitor...	21
Cool Down	Cool down the machine for safe repairing. Flushes the boiler with cold water.	Service/Monitor...	21
DC Motor	Manually control the DC motors.	Service/Monitor...	20
FlowM Test	Manually activates the Flow meter.	Service/Monitor...	21
Heater Test	Manually activates the boiler heaters.	Service/Monitor...	19
Inputs	Checks the 24V DC inputs.	Service/Monitor...	21
Niveau test	Checks the water level sensor in the steam boiler.	Service/Monitor...	20
POS SW Test	Activate the end switches.	Service/Monitor...	20
Valve tests	Individually activates valves to test the electrical connections to these valves.	Service/Monitor...	19

SAVING SETTINGS TO CARD

PARAMETER	DESCRIPTION	MENU	PAGE
Load to Card	Uploads the settings from a service card to the Products, Config1, and Config2 menus of the machine.	Config 2...	15
Load Defaults	Overwrites the current settings in Products, Config1 and Config2 with factory default settings.	Config 2...	15
Save to Card	Saves all settings in Products, Config1 and Config2 menus to a service card.	Config 2...	14

3.10 ALPHABETICAL LIST OF PARAMETERS INDEX

PARAMETER	MENU	PAGE	PARAMETER	MENU	PAGE	PARAMETER	MENU	PAGE
AC Motors	Service/Monitor	20	M_Cleanings	Service	19	Power version	Config 2	14
Additional IO	Service/Monitor	21	Max_Cycles	Service	18	Pre-Rinse	Config 1	12
AFV	Config 1	13	Max.FlowM	Service	18	Pre-sel Mode 1	Config 1	13
Auto Steam	Config 2	16	MB_Sensor	Config 2	45	Pre-sel Mode 2	Config 1	13
B_Emptying	Config 1	13	MLR Parameter	Config 1	13	PressReg	Config 1	12
C_Cleaning	Service	18	MLR Type	Config 2	15	Price => CCI	Config 2	15
C_Request	Config 2	16	NBUP	Config 1	13	Product_Total	Mode 3	
C_Value	Config 2	14	Niveau test	Service/Monitor	20	PT_Clear	Config 2	16
Cap.Auto.Rinse	Config 1	13	P_Bypass	Products	10	Ref. Temp AS	Config 2	16
Cap_Corr	Config 1	12	P_Cap Delay	Products	9	Ref-Temp CB	Config 1	12
Card System	Config 2	14	P_Cap Product	Products	9	R-Mode2	Config 2	15
Choko	Config 2	15	P_Cap Time	Products	9	Save to Card	Config 2	14
CLR W_Serv	Service	18	P_Cof Delay	Products	9	S-Filling	Config 2	16
CLR_Error	Service	19	P_Cof.Source	Products	10	Shift	Config 2	15
CLR_P_Serv	Service	18	P_Count	Products	10	Steam boiler	Config 2	14
Cool Down	Service/Monitor	21	P_Cycle	Products	10	Tea/Steam	Config 2	17
Cycles	Service	18	P_FM Pulse	Products	8	Valve tests	Service/Monitor	19
DC Motor	Service/Monitor	20	P_Foam	Products	9	W_Serv	Service	18
Decimal point	Config 2	14	P_Grams	Products	8	Water Control	Config 1	13
Fahrenheit	Config 2	17	P_Name	Products	10	Water Tank	Config 2	14
FlowM Test	Service/Monitor	21	P_P_Pressure	Products	9			
GL Sec/10Gr	Config 1/Grinders	12	P_PL_Pause	Products	9			
GR Sec/10Gr	Config 1/Grinders	12	P_PL_Time	Products	9			
Grinder L test?	Config 1/Grinders	12	P_Pre-Inf	Products	9			
Grinder R test?	Config 1/Grinders	12	P_Price	Products	8			
Grounds Value	Config 1	12	P_Reg.Nr.	Products	10			
Heater Test	Service/Monitor	19	P_Time	Products	10			
iButton Foam	Config 2	16	P_Type	Products	8			
iButton Milk	Config 2	17	P_Valid Mode 1	Products	10			
iCorrectFct	Config 2	17	P_Valid Mode 2	Products	10			
IMS Beeper	Config 2	15	P-Serv	Service	18			
Inputs	Service/Monitor	21	P1 Turns	Config 1	13			
Language	Config 2	14	P2 Outs	Config 1	13			
Last Errors	Service	18	Periph Type	Config 2	14			
Load to Card	Config 2	15	POS SW Test	Service	20			
Load to Defaults	Config 2	15	Power	Config 2	14			

SECTION 4: ELECTRICAL

TABLE OF CONTENTS: SECTION 4

	<i>Page</i>
4.1 INTRODUCTION.....	2
4.2 HIGH VOLTAGE COMPONENTS.....	2 - 4
4.3 LOW VOLTAGE COMPONENTS.....	5 - 7
4.4 MAINBOARD DIAGRAM.....	8 - 9
4.5 MAINBOARD SCHEMATICS	10 - 11

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4.1 INTRODUCTION

The electrical section of this manual details the electrical components of the Egro 55 series machines. The electrical components are broken out into three main sections, 1. High voltage 2. Low voltage 3. Motherboard.

4.2 HIGH VOLTAGE COMPONENTS

WARNING: TURN THE MACHINE OFF AND UNPLUG IT FROM THE WALL PRIOR TO WORKING WITH ANY HIGH-VOLTAGE COMPONENTS!

PUMP MOTOR: Generation 1

55 Series machines are equipped with a magnetically controlled 230v CMP-71100 internal water pump. The pump is water cooled for longer motor life.



PUMP MOTOR: Generation 2

55 Series produced after May 2008 utilizes a spindle-driven pump to accommodate high volume use while providing consistent, sustainable pressure for each and every shot.



GRINDER MOTORS

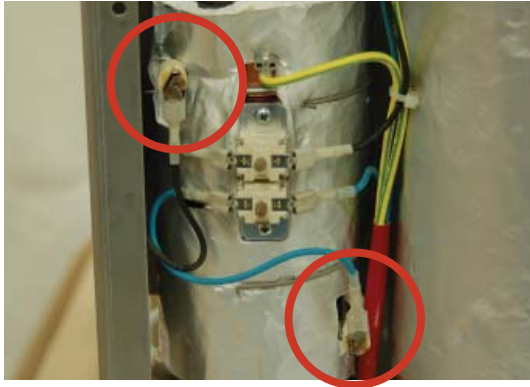
The 55 series is equipped with two independently controlled 230V 1/2 hp Ditting grinder RPM motors. 1690 RPM. 150w.



4.2 HIGH VOLTAGE COMPONENTS - CONTINUED

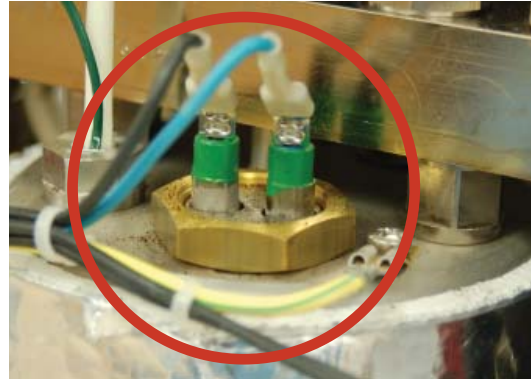
HEATING ELEMENT: HOT WATER BOILER

The hot water boiler or coffee boiler contains a 208V 3000w external heating element.



HEATING ELEMENT: STEAM BOILER

The steam boiler contains a 208V 3000w internal heating element.



RELAYS

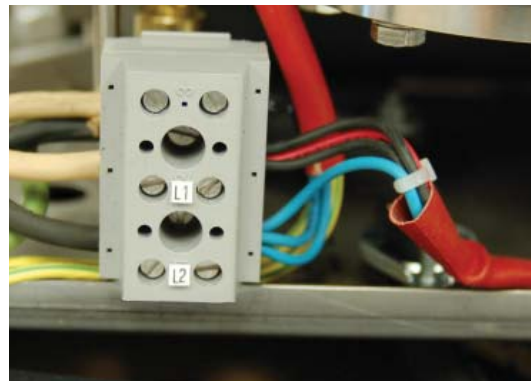
Electrical device such that current flowing through it in one circuit (24v from the mainboard) can switch on and off a current in a second circuit (208v going to the heating elements and the pump).



TERMINAL BLOCK

Receives the incoming lines of power from the plug.

- Black wires lead to the relay
- Red wires lead to the bottom relay
- Blue wires lead to the mainboard for all 230v/208v components



4.2 HIGH VOLTAGE COMPONENTS - CONTINUED

POWER SWITCH

Turns the machine on and off. 230v



CAPACITORS

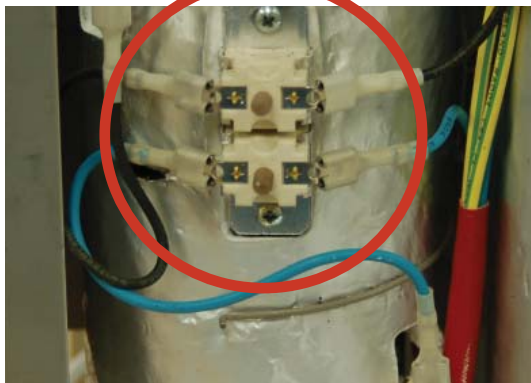
230v incoming.



HIGH LIMIT SWITCH: HOT WATER BOILER

The hot water boiler high limit has a switch for each leg of power. This is a thermo protection for the heating element.

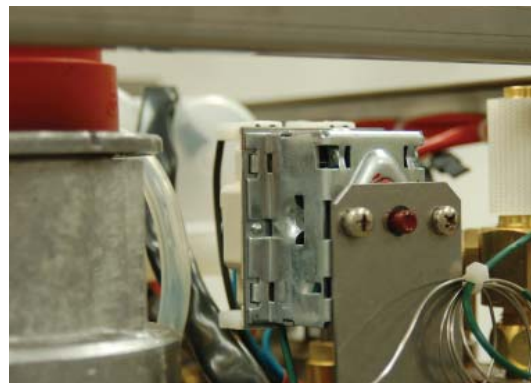
Press the two brown buttons to reset the hot water boiler high limit.



HIGH LIMIT SWITCH: STEAM BOILER

The steam boiler high limit cuts both legs of power to the steam boiler's heating element.

Press the red button to reset the steam boiler high limit.



4.3 LOW VOLTAGE COMPONENTS

FLOWMETER

24v + 5v. Counts the pulses of the water going to the hot water boiler and the brew group.



BREW CHAMBER HEAT SLEEVE

24v. Keeps the brew chamber at constant temperature, to promote temperature stability during espresso extraction.



STEAM BOILER PRESSURE-STAT

5v. Regulates the temperature of the steam boiler.



DISPLAY

24v. Serves as the display for drinks and also programming. By using the programming key the drink touch pad can be used to program, configure and customize the machine.



4.3 LOW VOLTAGE COMPONENTS - CONTINUED

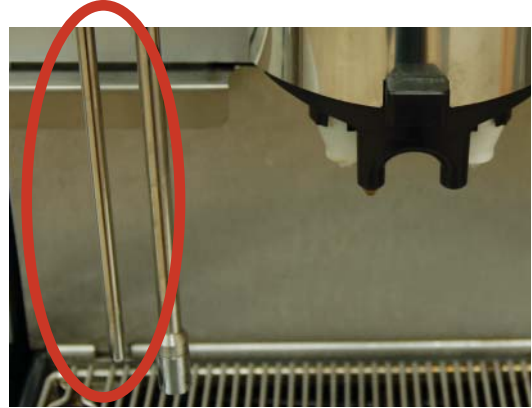
PISTON MOTORS

24v. Contains two (upper and lower) piston motors, that power the upper and lower pistons for tamping during the brewing process.



TS OR iSTEAM WAND PROBE

5v. Temperature sensing probe for steaming milk. Adjust the final or shut-off temperature by using the programming.



SOLENOIDS: MODEL 5511

There are five operational solenoids located in the Egro Model 5511. All the solenoids are 24v DC.

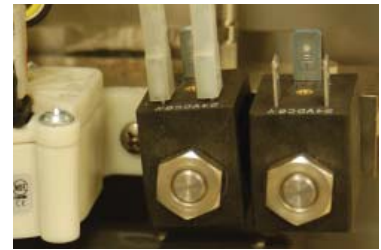
BREW (10W)



STEAM (10W)



STEAM BOILER (8W)



TEA- COFFEE BOILER (10W)



TEA - STEAM BOILER (10W)



4.3 LOW VOLTAGE COMPONENTS - CONTINUED

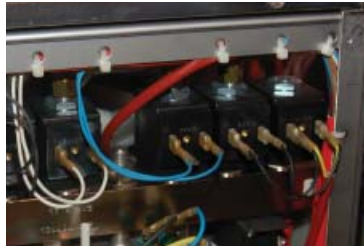
SOLENOIDS: MODEL 5513

In addition, to the five solenoids located in the Model 5511, there are three solenoids exclusive to the Model 5513.

**STEAM SOLENOID FOR LEFT
FROTHER HEAD
(10W)**



**STEAM SOLENOID FOR RIGHT
FROTHER HEAD
(10W)**

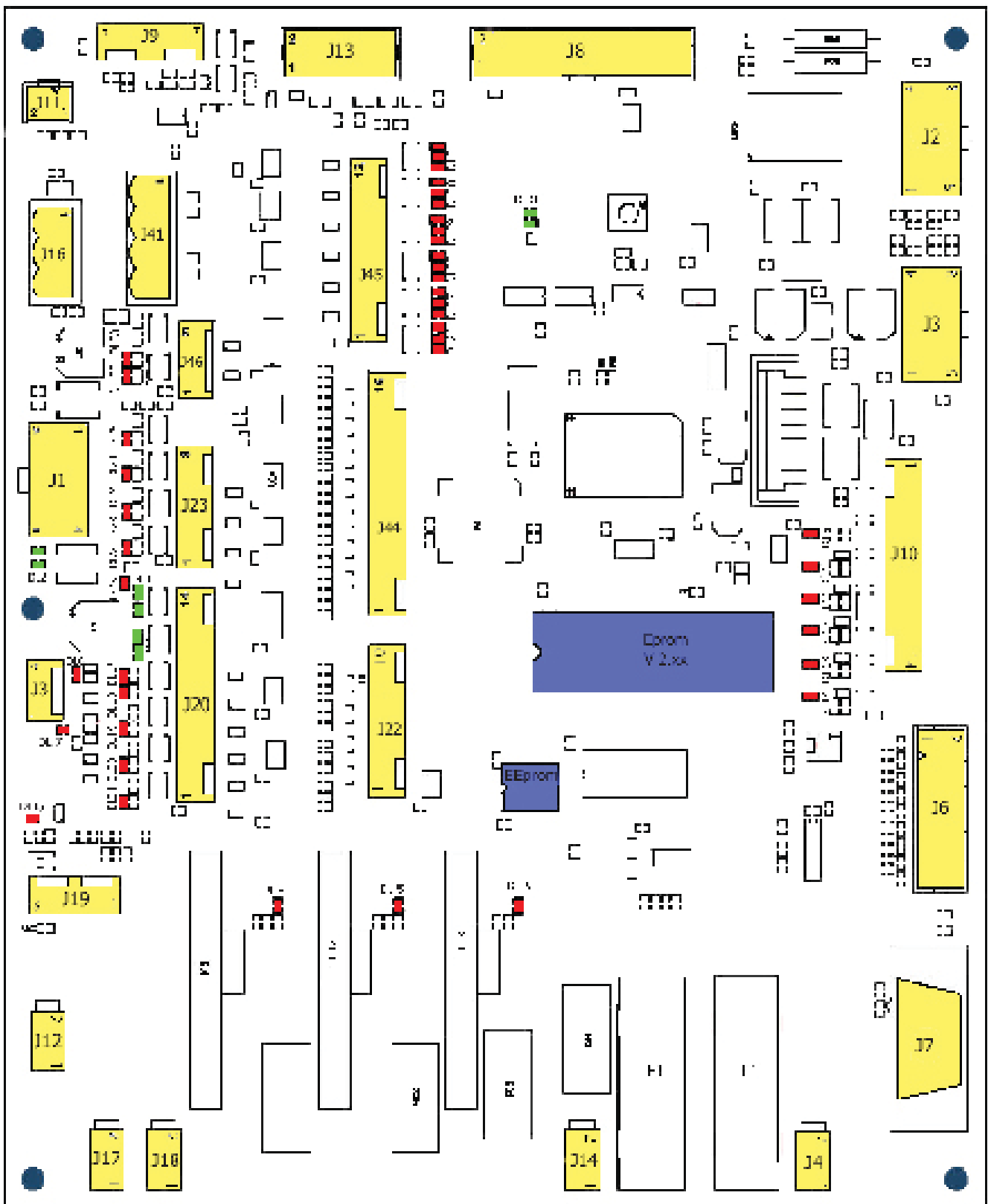


RINSING SOLENOID (8W)

No picture available at this time. Solenoid is located on the cold water block.

4.4 MAINBOARD DIAGRAM

Diagram for the R2 Mainboard on the Egro 55 Series



4.4 MAINBOARD DIAGRAM - CONTINUED

LED LIST FOR R2 MAINBOARD

DL 1	24 Volt (green continuous)
DL 2	5 Volt (green continuous)
DL 3	Run mode (green flashing)
DL 4	Pump
DL 5	Left grinder
DL 6	Right grinder
DL 7	Coffee boiler
DL 8	Steam boiler
DL 9	Brew valve
DL 10	Tea valve
DL 11	Steam filling valve
DL 12	Cappuccino valve left
DL 13	Cappuccino valve right
DL 14	Bypass Y6
DL 15	Steam valve for TS steam ASV
DL 16	not in use
DL 17	iFaom (iSteam capp.)
DL 18	iMilk (iSteam latte)
DL 19 - 25	not in use
DL 26	Res 2
DL 27	Res 3
DL 28	Air vavle AFV
DL 29	Reversing valve SV
DL 30	Air pump AP
DL 31	Cold water valve Y10
DL 32	Milk pump MP2
DL 33	Milk pump MP1

INPUT LIST

J1	orange, green, 2x grey = leads to power board 2x white = lead to 6.3a fuse (230v)
J2	brown, white, grey = bottom of motor gear box red & black = motor for gears green, yellow, pink = piston home position sensor (24v)
J3	
J3	
J4	
J6	
J7	
J8	
J9	
J10	
J11	
J12	
J13	
J14	
J16	
J17	
J18	
J19	
J20	
J20	
J22	
J23	
J41	
J44	
J45	
J46	

SECTION 5: HYDRAULIC

TABLE OF CONTENTS: SECTION 5

	<i>Page</i>
5.1 INTRODUCTION.....	2
5.2 HOT WATER (COFFEE) BOILER.....	2 - 3
5.3 STEAM BOILER.....	3 - 5
5.4 BREW GROUP ASSEMBLY.....	6 - 7

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5.1 INTRODUCTION

The hydraulic and steam section of this manual details the hydraulic components of the Egro 55 series. The hydraulic components are broken down into three main sections, 1. Hot Water or Coffee Boiler 2. Steam Boiler and 3. Brew Group Assembly

5.2 HOT WATER (COFFEE) BOILER

HOT WATER SOLENOID FITTING

Sends hot water to the mixing chamber when the hot water solenoid opens.



TEMPERATURE SENSOR

Reads the temperature of the water in the boiler.

Sends temperature reading to the Mainboard.



EXPANSION VALVE

Also called a pressure relief valve. Relieves the pressure from the hot water or coffee boiler when it reaches 11 bar. Excess pressure flows into drip tray via silicon tubing.



BREW SOLENOID

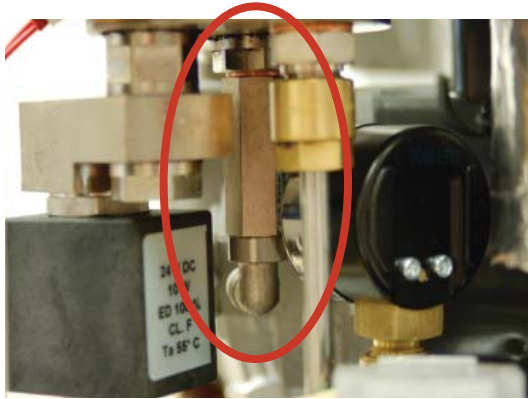
A three-way valve located on the bottom of the boiler. Waste is connected to the drain T-fitting and when open it allows water to go to the brew group assembly.



5.2 HOT WATER (COFFEE) BOILER

INCOMING WATER CHECK VALVE

Located on the bottom of the boiler. Allows water to only pass in one direction - incoming to the boiler.



WATER PRESSURE GAUGE

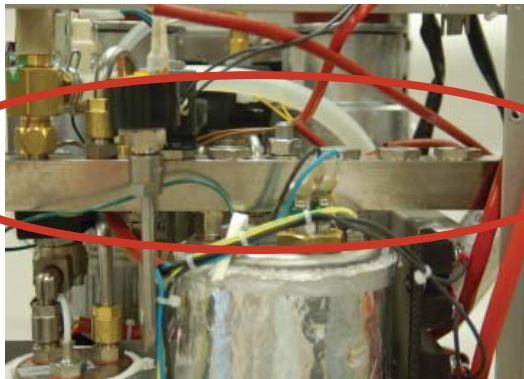
Located on the bottom of the boiler. Indicates the water pressure from the pump through the boiler. Recommended resting pressure should be 9 bar.



5.3 STEAM BOILER

STEAM BLOCK

Any components that receive steam have solenoids located on this block.



PRESSURE RELIEF VALVE

Safety valve in case of boiler over-pressurization. Factory set at 3 bars of pressure.



5.3 STEAM BOILER - CONTINUED

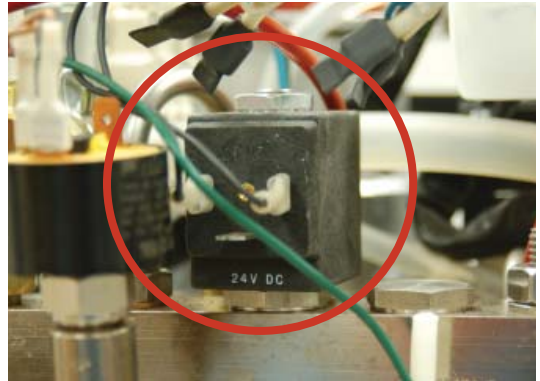
PRESSURE STAT

Regulates the pressure of the steam boiler. Adjustable from the top.



STEAM SOLENOID - HOT WATER

Supplies steam to the mixing chamber for use with hot water.



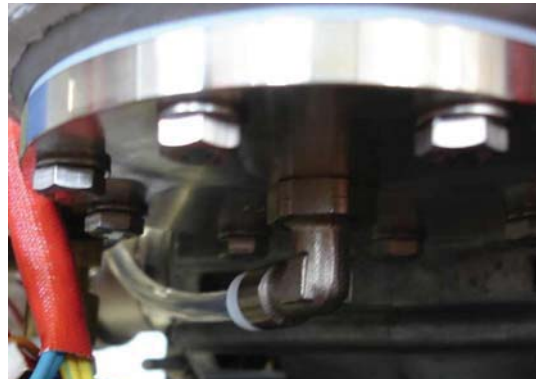
TS STEAM WAND SOLENOID

Three-way solenoid, located between the grinder chutes. Waste connects to the drain tray. When opened steam is allowed to pass through to the steam wand.



INCOMING WATER SUPPLY

Incoming water supply from fill solenoid on the cold water block. Fills boiler from the bottom.



5.3 STEAM BOILER - CONTINUED

WATER LEVEL PROBE

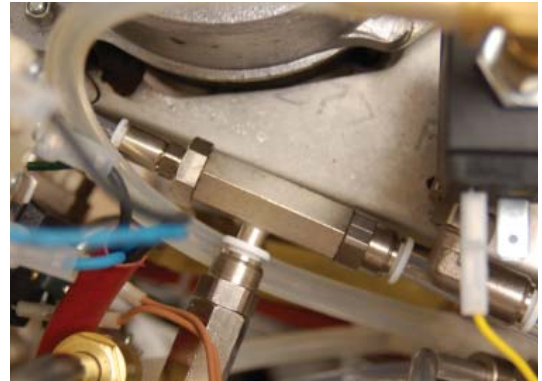
Regulates the water level in the steam boiler.

Red wire – sends data to Mainboard
Blue wire – grounded on top of boiler, connects to Mainboard



INJECTION CHAMBER

Union where steam meets water from coffee boiler and continues on to hot water tap. Used for preparation of tea water.



THE FOLLOWING COMPONENT IS INCLUDED WHEN THE MACHINE IS EQUIPPED WITH ISTEAM.

VENTURI MIXING CHAMBER

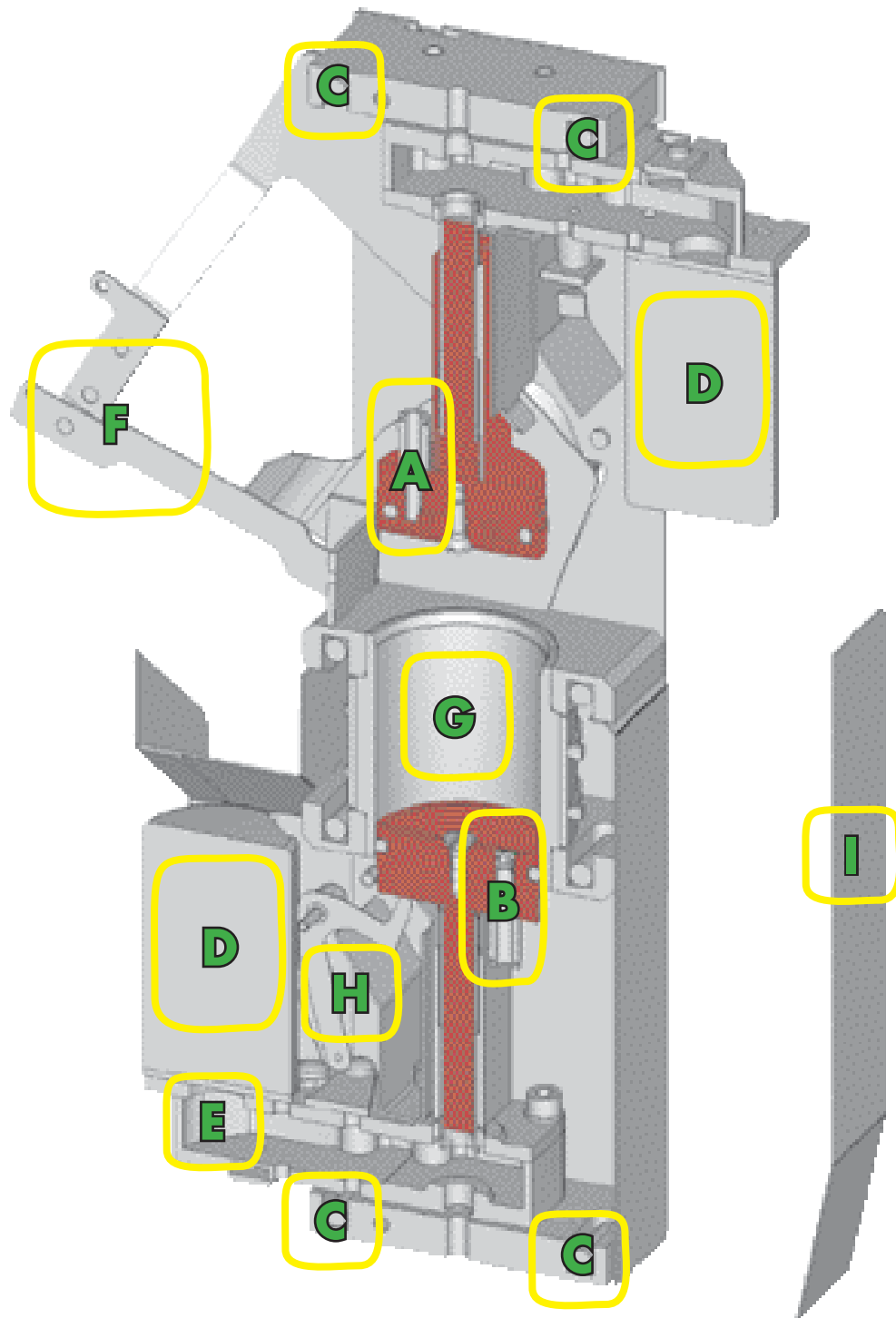
Valve where steam is infused with air using the principles of Venturi.

The Venturi is located on the door of the Egro.



5.4 BREW GROUP ASSEMBLY

Following is a diagram of the brew group assembly. All brewing and extraction takes place in the brew group assembly. For a complete guide to repairing and rebuilding the brew group, please see section 6 of this manual.



5.4 BREW GROUP ASSEMBLY - CONTINUED

BREW GROUP ASSEMBLY DIAGRAM KEY

A	Upper piston quick- connect fitting. Connects incoming water from the hot water (coffee) boiler to the brew chamber.
B	Bottom piston quick-connect fitting. Delivers extracted espresso to the coffee outlet.
C	Allen bolts or cotter pins that hold the brew group together.
D	Piston motor. Drives the gear box.
E	Piston gear box. Drives the piston auger shaft.
F	Sweeper arm. Clears the coffee puck from the chamber area after brewing.
G	Brewing chamber. Grounds are tamped and espresso extraction takes place in the brewing chamber.
H	Home position sensor arm. Notifies the machines when the piston has reached it's home piston.
I	Grounds slide guide. Guides the coffee puck to the ground drawer.

Note: The red highlighted areas represent the upper and lower pistons.

SECTION 6:

ADJUSTMENTS AND MAINTENANCE

TABLE OF CONTENTS: SECTION 5

	<i>Page</i>
<i>Adjustments</i>	
6.1 CALIBRATING MACHINE TO BEANS - DIALING IN 10 GRAMS.....	2 - 3
6.2 ADJUSTING GRIND.....	3
<i>Maintenance</i>	
6.3 REPLACING BREW GROUP.....	6
6.4 DRAINING THE STEAM BOILER.....	7
6.5 REPLACING GRINDER BURRS.....	8
6.6 PM GUIDE.....	9
6.7 BREW GROUP. REBUILD GUIDE	10

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6.1 CALIBRATING MACHINE TO BEANS - DIALING IN 10 GRAMS

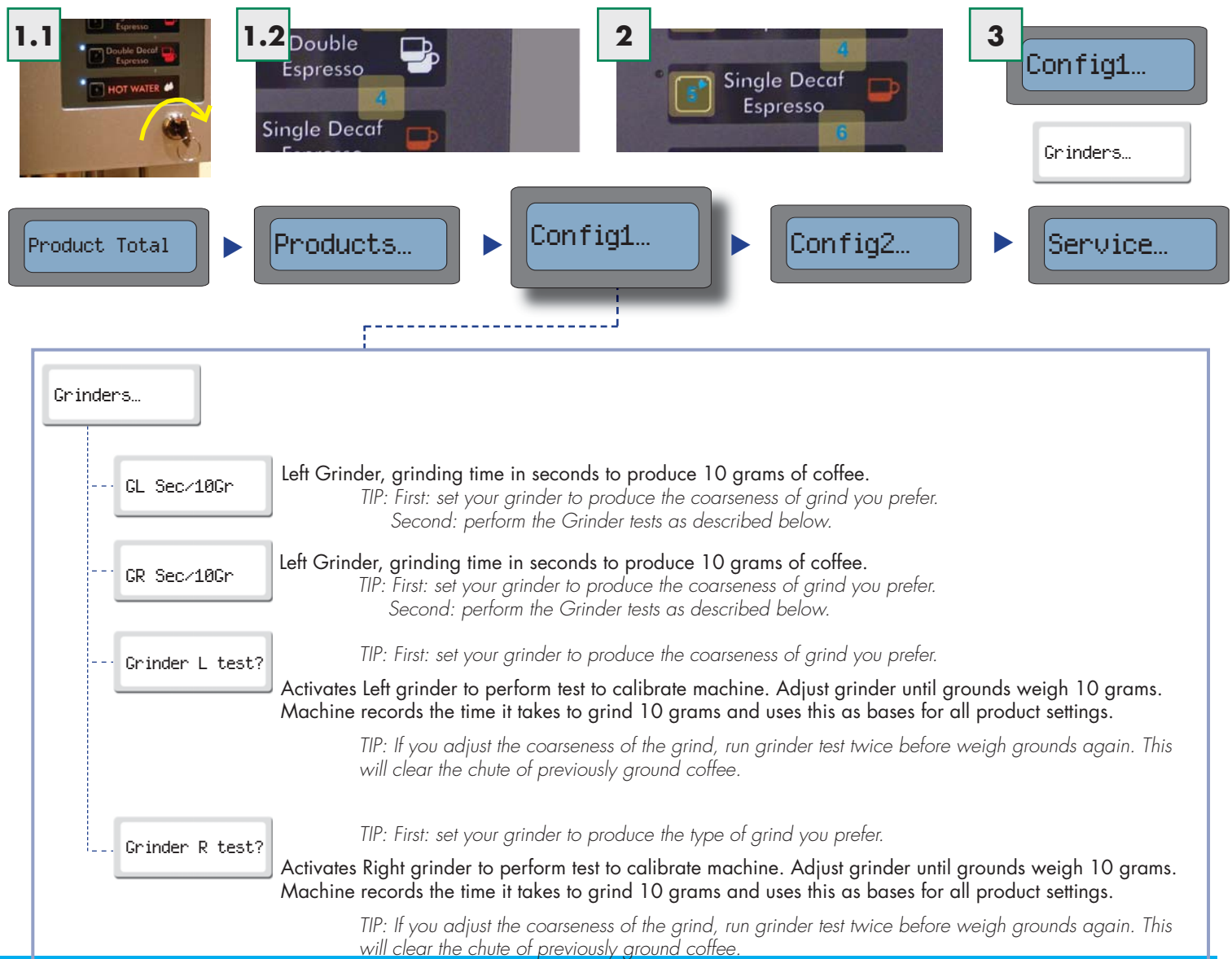
PLEASE NOTE: This step requires you enter programming. Please refer to section 3 of this manual for guidance in how to enter programming and how to navigate in the programming mode.

This step is critical to the proper function of the Egro 55 series machines. It gives the machine an accurate starting point to produce all drinks. It is unique to the roast of espresso or coffee beans. If you change the roast of beans used in the machine you will need to adjust this calibration by repeating the steps outline below.

You will need your gram scale to complete these steps. Please perform these steps before programming any drink parameters.

REFER TO SECTION 3 FOR COMPLETE INSTRUCTIONS HOW TO ENTER THE PROGRAMING MODE

1. Enter programming menu as described in Section 3.3.
 - 1.1 Insert programming key, turn clockwise 1/4 turn
 - 1.2 Press the number 4 button on the key pad
 - 1.3 Enter the PIN code 1849, but pressing the 1, 8, 4 and 9 buttons
2. Scroll (using button 5) to the Config 1 menu and press enter (button 1).
3. Scroll (using button 5) to the Grinders submenu and press enter (button 1).



6.1 CALIBRATING MACHINE TO BEANS - DIALING IN 10 GRAMS - CONTINUED

4. You have accessed the Grinders submenu. There are four options in the grinder menu, they are described in the diagram above.

5. Place an empty clean paper cup or light container on your gram scale and tare the scale.

6. Scroll (using the number 5 button) to the Grinder L test?

7. Remove the screw holding front door in place and swing the door open.



8. GRINDER LEFT TEST

8.1 Place a cup under the left grinder chute to catch the grinds. Press the ENTER button (button number 1) to activate the grinder and start the test. Run three tests and discard the coffee grounds.



8.2 Conduct a fourth test and weigh it using your gram scale.

PLEASE NOTE: Always use the fourth grinder test after each adjustment to ensure that the grounds weight is accurate.



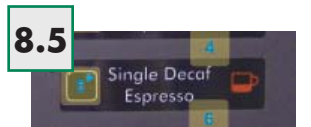
8.3 If the weight is not 10 grams, then scroll back (using the number 3 button) until the screen reads, GL Sec/10Gr.



8.4 Press ENTER or button 1 to make adjustments to the grinding time of the left grinder.

8.5 Use the + and - (buttons 7 and 9) to make adjustments to the grind time. If the weight was less than 10g increase the grind time, if the weight was more than 10 grams decrease the grind time.

PLEASE NOTE: Adjust time by small increments. Just one or two tenths of a second can greatly affect the resulting weight.

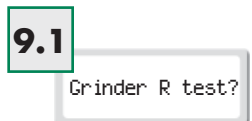


8.6 Press ENTER (button 1) to save the changes.

8.7 Scroll forward (button 5) to the Grinder L test? again. And repeat the test as described in 8.1 to 8.6 until the grinds ground = 10 grams.

9. GRINDER RIGHT TEST (THE RIGHT GRINDER CALIBRATION IS THE SAME AS THE LEFT, HOWEVER IT USES THE GRINDER R TEST? AND GR SEC/10G PROGRAMMING FEATURES IN THE CONFIG 1/GRINDERS MENU)

9.1 Scroll (using the number 5 button) to the Grinder R test?



9.2 Place a cup under the right grinder chute to catch the grinds. Press the ENTER button (button number 1) to activate the grinder and start the test. Run three tests and discard the coffee grounds.

9.3 Conduct a fourth test and weigh it using your gram scale.



PLEASE NOTE: Always use the fourth grinder test after each adjustment to ensure that the grounds weight is accurate.

9.4 If the weight is not 10 grams, then scroll back (using the number 3 button) until the screen reads, GR Sec/10Gr.



9.5 Press ENTER or button 1 to make adjustments to the grinding time of the left grinder.

9.6 Use the + and - (buttons 7 and 9) to make adjustments to the grind time. If the weight was less than 10g increase the grind time, if the weight was more than 10 grams decrease the grind time.

PLEASE NOTE: Adjust time by small increments. Just one or two tenths of a second can greatly affect the resulting weight.

9.7 Press ENTER (button 1) to save the changes.

9.8 Scroll forward (button 5) to the Grinder R test? again. And repeat the test as described in 9.1 to 9.8 until the grinds ground = 10 grams.



6.2 ADJUSTING THE GRIND

This is the first step in calibrating the machine to the roast of bean which is being served. This will need to be done using the beans that will be served.

 **TIP:** Pull a shot first and see how machine is pouring prior to adjusting the grind.

STEPS FOR ADJUSTING GRINDER WITHOUT GRINDER ADJUSTMENTS INSTALLED

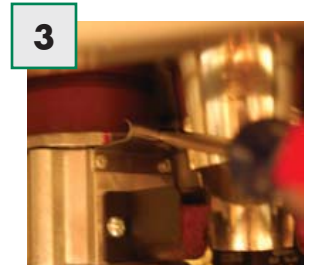
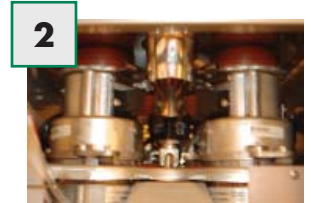
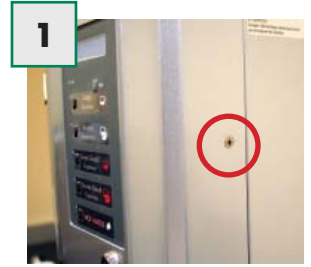
1. Remove the screw holding the front door closed. Swing the door open.
2. Find the grinders on the inside of the machine. On the top of both grinders you will find an adjustment plate.
3. Insert a flat headed screwdriver into the slot on the adjustment plate. Apply a gentle downward pressure on the screw driver to lift the plate free of the notches that are holding it in place.
4. Turn the collar on the top of the grinder to adjust the grind.

Finer grind = Turn collar clockwise

Courser grind = Turn collar counter clockwise

5. Make sure that the adjustment plate is securely held in place by the notches before removing the screwdriver from the slot.

Please note: While one notch is a seemingly small adjustment, it can greatly affect the resulting grind. Use small turns, one notch at a time, to adjust the grinder burrs until the correct grind is reached.



STEPS FOR ADJUSTING GRINDER WITH AN INTERNAL GRINDER ADJUSTMENTS INSTALLED

1. Using a Phillips head screwdriver remove the screw which locks the door and swing the door open.

WARNING: do not loose this screw.

2. Choose the grinder which needs to be adjusted. Turn the knob one or two clicks, close the door and test a product.

KEY TO ADJUSTMENT

For the RIGHT grinder:

Finer grind = Turn the knob clockwise

Courser grind = Turn the knob counter-clockwise

For the LEFT grinder:

Finer grind = Turn the knob counter-clockwise

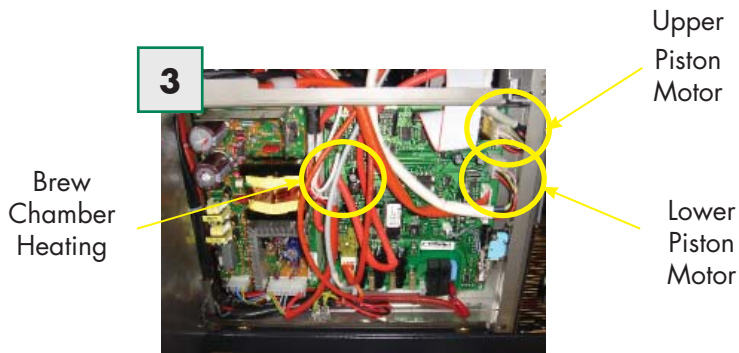
Courser grind = Turn the knob clockwise



6.3 REPLACING BREW GROUP ASSEMBLY

REMOVE AND REPLACE THE BREW GROUP ASSEMBLY (BGA)

- 1 Turn off and unplug the machine
- 2 Remove the left and right side panels of machine
- 3 Disconnect the piston motors and brew chamber heating element power cables from the motherboard
→ The connections are J2, J3 and J16 on the motherboard
- 4 Disconnect the Teflon water deliver hoses from the upper and lower pistons
- 5 Loosen the 2 nuts located behind the BGA
- 6 Pull the BGA upwards to remove from the door
- 7 Put new or rebuilt BGA back into machine, be sure to connect all cables and hoses



6.4 DRAINING THE STEAM BOILER

STEPS TO DRAINING THE STEAM BOILER

1. Cool down the machine using the Cool Down function in the programming menu. (Service/Monitor/Cool Down...)

2. Remove the center bolt located on the bottom of the steam boiler using a 17mm wrench.

PLEASE NOTE: If you disassemble the steam boiler you will need to replace the bottom gasket.

For all machines with serial numbers less than 407263 the gasket's part number is: 54930

For all machines with serial numbers greater than 407263 the gasket's part number is 100351.001

3. When res-assembling the boiler after draining, replace the gasket with a new one and follow these steps:

- 3.1 Tighten all bolts y hand
- 3.2 Using a wrench turn all bolts one at time in order, clockwise 1/8 turn*
- 3.3 Repeat this process three times (3 x 1/8 turn)

*Tighten bolts a little at a time and work clockwise. If you over tighten one bolt too quickly it may cause the boiler to leak.

6.5 REPLACING GRINDER BURRS

Rancilio recommends changing the grinder burrs every burrs every 100,000 - 120,000 Cycles. This will help to increase the life of your grinder motors.

STEPS TO REPLACING THE GRINDER BURRS

1. Turn off the machine and unplug it
2. Remove the bean hoppers
3. Remove the top panel. *PLEASE NOTE: this requires removing all 3 side panels of the machine, including all associated screws.*

GRINDERS WITHOUT AN INTERNAL ADJUSTMENT

- 4a. Remove the locking plate located on the grinder collar, by removing the two screws which hold it to the upper grinder housing.

GRINDERS WITH AN INTERNAL ADJUSTMENT

- 4b. Remove the grinder adjustment by removing the two screws which hold it to the upper grinder housing.
5. Unscrew the upper burr plate by rotating it in a counter-clockwise motion.
6. Remove the old burs, by removing the 3 screws on each burr; the upper burr plate that was removed and the burr in the bottom of the grinding chambers. Please Note: the upper burr on the top panel is different and new burr must match.
7. Clean the upper and lower burr pate.
8. Install new burrs.
9. Re-insert the upper burr plate into the grinder chamber.
10. Re-assemble the top plate and the side panels.
11. Turn the machine on and allow it to reach operating temperature.
12. Check the Grind, using the "Config 1/Grinders/ Tests menu.
13. Re-calibrate the machine to the beans using the grinder tests and your gram scale as described in 6.1.

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6.6 PM GUIDE

PREVENTATIVE MAINTENANCE GUIDE FOR EGRO MODEL 5511

This guide is intended for certified factory trained technicians only. Should you have any questions or need further assistance, please contact Rancilio North America at: (877) 726-2454. Extension: 208

PLEASE NOTE: There are two different types of preventative maintenance visits recommended for the EGRO Series 55 machines. Type 1, 2. Please refer to the table below for details of when to perform each type of PM.

Number of Cycles	Type of P.M. Visit Required	Parts Kit Needed
15,000	1	1
30,000	2	2
45,000	1	1
60,000	2	2
75,000	1	1
90,000	2	2
105,000	1	1
120,000	2	2

TOOLS NEEDED

- > Phillips head screwdriver
- > Flat head screwdriver
- > Allen wrenches size 3mm and 4mm
- > Wrenches in following sizes:
-> 7, 8, 10, 13, 12, 14, 17, 22, 26, 27 mm

LUBE NEEDED

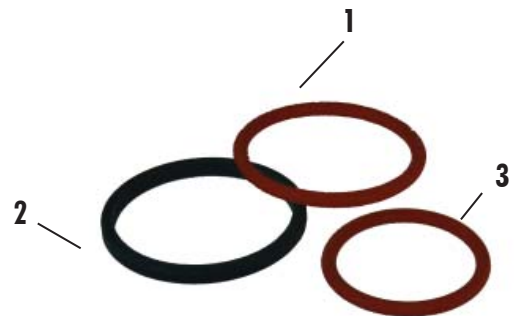
- > Viper lube Loctite PN 36781
- > Krytox RFE PFPE Lube, Loctite PN 29711 (green tube)

PREVENTATIVE MAINTENANCE PARTS KITS AVAILABLE

SERVICE PART'S KIT 1 INCLUDES:

Ref. Num.	Part Describ.	P/N	QTY Included
1	Upper piston O-ring	039061	1
2	Upper piston scrapper O-ring	039064	1
3	Lower piston O-ring	029441	1

SERVICE PARTS KIT 1



SERVICE PART'S KIT 2 INCLUDES:

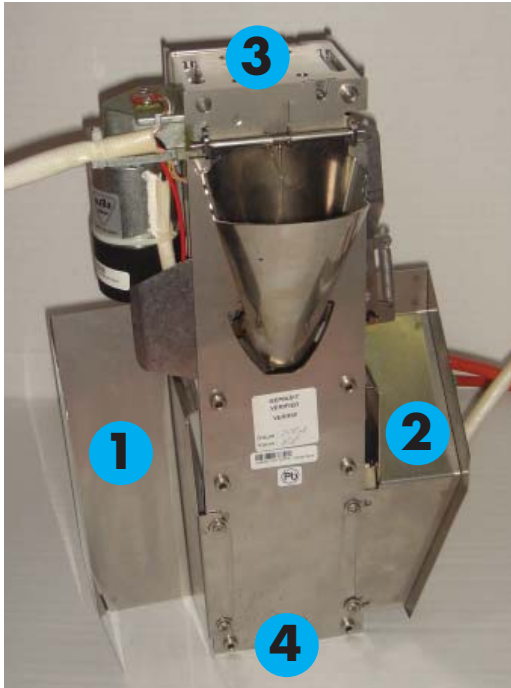
Ref. Num.	Part Describ.	P/N	QTY Included
1	Upper piston O-ring	039061	1
2	Upper piston scrapper O-ring	039064	1
3	Lower piston O-ring	029441	1
5	O-ring for coffee/brew valve assembly	043366	2
6	Coffee plunger	054055	1
7	Steam wand tip seal	040501	1
8	Coffee shower screens	060116	2
9	Pressure relief valve	055757	1

SERVICE PARTS KIT 2



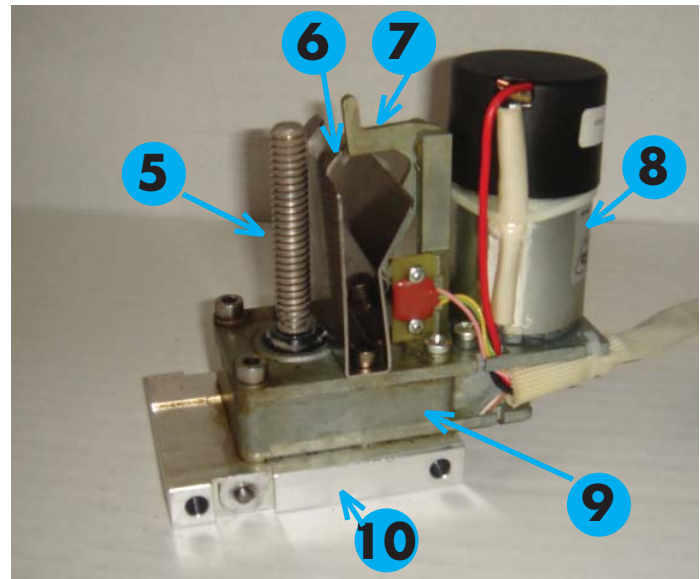
6.6 PM GUIDE

DESCRIPTION OF PARTS:



BREW GROUP ASSEMBLY OR BGA: the complete brewing module of the Egro 55 series espresso machines.

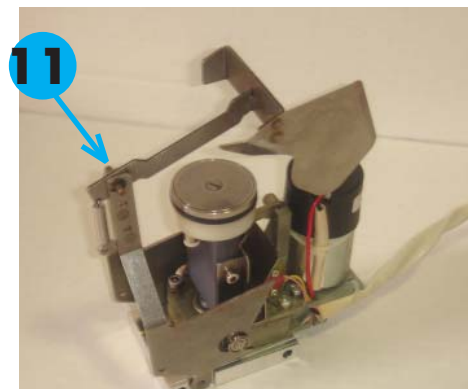
1. Grounds slide
2. Grounds puck slide
3. Upper Piston Assembly or UPA
4. Lower Piston Assembly or LPA (not pictured)
5. Auger shaft
6. Piston spring plate
7. Piston sensing arm
8. Piston motor
9. Gear box
10. Mounting plate
11. Grounds puck sweeper arm



PISTON ASSEMBLY, UPA OR LPA: The upper and lower piston assemblies are identical except for the actual pistons.



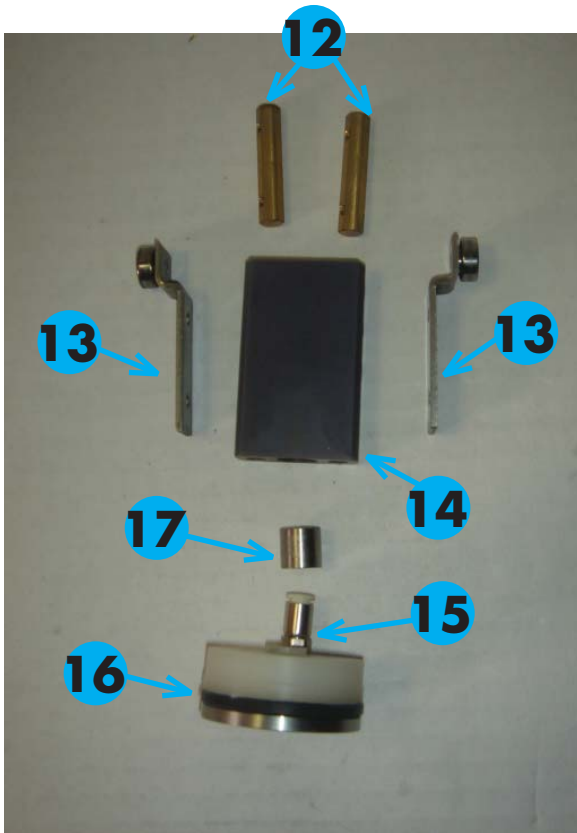
VIEW OF THE BOTTOM OF THE MOUNTING PLATE: you can access the gear box through the hole in the bottom of the mounting plate. This way you can manually control the piston.



UPPER PISTON ASSEMBLY: the upper piston assembly has a sweeper arm attached to it.

6.6 PM GUIDE

DESCRIPTION OF PARTS --- Continued



UPPER PISTON: This is an exploded view of the upper piston.

UPPER PISTON

- 12.** Brass pins to hold piston guide arms
- 13.** Piston guide arms
- 14.** Upper piston Shaft
- 15.** Quick connect for hose
- 16.** Upper piston head
- 17.** Piston stabilizing ring
- 18.** Piston head, scrapper ring and O-ring
- 19.** Stainless steel piston plate
- 20.** Shower screen



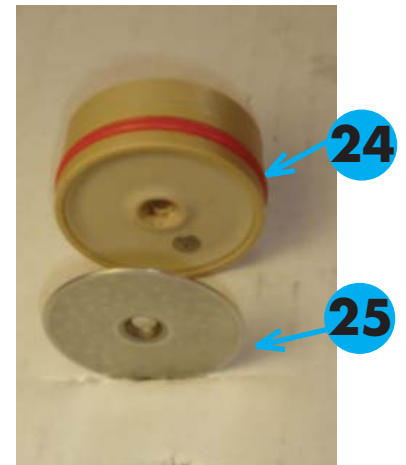
LOWER PISTON: This is an exploded view of the lower piston.

LOWER PISTON

- 21.** Piston Shaft
- 22.** Quick connect for hose
- 23.** Piston head
- 24.** Lower piston O-ring
- 25.** Shower screen



UPPER PISTON HEAD: This is an exploded view of the upper piston head.



LOWER PISTON HEAD: This is an exploded view of the lower piston head.

6.6 PM GUIDE

STEPS FOR PM TYPE 1: EXCHANGING THE BGA USING A NEW OR REBUILT BREW GROUP ASSEMBLY (BGA)

1. EMPTY STEAM BOILER AND TURN OFF MACHINE

- 1.1 Turn key to right and press the number 5 button display should read M_5: Heater Off.
- 1.2 Empty steam boiler by activating the steam wand until no steam comes out.
- 1.3 Turn off machine.

2. REMOVE AND REPLACE THE BREW GROUP ASSEMBLY (BGA)

- 2.1 Remove the left and right side panels of machine.

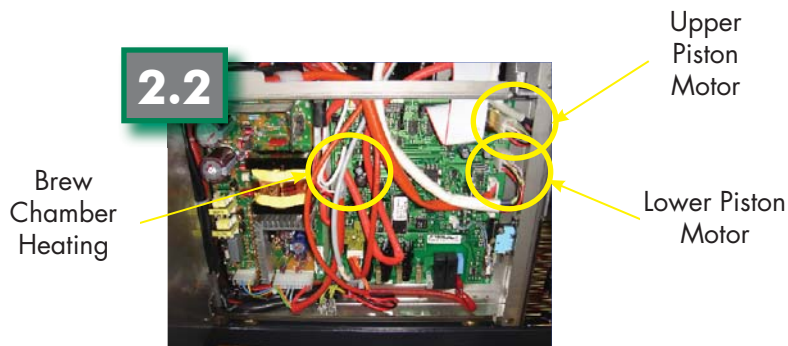


PLEASE NOTE: For PM TYPE 2 you will also need to remove the Back panel.

- 2.2 Disconnect the piston motors and brew chamber heating element power cables from the motherboard
-> The connections are J2, J3 and J16 on the motherboard.
- 2.3 Discount the Teflon water deliver hoses from the upper and lower pistons.
- 2.4 Loosen the 2 nuts located behind the BGA.
- 2.5 Pull the BGA upwards to remove from the door.
- 2.6 Put new or rebuilt BGA back into machine, be sure to connect all cables and hoses.



PLEASE NOTE: If you do not have a new or rebuilt BGA available please see use the alternative steps on pages ? to ? for instructions on how to exchange the O-rings on site.



3. INSPECT GRINDERS AND CLEAN HOPPERS

- 3.1 Visually inspect grinders by removing hoppers and looking into grinders. Check for excessive coffee build-up and clean if necessary.
- 3.2 Clean hoppers by emptying the beans and wiping all oily build up from hoppers using a clean dry cloth
NOTE: See operating instructions for more information.

4. CLEAN ALL OUTLETS

- 4.1 Run the automatic daily coffee cleaning.
- 4.2 Clean steam wand by thoroughly wiping wand with clean wet cloth.

4.2



6.6 PM GUIDE

STEPS FOR PM TYPE 1: EXCHANGING THE BGA USING A NEW OR REBUILT BREW GROUP ASSEMBLY (BGA)

5. TEST WATER HARDNESS

5.1 Test water hardness and record GPG on PM Checklist/sign-off sheet.

6. REPLACE WATER FILTRATION AND SOFTENING CARTRIDGES

6.1 Replace in line water filtration and softening cartridges.

 **PLEASE NOTE:** Please follow instructions from softener/filtration manufacturer for flushing filters prior to installing them.

7. TEST WATER HARDNESS -- AGAIN, AFTER THE SOFTENING SYSTEM IS INSTALLED

7.1 Test water hardness and record GPG on PM Checklist/sign-off sheet.

8. CHECK TOTAL CYCLES AND TOTAL NUMBER OF CLEANINGS PERFORMED AND RECORD ON CHECKLIST

8.1 Enter programming mode and make note of total cycles, total cycles since last PM and total number of cleanings on PM checklist form.

- SERVICE MENU/Cycles
- SERVICE MENU/P-Serv
- SERVICE MENU/C-Cleanings

9. RESET SERVICE COUNTER

9.1 Enter programming mode to clear the service counter. This is the counter which tells the user to call for service.

- SERVICE MENU/CLR P-Serv.

10. TURN MACHINE ON*

10.1 Turn machine on.

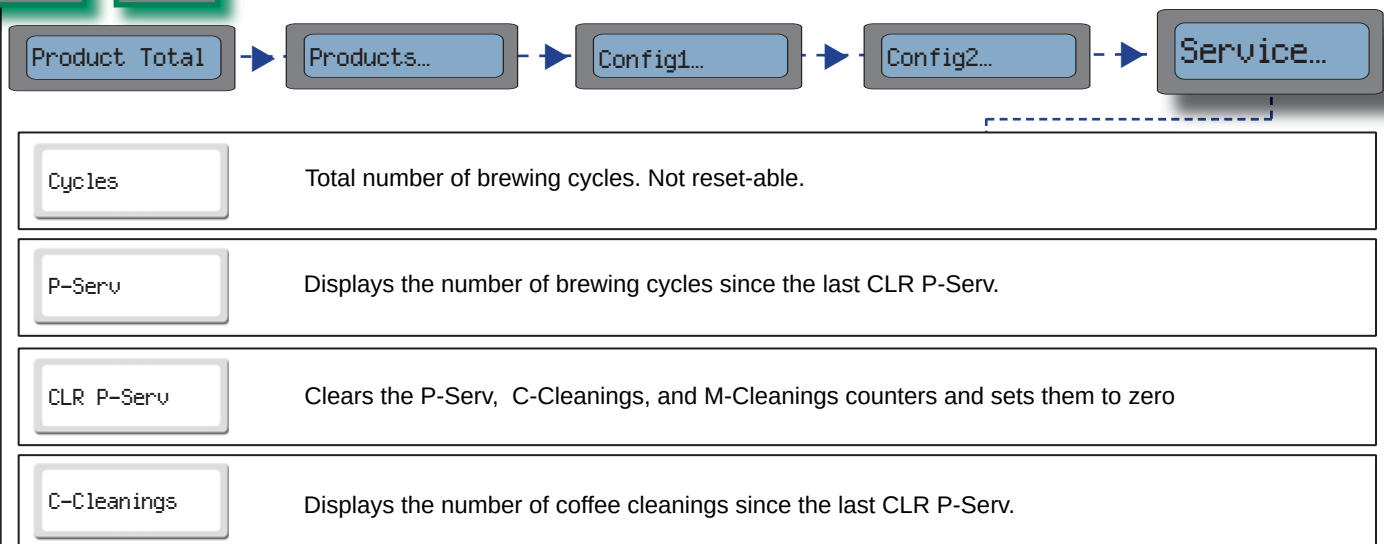
 ***PLEASE NOTE:** If this is a Type 2 PM please skip this step and continue directly to Step 12

10.2 Turn key to right and verify that the machine is in M_1: Normal.

8

9

PROGRAMMING MENU DIAGRAM



To access the programming menu. Insert key and turn to right. Enter Pin code: 1849 using numbers on keypad. Scroll through programming until you reach the SERVICE menu. Enter SERVICE menu using the number 1 button. Refer to Section 3 for more details.

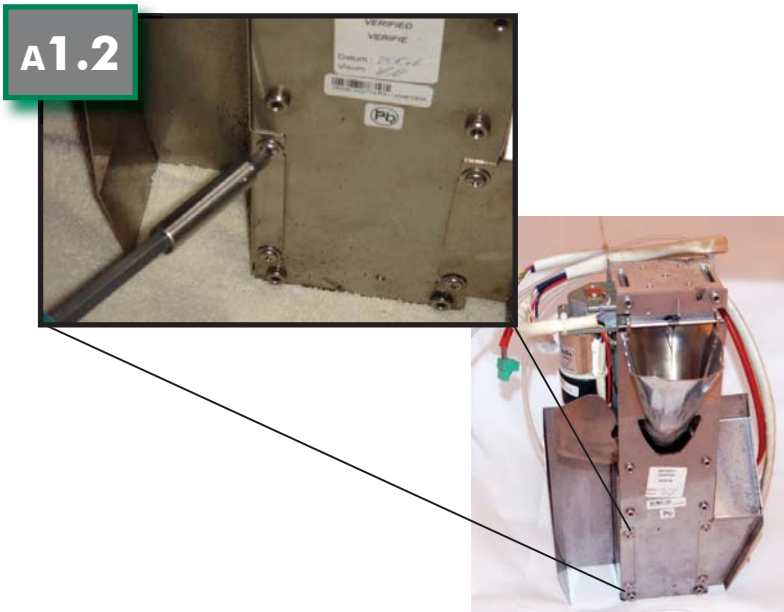
6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-1. REMOVE BGA FROM MACHINE AND REMOVE GROUNDS PUCK CHUTES

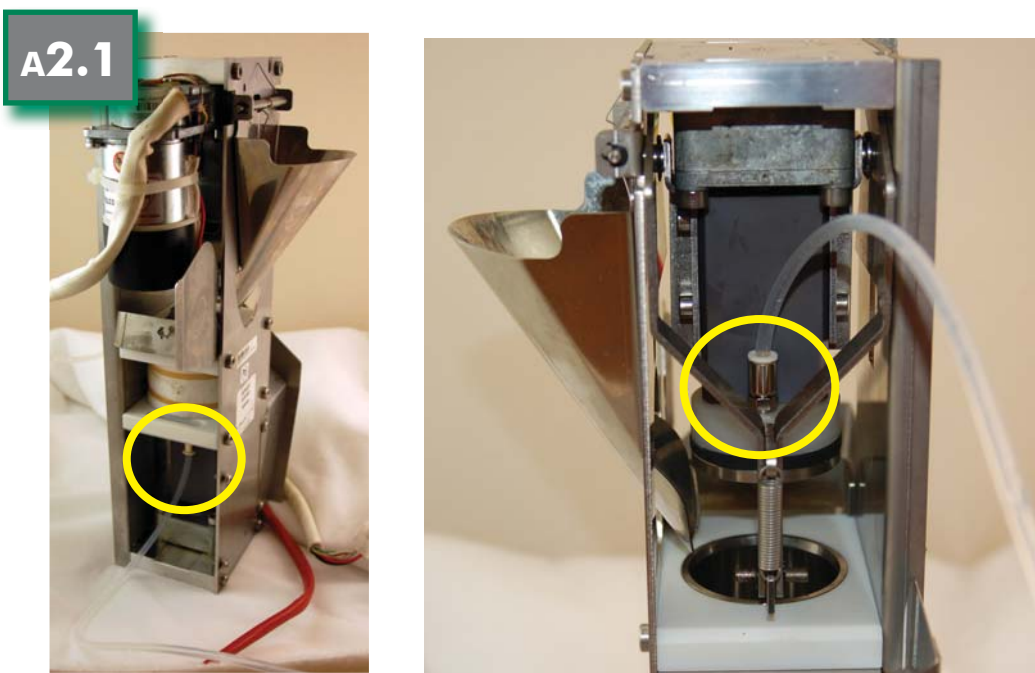
A1.1 Remove the BGA from the machine: Follow steps 1.1 to 1.7 as described in STEP 1.

A1.2 Remove the grounds and puck chutes from the side of the BGA.
→ TOOL: Phillip's head screwdriver



A-2. REMOVE HOSES FROM PISTONS

A2.1 Remove hoses from both the upper and lower pistons



6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-3. REMOVE UPPER PISTON O-RINGS

A3.1 Place the BGA on the workbench and remove the Upper Piston Assembly (UPA) by loosening the two cotter pins, and gently pulling the sides of the BGA housing apart and pulling upward on the UPA.

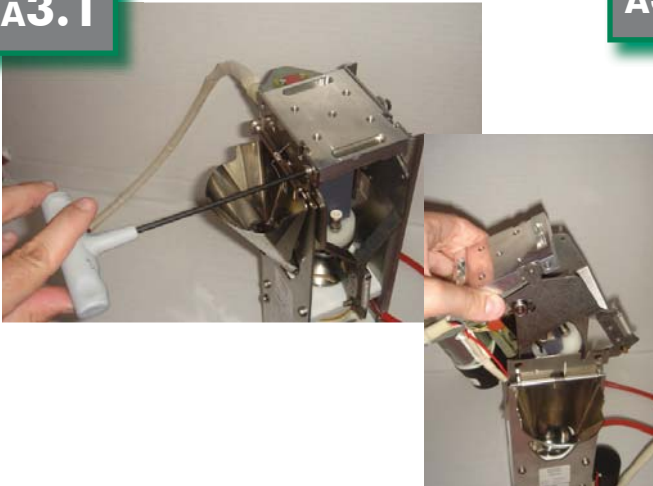
TOOL: 3mm Allen wrench

A3.2 Remove the grounds puck sweeper arm from the UPA by gently pulling on both sides, releasing it from the UPA.

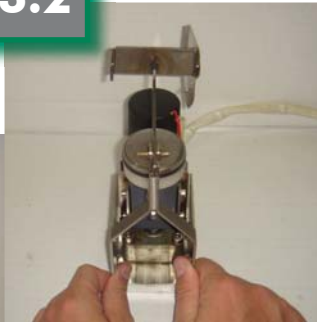
A3.3 Remove upper piston from UPA by turning it up the auger shaft using a 3mm Allen wrench inserted into the gear box (bottom mounting plate) of the UPA.

TOOL: 3mm Allen wrench

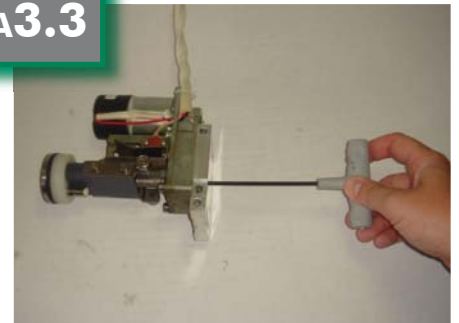
A3.1



A3.2



A3.3



A3.4 Remove the shower screen and the stainless steel upper piston plate by unscrewing the screw on the end of the piston. Clean parts using a clean towel and water solution and dry thoroughly when clean.

TOOL: Flat headed Screwdriver



PLEASE NOTE: If you are conducting a PM Type 2 please replace the shower screen with a new shower screen → PN: 060116

A3.5 Remove the upper piston scraper ring and the orange O-ring from the piston head.

A3.4



6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-4. REPLACE AND LUBRICATE UPPER PISTON O-RINGS

A4.1 Lubricate upper piston groove
LUBE: Viper Lube Loctite PN 36781

A4.2 Replace the upper piston scrapper ring and O-ring
PN: 039061 and 0390654

A4.3 Reassemble the shower screen and stainless steel upper piston plate onto upper piston
TOOL: Phillip's head screwdriver



CAUTION: Do not over tighten or cross thread



PLEASE NOTE: For PM Type 2 please replace the brew shower screens with new screens
-> PN: 060116



TIP: For optimal performance rotate the upper and lower shower screens during reassembly

A4.4 Lubricate upper piston auger and auger hole in the piston shaft
LUBE: Krytox RFE PFPE Lube, Loctite PN 29711 (green tube)

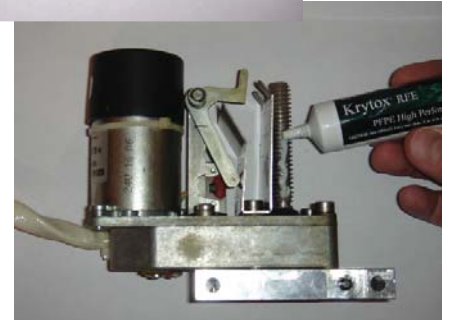
A4.1



A4.3



A4.4



6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-5. REASSEMBLE UPPER PISTON

A5.1 Reassemble piston onto the UPA by turning it down the auger shaft using a 3mm Allen wrench inserted into the gear box of the UPA (bottom of the mounting plate)

TOOL: 3mm Allen wrench



PLEASE NOTE: Be sure the quick connect faces to the outside, or away from the motor

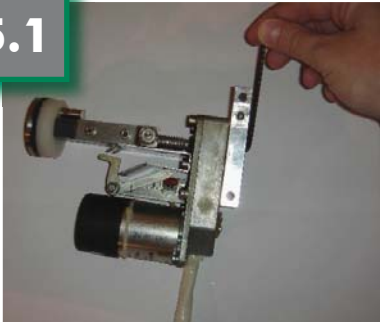
A5.2 Reattach sweeper arm to UPA



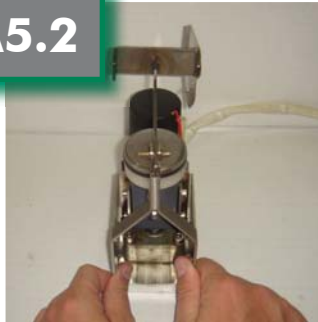
TIP: If the sweeper arm is difficult to reassemble to the UPA, run the piston down a few turns by inserting a 3mm Allen wrench into the gear box of the UPA and manually moving the piston.

A5.3 Set UPA aside for now

A5.1



A5.2



A-6. REMOVE LOWER PISTON O-RINGS

A6.1 Place the BGA on the counter (upside down) and remove the Lower Piston Assembly (LPA) by loosening the two cotter pins, and gently pulling the sides of the BGA housing apart and pulling upward on the LPA.

TOOL: 3mm Allen wrench.



TIP: If necessary use a slight rocking motion to remove LPA from housing

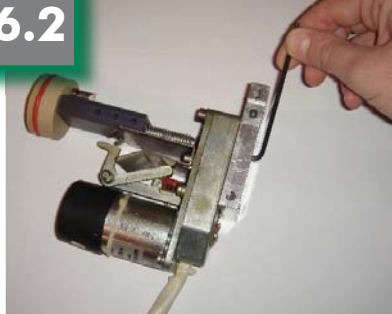
A6.2 Remove the lower piston from the LPA by turning it up the auger shaft using a 3mm Allen wrench inserted into the gear box of the of the LPA (bottom of the mounting plate)

TOOL: 3mm Allen wrench

A6.1



A6.2



6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-6. REMOVE LOWER PISTON O-RINGS -- CONTINUED

A6.4 Remove the shower screen by unscrewing the screw on the end of the piston.

TOOL: Screwdriver

A6.5 Remove O-ring from lower piston by inserting a screwdriver in the O-ring groove and "popping" the O-ring out of the groove

A6.4



A6.5



A-7. REPLACE LOWER PISTON O-RINGS AND LUBRICATE

A7.1 Lubricate lower piston groove

LUBE: Viper lube Loctite PN 36781

A7.2 Replace lower piston O-ring

PN: 029441 (small orange seal)

A7.3 Reassemble shower screen onto lower piston

TOOL: Screwdriver



PLEASE NOTE: For PM Type 2 please replace the shower screens
-> PN: 060116

A7.4 Lubricate lower piston auger shaft and auger shaft hole in piston

LUBE: Krytox RFE PFPE Lube, Loctite PN 29711 (green tube)

A7.5 Reassemble piston onto LPA by turning it down the auger shaft using a 3mm Allen wrench inserted into the gearbox of the LPA

TOOL: 3mm Allen Wrench

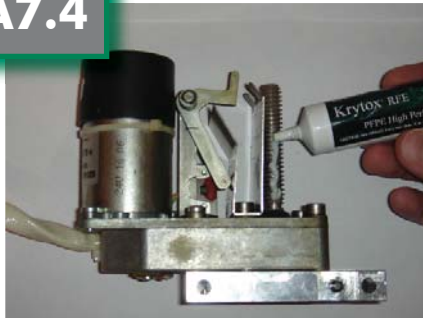


TIP: The quick connect faces to the outside, or away from the motor

A7.1



A7.4



A7.5



6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-8. REASSEMBLE UPA AND LPA INTO BREW GROUP ASSEMBLY

A8.1 Mount lower piston assembly into brew unit housing

TOOL: 3mm Allen wrench



PLEASE NOTE: the motor goes to the left (when the BGA is facing towards you) and the cotter pins are inserted from the front of the BGA

A8.2 Mount the upper piston assembly into the brew unit housing



PLEASE NOTE: motor goes to the left (when the BGA is facing towards you) and the cotter pins are inserted from the front of the BGA

If the cotter pins which hold the UPA in place do not easily insert into the frame, manually move the piston up or down using a 3mm Allen wrench inserted into the UPA gear box

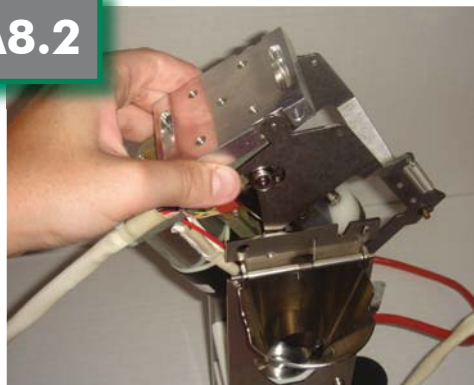
A8.3 Test the pistons manually by using a 3mm Allen wrench inserted into the gear box of the UPA and the LPA, to make sure that they are positioned correctly

→ TOOL: 3mm Allen wrench

A8.1



A8.2



A8.3



A-9. REATTACH HOSES TO UPPER AND LOWER PISTONS

A9.1 Reattach the hoses to the upper and lower pistons

A9.1



6.6 PM GUIDE

ALTERNATIVE STEPS FOR PM TYPE 1: ON-SITE O-RING EXCHANGE

A-10. REATTACH GROUNDS SLIDES TO SIDES OF BGA

A9.1 Reattach the grounds slides to the sides of the BGA



TIP: The shorter bent puck slide goes on the right side of the BGA, when the BGA is facing towards you (Funnel towards you)

A10.1



A-11. REASSEMBLE BGA INTO MACHINE

A11.1 Reattach the BGA into the machine

A11.2 Reconnect all cables to main board

6.6 PM GUIDE

STEPS FOR PM TYPE 2

PERFORM ALL THE STEPS NECESSARY FOR PM TYPE 1 PLUS FOLLOWING STEPS!



PLEASE NOTE: If you do not have a new or rebuilt BGA, and are following the alternative steps for on-site O-ring exchange, please also exchange the brew shower screens instead of cleaning them.

-> Shower Screen Part Number: 060116

11. PERFORMANCE MAINTENANCE ON COFFEE BOILER

Coffee Boiler Valve

11.1 Inspect and clean coffee valve. Recommend decalcification if needed

11.2 Replace coffee valve plunger

-> PN 054055

-> TOOLS: 12, 17, and 22 mm wrenches

11.3 Replace and lubricate O-ring to coffee valve

-> PN: 043366

12. REPLACE COFFEE BOILER EXPANSION VALVE

12.1 Replace pressure relief valve

-> PN: 055757

-> TOOLS: 14 and 17mm wrenches

13. INSPECT STEAM BOILER

13.1 Inspect the level sensor for calcium build-up, by removing it from the boiler. To remove it from the boiler loosen the locking nut and remove the complete level sensor sub-assembly. Decalcify if necessary

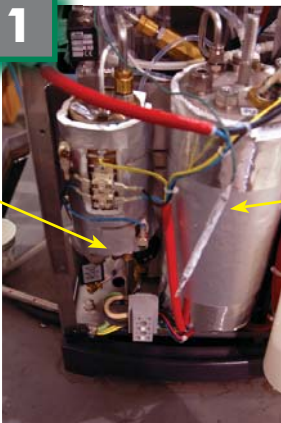
-> TOOL: 12mm wrench



CAUTION: Be sure that there isn't any steam pressure in the boiler! See Step 1 for more information

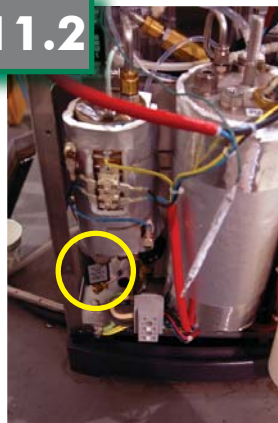
11

Coffee
Boiler

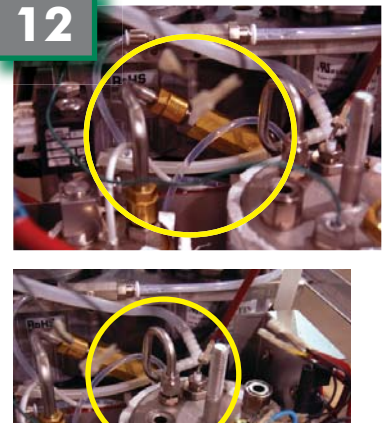


Steam
boiler

11.2



12



6.6 PM GUIDE

STEPS FOR PM TYPE 2

14: REPLACE THE SEAL ON THE STEAM WAND TIP

- 14.1** Replace the seal on the steam wand tip
-> PN: 040501



PLEASE NOTE: Be careful not to slice the seal when reassembling the tip to the wand, the threads of the steam tip are very sharp.

15: TURN MACHINE ON

- 15.1** Turn machine on
15.2 Turn key to right and verify that the machine is in M_1: Normal

6.6 PM GUIDE: CHECKLIST AND SIGN-OFF SHEET

This form is to be completed by the service technician performing the Preventative Maintenance visit.

CUSTOMER INFORMATION		SERVICE TECH INFORMATION	
COMPANY NAME		TECHNICIAN'S NAME	
LOCATION, CITY, STATE		COMPANY NAME	
DATE		PHONE NUMBER	
TOTAL CYCLES PERFORMED		E-MAIL	
CLEANING CYCLES PERFORMED		PM VISIT TYPE	1 or 2 (please circle)
CYCLES SINCE LAST PM (P-SERV)		TIME TO COMPLETE PM	_____ hours _____ mins
MACHINE'S SERIAL NUMBER			

CHECKLIST FOR PM TYPE 1

BREW GROUP ASSEMBLY (BGA)

☐ Replaced BGA with new or rebuilt BGA

OR.....

If you changed O-rings on site please check the following

- ☐ Lubricated and replaced upper piston O-rings
- ☐ Lubricated and replaced lower piston O-ring
- ☐ Cleaned shower screens on upper and lower pistons

GRINDERS

- ☐ Inspected grinders
- ☐ Cleaned hoppers

OUTLETS AND STEAM WAND

- ☐ Ran automatic coffee cleaning program
- ☐ Cleaned tea outlet
- ☐ Cleaned steam wand

WATER FILTRATION AND SOFTENING SYSTEM

- ☐ Tested water hardness before installing softening and filtering system

-> Water Hardness is: _____ GPG

- ☐ Replaced water filtration and softening cartridges
- ☐ Tested water hardness before installing softening and filtering system

-> Water Hardness is: _____ GPG

CHECKLIST FOR PM TYPE 2:

INCLUDES ALL OF TYPE 1 PLUS THE FOLLOWING:

BREW GROUP ASSEMBLY

- ☐ Replaced shower screens on upper and lower pistons

HOT WATER BOILER

Brew Valve

- ☐ Inspected and cleaned brew valve
- ☐ Replaced coffee valve plunger - (PN 054055)
- ☐ Replaced and lubricated O-rings to brew valve assembly (PN: 043366)

COFFEE BOILER EXPANSION VALVE

- ☐ Replaced pressure relief valve - (PN 054055)

STEAM BOILER

- ☐ Inspected and cleaned the level sensor

-> Recommended Decalcifications YES or NO (please circle)

STEAM WAND

- ☐ Cleaned steam wand and exchanged steam wand tip seal (PN: 040501)

.....
Additional Notes/Comments:

Please complete and return form to verify that a preventative maintenance visit was performed.

RETURN TO:

Service Technician Name (Please Print)

Signature of Service Technician

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6.7 BREW GROUP REBUILD GUIDE

This guide is intended for certified factory trained technicians only. It is recommended that you bring BGA's back to your shop to rebuild them. Should you have any questions or need further assistance, please contact Rancilio North America at: (877) 726-2454.

TOOLS NEEDED

- > Phillips head screwdriver
- > Flat head screwdriver
- > Allen wrenches size 3mm and 4mm
- > Wrenches in following sizes:
 - > 7mm and 8 mm

OTHER ITEMS NEEDED

- > Lubricant
 - > Viper lube Loctite PN 36781
 - > Krytox RFE PFPE Lube, Loctite PN 29711 (green tube)
- > Clean rags/clothes
- > Espresso dairy cleaner, coffee cleaning tablets or a lemon
- > A dish, pan, tub, or bowl for water
- > Toothbrush or small group brush

AND...

SERVICE PART'S KIT 1 WHICH INCLUDES:

Ref. Num.	Part Describ.	P/N	QTY Included
1	Upper piston O-ring	039061	1
2	Upper piston scrapper O-ring	039064	1
3	Lower piston O-ring	029441	1

GETTING STARTED:

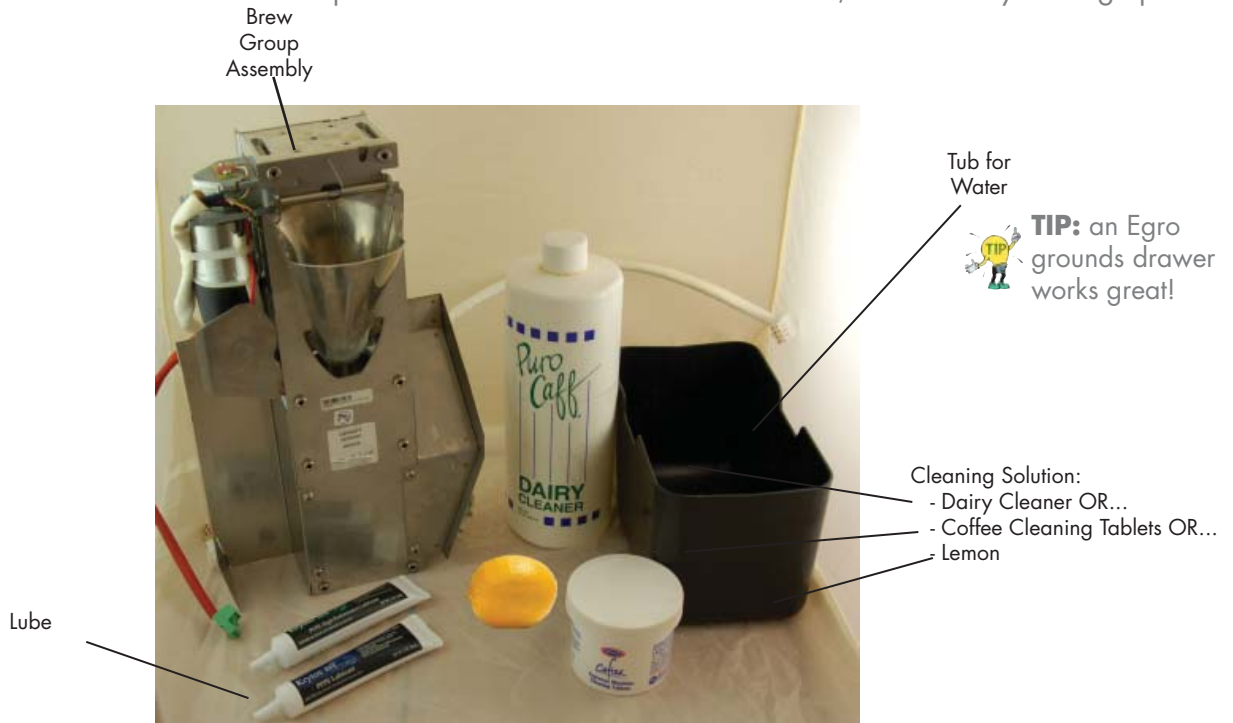
- > Prepare a work area that can easily be cleaned.
- > Prepare water solution in a tub, dish, pan or bowl.
 - Espresso machine dairy cleaner in about 32oz of water (recommended) or...
 - Dissolve a coffee cleaning tablet in about 32oz of water or...
 - Squeeze lemon juice into about 32oz of water



Do **NOT** use dish soap or any harsh cleaners which contain abrasive chemicals. These items can leave a nasty residue on the BGA components or damage them.

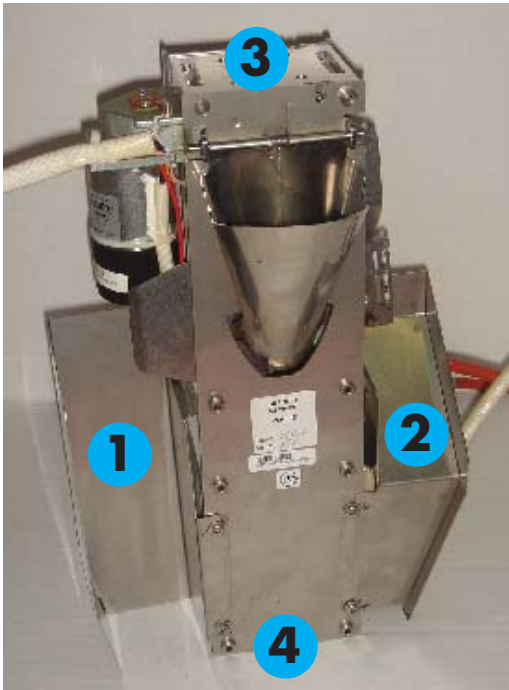


CAUTION: DO NOT leave parts in water for more than 30 minutes, solution may damage parts.



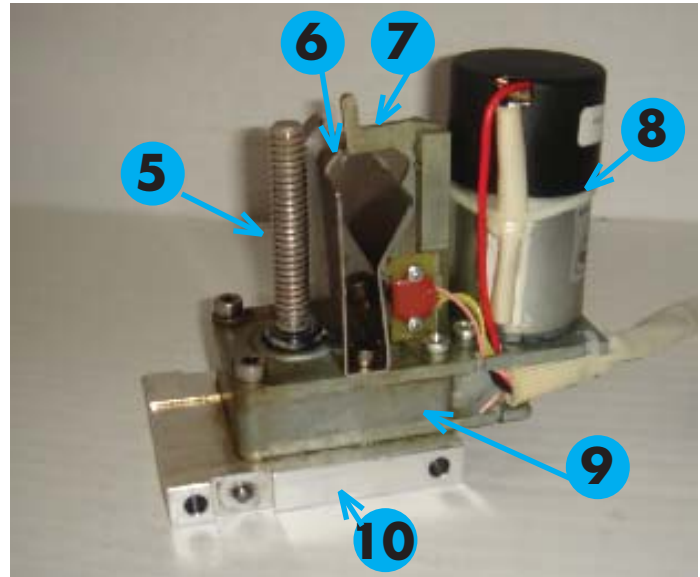
6.7 BREW GROUP REBUILD GUIDE

DESCRIPTION OF PARTS:



Brew Group Assembly or BGA: the complete brewing module of the Egro 55 series espresso machines.

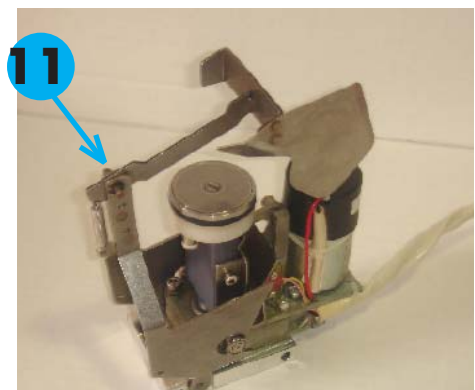
1. Grounds slide
2. Grounds puck slide
3. Upper Piston Assembly or UPA
4. Lower Piston Assembly or LPA (not pictured)
5. Auger shaft
6. Piston spring plate
7. Piston sensing arm
8. Piston motor
9. Gear box
10. Mounting plate
11. Grounds puck sweeper arm



Piston Assembly, UPA or LPA: The upper and lower piston assemblies are identical except for the actual pistons.



View of the Bottom of the Mounting Plate: you can access the gear box through the hole in the bottom of the mounting plate. This way you can manually control the piston.



Upper Piston Assembly: the upper piston assembly has a sweeper arm attached to it.

6.7 BREW GROUP REBUILD GUIDE

DESCRIPTION OF PARTS --- Continued



Upper Piston: This is an exploded view of the upper piston.

Upper Piston

12. Brass pins to hold piston guide arms (13)

13. Piston guide arms

14. Upper piston Shaft

15. Quick connect for hose

16. Upper piston head

17. Piston stabilizing ring

18. Piston head, scraper ring and O-ring

19. Stainless steel piston plate

20. Shower screen

Lower Piston

21. Piston Shaft

22. Quick connect for hose

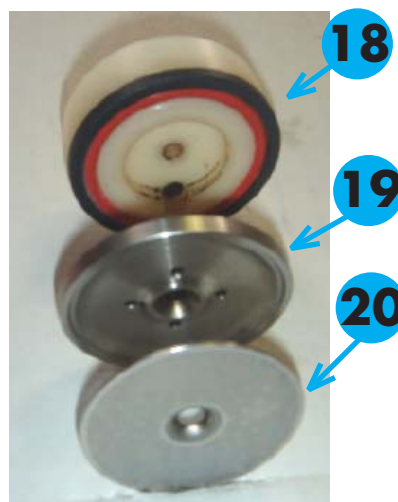
23. Piston head

24. Lower piston O-ring

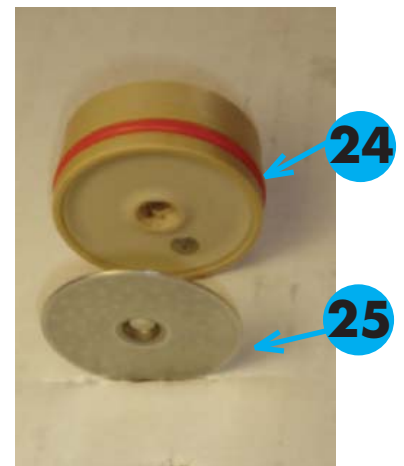
25. Shower screen



Lower Piston: This is an exploded view of the lower piston

**Upper Piston Head:**

This is an exploded view of the upper piston head.



Lower Piston Head: This is an exploded view of the lower piston head.

6.7 BREW GROUP REBUILD GUIDE

1. REMOVE BGA FROM THE MACHINE

1.1 Unplug the machine

1.2 Remove the left and right side panels of machine

1.3 Disconnect the piston motor and brew chamber heating element power cables from the motherboard

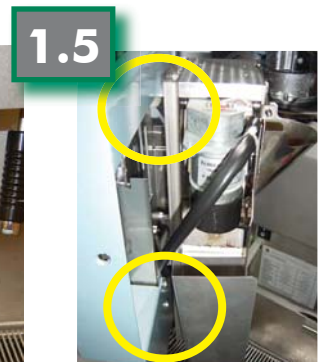
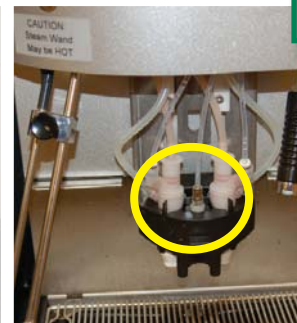
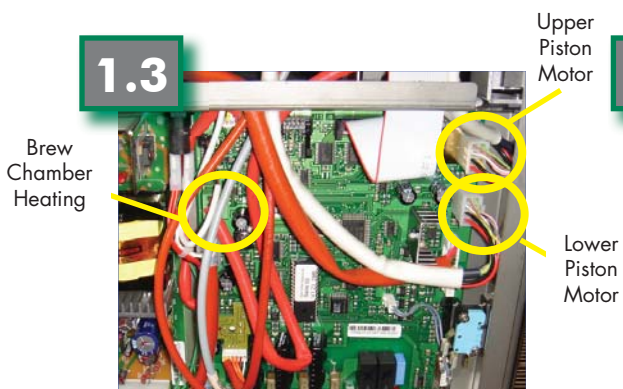


PLEASE NOTE: These are the connections J2, J3 and J16 on the motherboard

1.4 Discount the coffee and water deliver hoses from the brew valve on the coffee boiler and the espresso outlet on the front of the machine

1.5 Loosen the 2 nuts located behind the BGA

1.6 Pull the BGA upwards to remove from the door



2. REMOVE SLIDES FROM BREWING GROUP

2.1 Remove the grounds and pucks slides from the sides of the BGA by unscrewing the four screws which hold them
TOOL: Phillip's head screwdriver



TIP: You do not need to completely remove these screws

2.1

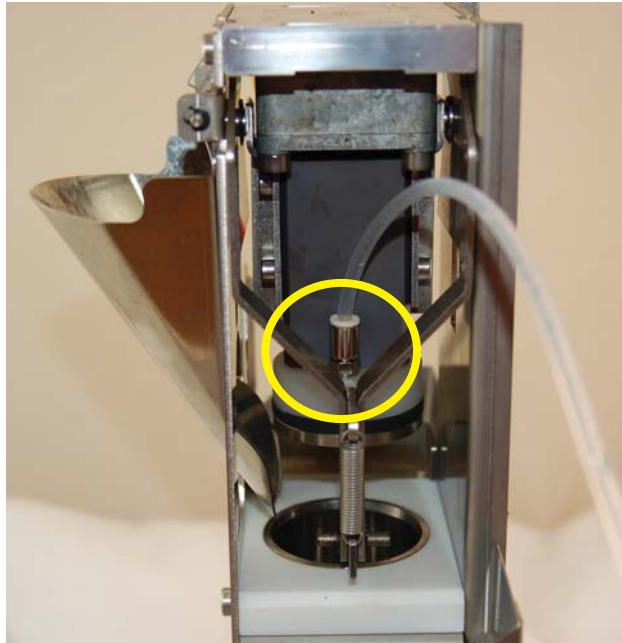


6.7 BREW GROUP REBUILD GUIDE

3. REMOVE HOSES FROM PISTONS

3.1 Remove hoses from both the upper and lower pistons

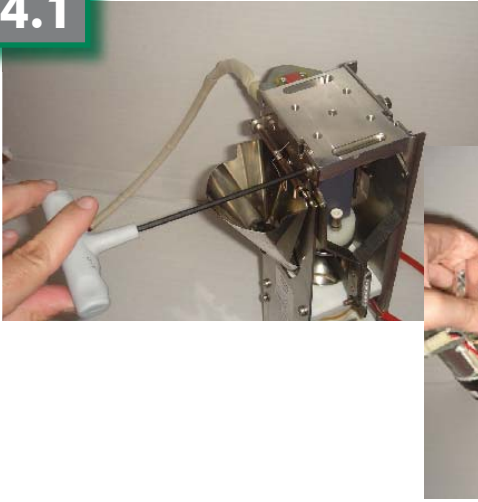
3.1



6.7 BREW GROUP REBUILD GUIDE

4. DISASSEMBLE AND CLEAN THE UPPER PISTON ASSEMBLY (UPA)

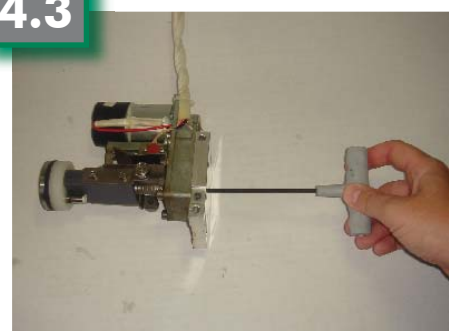
4.1



4.2



4.3



4.1 Place the BGA your work area and remove the Upper Piston Assembly (UPA) by loosening the two cotter pins, and gently pulling the sides of the BGA housing apart and pulling upward on the UPA.

TOOL: 3mm Allen wrench

4.2 Remove the grounds puck sweeper arm from the UPA by gently pulling on both sides, releasing it from the UPA.

4.3 Remove upper piston from UPA by turning it up the auger shaft using a 3mm Allen wrench inserted into the gear box (bottom mounting plate) of the UPA

TOOL: 3mm Allen wrench

4.4



4.5



4.6



4.4 Remove the shower screen and the stainless steel upper piston plate by unscrewing the screw on the end of the piston. Clean parts using a clean towel and water solution and dry thoroughly when clean

TOOL: Screwdriver

4.5 Remove piston guide arms

TOOL: 3mm Allen wrench



TIP: Watch for brass pins that are located inside the piston shaft. They will become loose when you re move the piston guide arms.

4.6 Remove piston shaft from piston head

TOOL: 3mm Allen wrench

6.7 BREW GROUP REBUILD GUIDE

4. DISASSEMBLE AND CLEAN THE UPA --- Continued

4.7



4.9

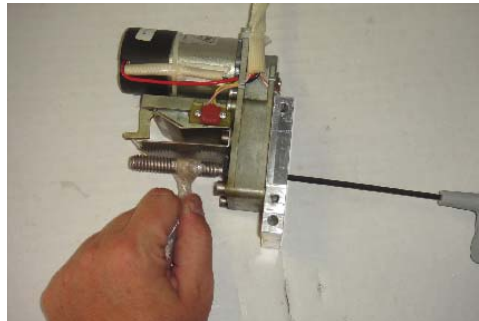


4.7 Remove the upper piston scrapper ring and the orange O-ring from the piston head

4.8 Wipe all upper piston components clean with water solution and towel

4.9 Wipe entire upper assembly clean with a damp towel

4.10



4.10 Clean all lube from auger shaft using a piece of plastic wrap or a towel.



CAUTION: do not use paper towels as pieces of them may get into threads of auger and cause damage



TIP: Use a short piece of plastic wrap to clean auger shaft. Wrap plastic around auger and move it up the auger by inserting a 3mm Allen wrench into the gear box of the UPA.

TOOL: 3mm Allen Wrench

6.7 BREW GROUP REBUILD GUIDE

5. REASSEMBLE THE UPPER PISTON ASSEMBLY (UPA)

5.1



5.3



5.4



5.1 Lubricate upper piston groove
LUBE: Viper lube Loctite PN 36781

5.2 Replace the upper piston scrapper ring and O-ring
PN: 039064 and 039064

5.3 Reassemble the shower screen and stainless steel upper piston plate onto upper piston
TOOL: Phillip's head screwdriver



CAUTION: Do not over tighten or cross thread

5.4 Replace stainless steel piston stabilizer ring onto piston head

5.5



5.6



5.7



5.5 Reassemble piston shaft to piston head using Allen screws
TOOL: 3mm Allen wrench
CAUTION: Do not overtighten or cross thread

5.6 Reinsert brass pins into piston shaft

5.7 Reattach piston shaft guides onto the sides of the piston shaft



PLEASE NOTE: Bearings should face upwards, or away from the piston head

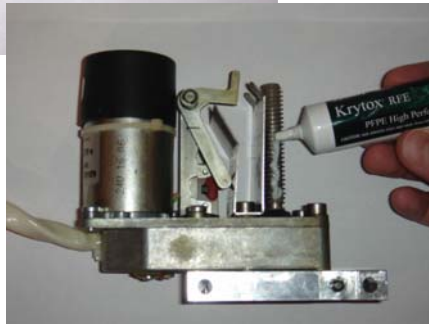


TIP: Tighten Allen screws half-way and lay on the edge of the table or flat surface and tighten the rest of the way

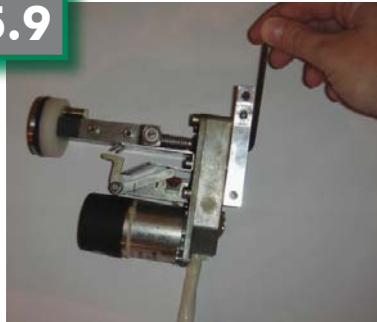
6.7 BREW GROUP REBUILD GUIDE

5. REASSEMBLE THE UPA --- Continued

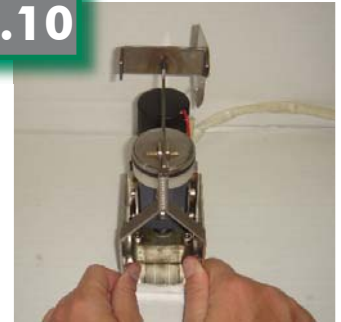
5.8



5.9



5.10



5.8 Lubricate upper piston auger and auger hole in the piston shaft
LUBE: Krytox RFE PFPE Lube, Loctite PN 29711 (green tube)

5.9 Reassemble piston onto the UPA by turning it down the auger shaft using a 3mm Allen wrench inserted into the gear box of the UPA (bottom of the mounting plate)
TOOL: 3mm Allen wrench

 **PLEASE NOTE:** Be sure the quick connect faces to the outside, or away from the motor

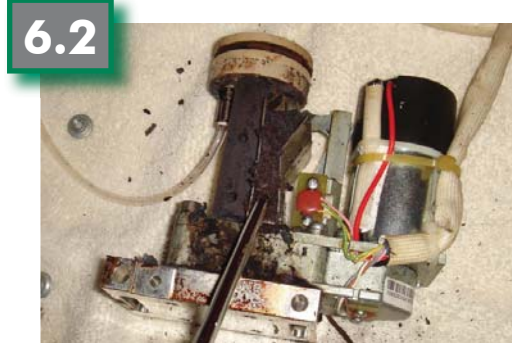
5.10 Reattach sweeper arm to UPA

 **TIP:** If the sweeper arm is difficult to reassemble to the UPA, run the piston down a few turns inserting a 3mm Allen wrench into the gear box of the UPA and manually moving the piston.

5.11 Set UPA aside for now

6.7 BREW GROUP REBUILD GUIDE

6. DISASSEMBLE AND CLEAN THE LOWER PISTON ASSEMBLY (LPA)



6.1 Place the BGA on the counter (upside down) and remove the Lower Piston Assembly (LPA) by loosening the two cotter pins, and gently pulling the sides of the BGA housing apart and pulling upward on the LPA. If necessary, place pins in water to remove coffee build-up.

TOOL: 3mm Allen wrench



TIP: If there is a great deal of excess coffee build-up and the LPA preventing it from easily coming out, pour a small amount of water solution into cotter pin grooves to free-up the pins.

TIP: If necessary use a slight rocking motion to remove LPA from housing.

6.2 If necessary, remove coffee build-up from LPA using a toothbrush or a screwdriver



CAUTION: Do this gently as not to damage parts.

6.3 Remove the lower piston from the LPA by turning it up the auger shaft using a 3mm Allen wrench inserted into the gear box of the of the LPA (bottom of the mounting plate)

TOOL: 3mm Allen wrench



6.4 Remove the shower screen by unscrewing the screw on the end of the piston. Place in water solution
TOOL: Screwdriver

6.5 Remove piston head from piston shaft by unscrewing 3mm Allen screws
TOOL: 3mm Allen wrench

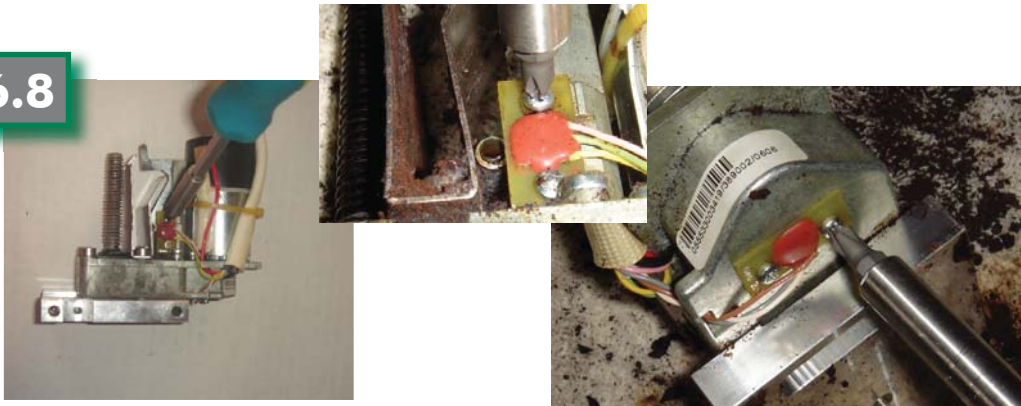
6.6 Remove O-ring from lower piston by inserting a screwdriver in the O-ring groove and "popping" the O-ring out of the groove

6.7 Place lower piston head in water solution to remove any excess coffee build-up

6.7 BREW GROUP REBUILD GUIDE

6. DISASSEMBLE AND CLEAN THE LPA --- Continued

6.8



6.8 Remove wiring harnesses from mounting plate below motor and piston sensing arm by unscrewing screws using a Phillip's head screwdriver

TOOL: Phillip's head screwdriver

6.9

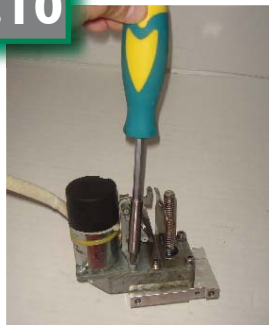


6.9 Remove wires from guides in mounting plate



TIP: Carefully cut zip tie if necessary

6.10



6.10 Remove motor sensing lever by unscrewing screws using a Phillip's head screwdriver

TOOL: Phillip's head screwdriver

6.11

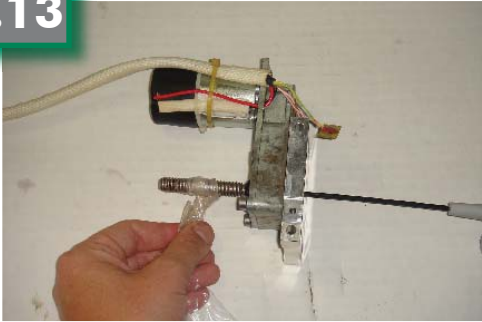


6.11 Remove piston spring plate by unscrewing two 4mm Allen Screws

TOOL: 4mm Allen Wrench

6. DISASSEMBLE AND CLEAN THE LPA --- Continued

6.13



6.12 Remove all components from water solution and wipe dry and clean using towel and toothbrush if necessary.

6.13 Clean all lube from auger shaft using a piece of plastic wrap or a towel.



CAUTION: do not use paper towels as pieces of them may get into threads of auger and cause damage.



TIP: Use a short piece of plastic wrap to clean auger shaft. Wrap plastic around auger and move it up the auger by inserting a 3mm Allen wrench into the gear box of the UPA.

TOOL: 3mm Allen Wrench

7. REASSEMBLE THE LOWER PISTON ASSEMBLY (LPA)

7.1



7.4



7.5



7.1 Lubricate lower piston groove
LUBE: Viper lube Loctite PN 36781

7.2 Replace lower piston O-ring
PN: 029441 (small orange seal)

7.3 Reassemble brew screen onto lower piston
TOOL: Screwdriver

7.4 Reattach piston shaft to piston head using Allen screws
TOOL: 3mm Allen wrench



CAUTION: Do not overtighten or cross thread

7.5 Reattach piston sensing arm to gear box using short screws
TOOL: Phillip's headed screwdriver

7.6



7.7



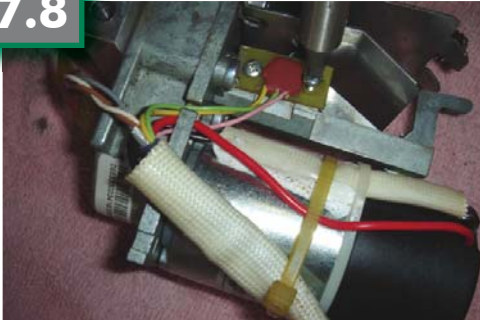
7.6 Attach gear box to the mounting block using 4mm Allen Screws
TOOL: 4mm Allen wrench

7.7 Attach piston spring plate to LPA using 4mm Allen Screws
TOO: 4mm Allen wrench

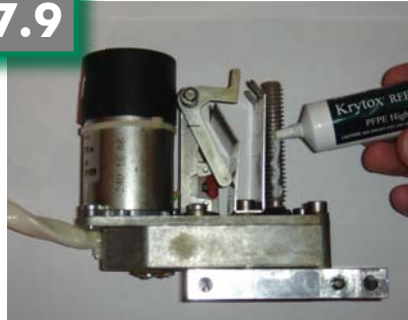
6.7 BREW GROUP REBUILD GUIDE

7. REASSEMBLE THE LPA --- Continued

7.8



7.9



7.8 Reattach motor wire harnesses to LPA



TIP: Green, yellow, pink wires attach to the motor sensor arm (UP)
Gray, brown and white wires attach to the LPA base (DOWN)

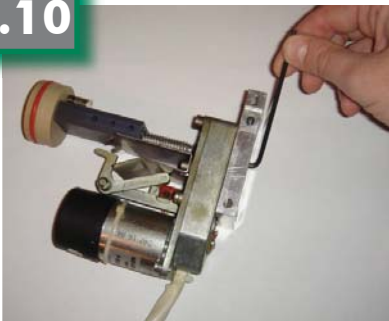


PLEASE NOTE: You must replace the zip tie which holds the wires in place if you cut them during disassembly

7.9 Lubricate lower piston auger shaft and auger shaft hole in piston

LUBE: Krytox RFE PFPE Lube, Loctite PN 29711 (green tube)

7.10



7.10 Reassemble piston onto LPA by turning it down the auger shaft using a 3mm Allen wrench inserted into the gearbox of the LPA

TOOL: 3mm Allen Wrench



TIP: The quick connect faces to the outside, or away from the motor

6.7 BREW GROUP REBUILD GUIDE

8. DISASSEMBLE THE BREW GROUP HOUSING/FRAME (If necessary)



PLEASE NOTE: If there is excess coffee build-up please disassemble the brew group housing and clean it thoroughly.

8.1



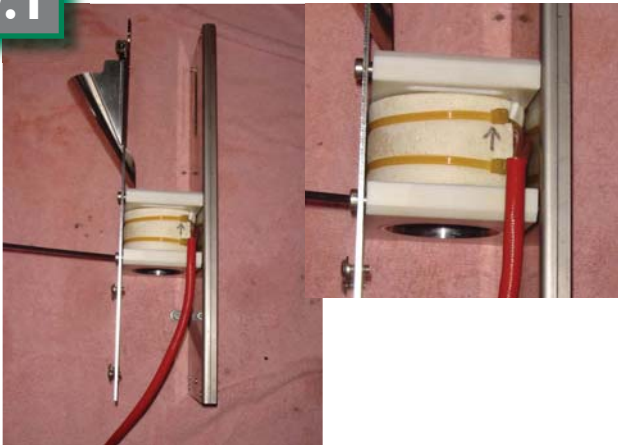
8.1 Disassemble brew chamber housing by unscrewing the cotter pins
TOOL: 3mm Allen wrench

8.2 Thoroughly clean brew chamber and housing using wet cloth

8.3 Clean stainless steel housing/frame using wet cloth

9. REASSEMBLE BREW GROUP HOUSING (If necessary)

9.1



PLEASE NOTE: If you took apart the brew group housing/frame please follow Steps 9.1 - 9.4 to reassemble the frame. If you did not take it apart please be sure to clean it thoroughly before reassembling UPA and LPA into the frame.

9.1 Reassemble brew unit frame or housing by laying sides of housing flat on table with front of brewing group to the right and back to the left.

9.2 Insert the brew chamber between the sides with arrow pointing upward, and wires to the right or the back of the brew unit.

9.3 Secure the brew chamber in place using long 3mm cotter pins, (heads of pins go towards front of BGA)
TOOL: 3mm Allen wrench

9.4 Stand on end and tighten cotter pins from both ends (Front and back of screws)
TOOLS: 3mm Allen wrench and 7mm wrench

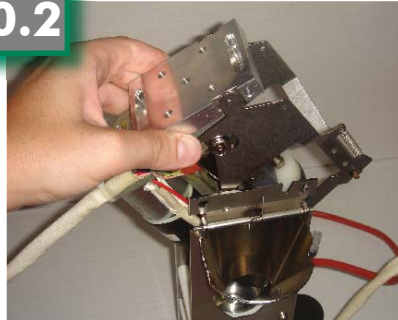
6.7 BREW GROUP REBUILD GUIDE

10. REASSEMBLE UPA and LPA INTO BREW GROUP ASSEMBLY

10.1



10.2



10.3



10.1 Mount lower piston assembly into brew unit housing.
TOOL: 3mm Allen wrench

 **PLEASE NOTE:** the motor goes to the left (when the BGA is facing towards you) and the cotter pins are inserted from the front of the BGA.

10.2 Mount the upper piston assembly into the brew unit housing.

 **PLEASE NOTE:** motor goes to the left (when the BGA is facing towards you) and the cotter pins are inserted from the front of the BGA.

If the cotter pins which hold the UPA in place do not easily insert into the frame, manually move the piston up or down using a 3mm Allen wrench inserted into the UPA gear box.

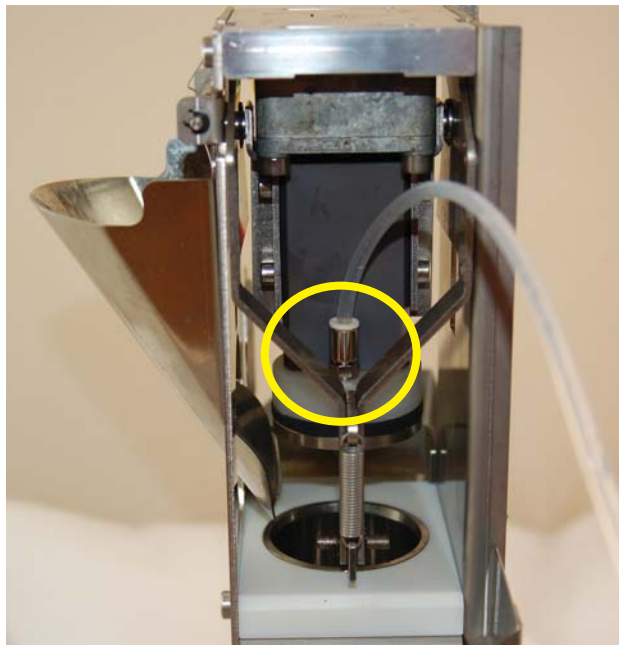
10.3 Test the pistons by manually by using a 3mm Allen wrench inserted into the gear box of the LPA, to make sure that they are positioned correctly.

-> TOOL: 3mm Allen wrench

6.7 BREW GROUP REBUILD GUIDE

11. REATTACH HOSES TO UPPER AND LOWER PISTONS

11.1



11.1 Reattach the hoses to the upper and lower pistons

12. REATTACH GROUNDS SLIDES TO SIDES OF BGA

12.1



12.1 Reattach the grounds slides to the sides of the BGA.

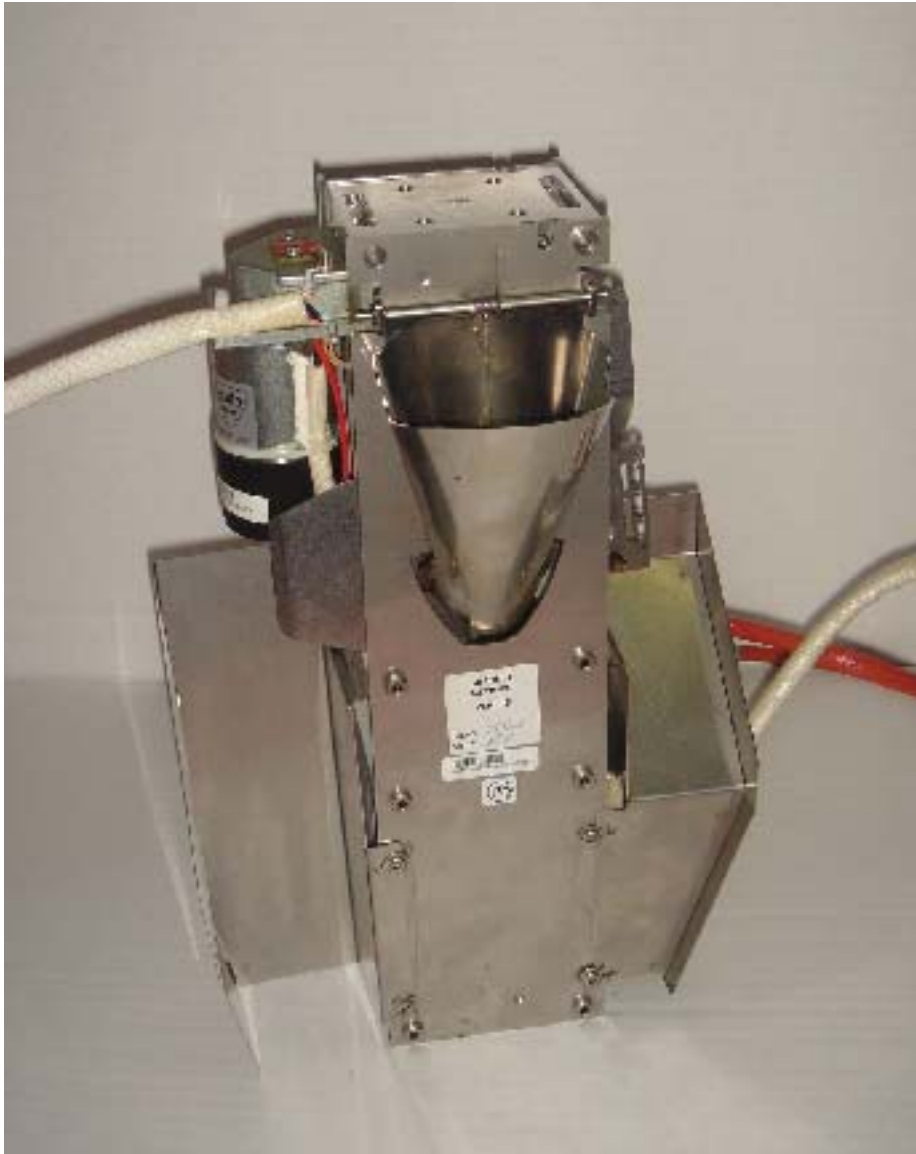


TIP: The shorter bent puck slide goes on the right side of the BGA, when the BGA is facing towards you (Funnel towards you)



PLEASE NOTE: it is recommend that you attach the newly built brew group to a working machine and run a cleaning program to ensure that every is assembled correctly and the BGA is as clean as possible.

6.7 BREW GROUP REBUILD GUIDE



CONGRATULATIONS!
YOU HAVE REFURBISHED
AN EGRO 55 SERIES BREW GROUP ASSEMBLY!