Perfect Servings®

Evolution™

Powder to Liquid Dispenser



MACHINE SET UP AND PRODUCT PROGRAMMING GUIDE

Item Numbers: 99917, 99918, 99919, 99920, 99921, 99922

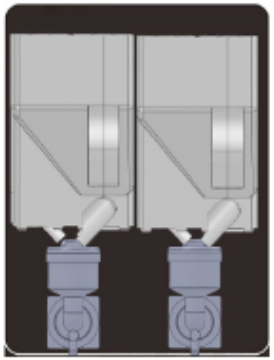
CAUTION: Read this manual completely before installation to avoid improper operation, property damage, or personal injury.

United Food Group, Inc. 1925 Holmes Rd. Elgin, IL 60123 847-622-1803

PERFECT SERVINGS®
Evolution™

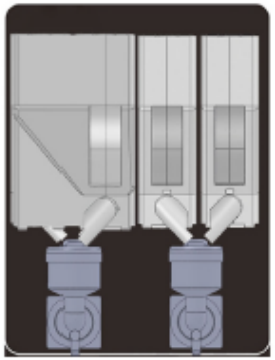


Powder to Liquid Dispenser



Front Load: 99917, Top Load: 99918

Two Hoppers/Two Bowls

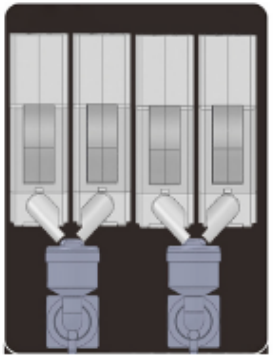


Front Load: 99919, Top Load: 99920

Three Hoppers/Two Bowls

Dispense your favorite hot beverage, including:

- Hot Coffee
- Hot Chocolate
- Hot Cream
- Cappuccino
- and More!



Front Load: 99921, Top Load: 99922

Four Hoppers/Two Bowls



Specifications

Dimensions:	26 3/8" H x 12 3/4" W x 23 3/4" D
Unit Weight:	57 lbs
Shipping Weight:	65 lbs
Electrical:	120 V, 60 Hz, 15 Amps
Water Source:	Direct connect
Water Pressure:	20 – 60 PSI
Water Inlet Connection on Machine:	¾" BSP male thread
Tank Capacity:	1.7 gallons
Temperature Setting:	Adjustable
Pallet Configuration:	5 x 1, 5 units per pallet

Evolution™

United Food Group developed the Evolution dispenser to address untapped opportunities not achievable with current dispensing equipment or comparable models available today.

The Evolution is a highly versatile unit capable of dispensing as little as 3/8 of an ounce of liquid or up to a full carafe of coffee.

This system can be configured as a powder-to-liquid cream dispenser, with options for:
- single-serve portion dispensing, or
- “Press and hold” continuous dispensing.

Products such as Cappuccino, Hot Chocolate, and other specialty beverages can be programmed for precise portion control by cup size or continuous flow.

Our proprietary blend of the patented processed microground coffee delivers a premium cup quality that exceeds any liquid coffee currently on the market. The coffee settings can be configured for:
- Push-and-hold dispensing
- Pre-programmed cup sizes
- Carafe-level servings

In developing the Evolution, we leveraged years of industry experience to source every component for maximum performance and value—without sacrificing quality. Most parts can be sourced from multiple distributors, allowing for competitive pricing and simplified service. The Evolution’s design emphasizes ease of maintenance, reducing downtime and service costs.

CAUTION: Read this manual completely before installation to avoid improper operation, property damage, or personal injury.

Unpacking and Installation

Before Setup

Before unpacking or installing the machine, read this guide thoroughly. Inspect all components for shipping damage or missing parts. Do not plug in or operate the unit until all installation steps are completed.

Unpacking

1. Carefully remove the Evolution from its packaging.
2. Check that all accessories, hoses, and fittings are included.
3. Ensure the machine is placed on a stable, level surface.

Water and Electrical Connections

- **Water Supply:** Connect the incoming water line to the inlet fitting on the rear of the machine.
- **Water Pressure:** Ensure line pressure meets the specified range in the technical sheet.
- **Electrical Requirements:** Verify that voltage and amperage meet unit specifications before connecting power.
- **Grounding:** Always connect the machine to a grounded outlet to prevent electrical hazards.

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Once you have attached the water to the back of the machine and turned the water on and plug the machine into a surge protected 110v, 20 amp circuit, you can turn the unit on.

CAUTION: Turning the unit on with out the water attached will cause damage to the inlet valve and void the warranty.

Open the door, and you will see the clean cycle displayed. CAUTION: Do not press any buttons until you have reviewed the system settings for each flavor, assuring that the machine is set up properly.



Programming the Equipment Overview

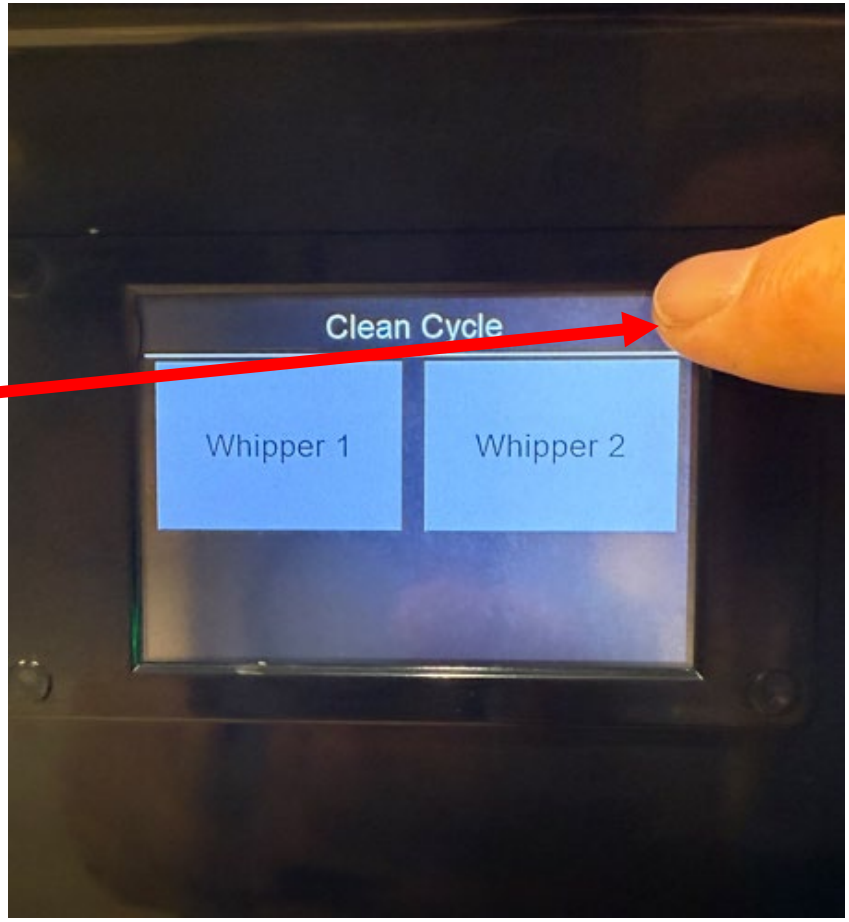
The programming capability of the Evolution sets it apart from other dispensers on the market. Advanced programming allows delayed powder start and extended powder dispensing after the water valve closes, preventing a visible stream of water at the end of the pour—especially important for coffee and cream applications.

By adjusting delay times, the powder continues dispensing briefly after water stops, resulting in a clean, professional beverage presentation.

Note: When setting delays for microground coffee or powdered cream, ensure the whipping chamber is thoroughly cleaned. Verify that the whipper delay is long enough to properly rinse the mixing chamber.

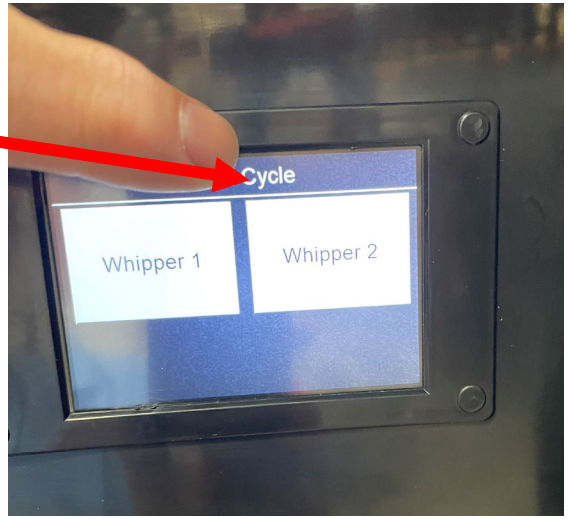
Programming the Equipment

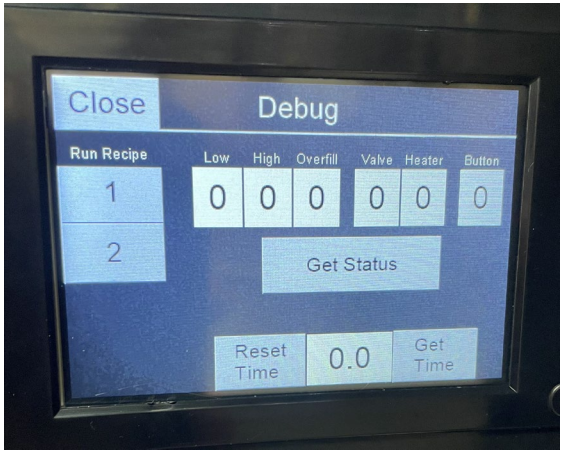
The Hidden Programming button is found by touching the UPPER RIGHT corner of the CLEAN CYCLE screen



Technician "DEBUG" (Hidden Button) Machine Status Screen

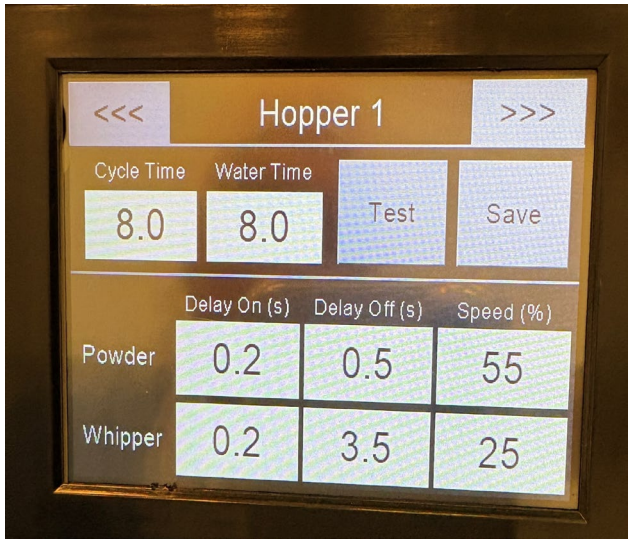
- Hidden Button-Press the top banner area in the middle on the word Clean Cycle. This will take you to the Debug page.
- This page gives you the status of the machine in its real time state.
- This is used only as a service technicians aid.
- Pressing "Get Status", will give you the current status of the machine at that moment.
- Low - shows a "1" (meaning if the water has meet the Low Probe and the heater will turn on.) If the tank is not full to the point of touching the low probe, you will not get hot product.) Once the high turns to a "1" the water inlet shuts off.
- High turns to a "1" High Probe and the water inlet shuts off.
- Overfill - The unit will check status, if over 5 seconds in this state, the unit will shut off the inlet valve. The water may overflow leaking out of the bottom of the machine's over- flow hose, shut off the machine, if this is the case.
- Valve - "1" indicates the inlet valve is letting water into the tank.
- Heater - "1" indicates water level was meet and heating water.
- Button - "1" indicates which button has been pressed.
- Reset Time - If testing, gives a count down, Get Time tells Second of use.
- Run Recipe - Test Recipe of each button on front of panel (1-4) depending the style of machine. (Do not press these until you have programmed and reviewed all of the Recipe settings.)





Programming Button Functions

- Cycle time = full cycle in (sec.)
- Water Time = full water time in (sec.)
- Delay On = Time before cycle starts in (sec.)
- Delay Off = Time after cycle ends in (sec.)
- Speed = Motor speed in (%) 100% is max
- Powder = Product in the Hopper timing and speed
- Whipper = Whipper bowl Motor timing and speed
- Test = Once programmed, test hopper #shown
- Save = Save program after every button change!



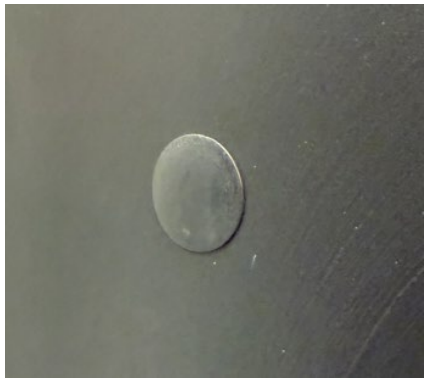
Picture is for representation only.
Programming numbers may be different.

Programming Water Valve Settings

1. Before starting, verify that both left and right water dump valves are preset to **1 oz of water per second**.

2. To test the water valve settings:
   - Select **cycle time** and **water time** on the programming board, set both to **8.0 seconds**.
   - A secondary screen will appear (numeric keyboard).
   - Use the back arrow to delete the current value.
   - Enter the number to increase or decrease the cycle time or water time.
   - Press **OK**.
   - The **Hopper Board** will appear; press **SAVE** again to confirm.
   - Each cycle should produce approximately **8 oz of water in 8.0 seconds**.

3. To adjust flow rate:
   - Use a **3/16" Allen wrench**.
   - Turn **counterclockwise** to increase flow, or **clockwise** to decrease.
   - Adjust in ¼-turn increments and re-test as needed. (See illustration to the right.)





Cycle Time and Water Time - Explained

- Cycle time is the full length of how many seconds it takes to fill the size cup with water and whipped product.

- Water Time is the full length of how many seconds of water needed to whip the product and fill the cup size.

- The Cycle times can differ if you needed extra Whipping time at the end of the water cycle, in most cases they are set the same.

For Cup Dispense: (Per cup size: 6oz, 8oz,10oz, etc.)

- To determine your cycle time, set both numbers to (8.0) for a 6-8 oz cup of Product or (0.8) for 1.5 Oz of Creamer cup. This will vary depending cup size. You will need to test once you have programmed the powder. See Test Procedures and review the Program settings.

Set the two water valves on the sides of the tank

- Accessible through the BLACK side plugs on outsides of the machine) to 3 ½ turns out, from closed position.) This is a starting point for water and product volume. SEE PROGRAM SETTINGS for more detail. (Pages 17-19)

For PRESS and HOLD product delivery:

- Set Cycle Times and Water Time to “0”

NOTE: Save after every button change and DO NOT TEST until you have fully programmed the Powder and Whipper, Doing so will damage the machine, and cause water and powder to dispense erratically.



Using On/Off Delays

The Evolution includes programmable **on/off delays** for powder and whipper motor functions to accommodate different product types.

- When dispensing small portions (e.g., creamers under 1 oz), delay the powder stop time after the water valve closes.
- This ensures consistent mixing and eliminates the visible “water tail” at the end of a cycle.



Caution – Delay Off Settings
Ensure the **mixing chamber is fully cleaned** at the end of each cycle. (see photo to the right)





If residual powder remains:

- Decrease the delay time slightly.
- Build-up in the chamber will affect flavor and may cause future clogs or off-tasting beverages.

Powder Speed Settings



1. Refer to the initial product setup guide for baseline powder settings.
2. To adjust powder flow:
   - Select **Powder Speed %** on the programming board.
   - A secondary screen will appear (numeric keyboard).
   - Use the back arrow to delete the current value.
   - Enter a new percentage to increase or decrease speed.
   - Press **OK**.
   - The **Hopper Board** will appear; press **SAVE** again to confirm.
3. Repeat process for all hoppers by scrolling to the hopper you would like to set by using the left or right arrows on the hopper screen (see photo to the right).

NOTE: To make your product stronger, increase your Powder Speed %, this will increase the speed of the powder motor, If you want less product, decrease the number on the Powder Speed %.

Change the Powder Setting

To change the powder settings, go to the Hopper you want to change by using the left or right arrows on the hopper board and press (**Powder Speed %**) button. A numeric screen will appear, hit the (**DEL**) key, which is delete. Then enter the new speed % you desire and hit (**OK**). The Hopper Screen will reappear, now press (**SAVE**) to lock in the setting.

Checking Powder by Weight



To verify powder output:

1. Remove the nozzle from the hopper (see photo to the right).
2. Dispense into a collection cup or over steam to check accuracy by weight.
3. Adjust powder speed if output is inconsistent.

Setting Water and Powder for “TIME”

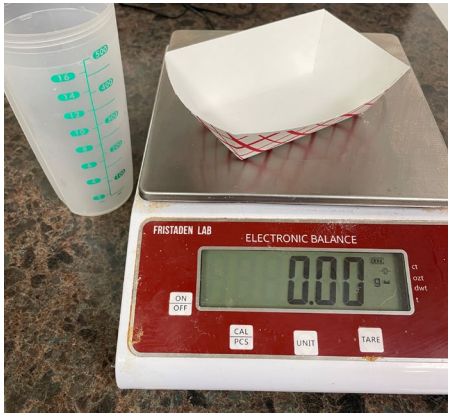
Using our standard settings will get you very close to setting your product up, **for your taste profile**.

You will need a scale and measuring cup to determine your taste profile, per 6-8 oz cup. Once you have the cup profile completed, you can change the Cycle time and Water Time to “0” for push and hold, the Ratio-Relationship will hold for the continuous pour for the customer.

Always ensure the bowl clears out at the end of the cycle, timing a shorter powder delay will assist in making sure its clear.







Whipper Speed Settings

The **whipper speed** controls product texture and foam consistency.

- Lower speeds gently mix without foam.
- Higher speeds create froth for products like cappuccino or whipped cream.





Recommended Settings:

- Do not set below **10%**, as this helps maintain a clean mixing chamber.
- For light foam (crème effect), increase speed slightly.
- For heavier froth, raise the percentage further.

To adjust whipper speed %:

1. Select **Whipper Speed %** on the programming board.
    - A secondary screen will appear (numeric keyboard).
    - Use the back arrow to delete the current value.
    - Enter a new percentage to increase or decrease speed.
    - Press **OK**.
    - The **Hopper Board** will appear; press **SAVE** again to confirm.
2. Repeat process for all hoppers by scrolling to the hopper you would like to set by using the left or right arrows on the hopper screen.



Whipper Delays

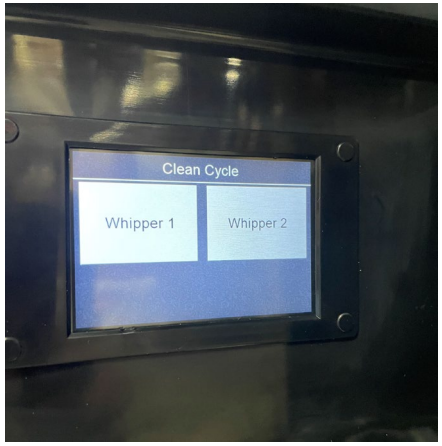
The Whipper is typically set up with no delay. The whipper should always run as long as the product is in the mixing chamber and at least 1-3.5 seconds after all the product is completely out of the mixing chamber. The best way to check if your whipper is running long enough for the product used is to remove the steam chamber and physical look down into the mixing chamber. Make sure the whipper runs long enough so that there is nothing left in the mixing chamber or on the whipper blade. **Caution – Delay Off Settings** Ensure the **mixing chamber is fully cleaned** at the end of each cycle. (see photos to the right)



How to get back to the MAIN SCREEN "Clean Cycle Screen"

Touch the Close button to change the screen back to the Main Screen:
"Clean Cycle Screen"





Cappuccino & Hot Chocolate Program Settings

90 RPM Motor

Cycle Time	Water Time
8.0	8.0

NOTE: For Push and Hold- Set Cycle Time and Water Time to "0"

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	Cappuccino	0.2	1.7	100
Whipper	Cappuccino	0.0	3.0	100

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	Hot Chocolate	0.2	1.7	100
Whipper	Hot Chocolate	0.0	3.0	100



Picture is for representation only.
Programming numbers may be different.

IMPORTANT: If you are switching to cappuccino or hot chocolate from coffee: Replace the motor with a **130 RPM motor** and change to the **standard canister spring**.

Cappuccino & Hot Chocolate Program Settings
130 RPM Motor

Cycle Time	Water Time
8.0	8.0

NOTE: For Push and Hold- Set Cycle Time and Water Time to "0"

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	Cappuccino	0.2	1.5	55
Whipper	Cappuccino	0.0	3.0	100

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	Hot Chocolate	0.2	1.5	55
Whipper	Hot Chocolate	0.0	3.0	100



Picture is for representation only.
Programming numbers may be different.

IMPORTANT: If you are switching to cappuccino or hot chocolate from coffee: Replace the motor with a **130 RPM motor** and change to the **standard canister spring**.

Regular & Flavored Creamer Program Settings
90 RPM or 130 RPM Motor

Cycle Time	Water Time
0.7	0.7

NOTE: For Push and Hold- Set Cycle Time and Water Time to "0"

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	French Vanilla Creamer	0.2	0.6	50
Whipper	French Vanilla Creamer	0.0	2.0	25

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	Creamer	0.2	0.6	55
Whipper	Creamer	0.0	2.0	30



Picture is for representation only. Programming numbers may be different.

IMPORTANT: If you are switching to creamer from coffee: Replace the motor with a **130 RPM motor** and change to the **standard canister spring**.

Microground Coffee Program Settings
50 RPM Motor

Cycle Time	Water Time
8.0	8.0

NOTE: For Push and Hold- Set Cycle Time and Water Time to “0”

	Flavor	Delay On (s)	Delay Off (s)	Speed (%)
Powder	Coffee*	0.2	1.7	15
Whipper	Coffee*	0.0	3.0	15



Picture is for representation only.
Programming numbers may be different.

IMPORTANT: Coffee is configured at the warehouse with a **special canister spring** and requires a **50 RPM motor**. Other products - such as creamers, cappuccinos, and hot chocolate - are configured with a **standard canister spring** and a **90 - 130 RPM motor**.

- **Switching from coffee to creamer, cappuccino or hot chocolate:** Replace the motor with a **130 RPM motor** and change to the **standard canister spring**.
- **Switching from creamer, cappuccino or hot chocolate to coffee:** Replace the motor with a **50 RPM motor** and install the **special coffee canister spring**.

Tips for changing the Flavor Profiles

- Once you have programmed to a standard setting, and saved for each hopper, you are ready to test. Ensure that the water has been turned on during the programming process, as it would heat up to temperature in 10 -15 minutes.
- You can now go back to the Program Setting for each Hopper and select test with the cup and powder tray below the spout. This will allow you to see the powder and water volumes.
- It will take two – three test cycles to prime the powder and water valves, prior measuring the products.
- Make sure the water level never exceeds 2/3rds of the bowl. If so, you will need to adjust the water valves from the side of the machine down 1/2 turn. (Clockwise until it reaches 2/3rds or less.
- Adjust your Cycle and Water Times according to your cup measurement with product.
- Weigh out your product in grams and verify your taste profile by running both.
- If you need more water increase the percentage first .
- Check the powder setting, by testing 4 x and divide by 4, if the qty needs less or more, increase or decrease the speed % and try again. Check by taste.
- Make sure you are saving after each button change, It will not save, if you change screens without saving.



