

LANCER®

TST
Touchscreen Tower
LANCER INSTALLATION GUIDE



FOR QUALIFIED INSTALLER ONLY. This basic Installation Sheet is an initial release. If a complete Operations Manual (for the unit being installed) is required or needed, please refer to the Lancer web site (lancercorp.com) for immediate access, or for your convenience, scan this QR code with a mobile device (app required) for immediate access to other Technical Documents and alternative translations (if available) pertaining to this unit. Contact Lancer Customer Service for assistance as required.

ABOUT THIS MANUAL

This booklet is an integral and essential part of the product and should be handed over to the operator after the installation and preserved for any further consultation that may be necessary. Please read carefully the guidelines and warnings contained herein as they are intended to provide the user with essential information for the continued safe use and maintenance of the product. In addition, it provides **GUIDANCE ONLY** to the user on the correct services and site location of the unit.

The installation and relocation, if necessary, of this product must be carried out by qualified personnel with up-to-date safety and hygiene knowledge and practical experience, in accordance with current regulations.

IMPORTANT SAFETY INSTRUCTIONS

⚠ Intended Use

The dispenser is for indoor use only. This appliance is to be installed in a location where its use can be overseen by trained personnel. This unit is not a toy. Children should be supervised not to play with appliance. It should not be used by children or infirm persons without supervision. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Cleaning and user maintenance shall not be performed by children without supervision. The min/max ambient operating temperature for the dispenser is 4°C to 32°C (40°F to 90°F). Do not operate unit below minimum ambient operation conditions. Should freezing occur, cease operation of the unit and contact authorized service technician. Service, cleaning and sanitizing should be accomplished only by trained personnel. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.



Electrical Warning

Appliance must be supplied by 24 VDC. Check dispenser name plate label, located inside tower panels, for the correct electrical requirements of unit. Do not plug into a wall electrical outlet unless the current shown on the name plate label agrees with local current available. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords with this unit. Do not 'gang' together with other electrical devices on the same outlet. The keyswitch does not disable the line voltage to the transformer primary. Always disconnect electrical power to the unit to prevent personal injury before attempting any internal maintenance. The resettable breaker switch should not be used as a substitute for unplugging the dispenser from the power source to service the unit. Only qualified personnel should service internal components of electrical control housing. Make sure that all water lines are tight and units are dry before making any electrical connections!

Carbon Dioxide (CO₂)

- **WARNING:** Carbon Dioxide (CO₂) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO₂ may displace oxygen in the blood.
- **WARNING:** Prolonged exposure to CO₂ can be harmful. Personnel exposed to high concentrations of CO₂ gas will experience tremors which are followed by a loss of consciousness and suffocation.
- **WARNING:** If a CO₂ gas leak is suspected, immediately ventilate the contaminated area before attempting to repair the leak.
- **WARNING:** Strict attention must be observed in the prevention of CO₂ gas leaks in the entire CO₂ and soft drink system.

Water Notice

Appliance is not suitable for installation where a water jet could be used. Provide an adequate potable water supply. Water pipe connections and fixtures directly connected to a potable water supply must be sized, installed, and maintained according to federal, state, and local laws. The water supply line must be at least a 3/8 inches (9.525 mm) pipe with a minimum of 20 PSI (0.137 MPa) line pressure, but not exceeding a maximum of 65 psi (0.448 MPa). Water pressure exceeding 65 psi (0.448 MPa) must be reduced to 65 psi (0.448 MPa) with the provided pressure regulator. Use a filter in the water line to avoid equipment damage and beverage off-taste. Check the water filter periodically, as required by local conditions. The water supply must be protected by means of an air gap, a back flow prevention device or another approved method to comply with NSF standards. A leaking inlet water check valve will allow carbonated water to flow back through the pump when it is shut off and contaminate the water supply. Ensure the back flow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

SPECIFICATIONS

DIMENSIONS

Width: 9.2 inches (235 mm)
Depth: 17.1 inches (433 mm)
Height: 26.9 inches (682 mm)

WEIGHT

Shipping: 40 lbs (18.14 kg)
Operating: 35 lbs (15.88 kg)

ELECTRICAL

24 VDC / 2.0 Amps

FLOW RATE

1.5 - 2.0 ounces per second

PLAIN WATER SUPPLY

Min Flowing Pressure: 20 psi (0.137 MPa)
Max Static Pressure: 65 psi (0.448 MPa)

This unit emits a sound pressure level below 70 dB

CARBON DIOXIDE (CO₂) SUPPLY

Min Pressure: 70 psi (0.483 MPa)
Max Pressure: 80 psi (0.552 MPa)

FITTINGS

Carb Water Inlet: 3/8 inch (9.5 mm) barb
Carb Water Outlet: 3/8 inch (9.5 mm) barb
Plain Water Inlet: 3/8 inch (9.5 mm) barb
Brand Syrup Inlets: 3/8 inch (9.5 mm) barb
Drain Fitting: 5/8 inch (15.9 mm) barb

READ THIS MANUAL

This manual was developed by the Lancer Corporation as a reference for the owner/operator and installer of this dispenser. Please read this guide before installation and operation of this dispenser. If service is required please call your Lancer Service Agent or Lancer Customer Service. Always have your model and serial number available when you call.

Your Service Agent: _____

Service Agent Telephone Number: _____

Serial Number: _____

Model Number: _____

INSTALLATION

Unpack the Dispenser

1. Cut package banding straps and remove.
2. Open the box and remove the accessory kit and loose parts.
3. Carefully lift the unit out of the box and place on a flat surface taking care to not scratch the plastic covers.

NOTE

Inspect unit for concealed damage. If evident, notify delivering carrier and file a claim against the same.

Selecting/Preparing Counter Location

NOTE

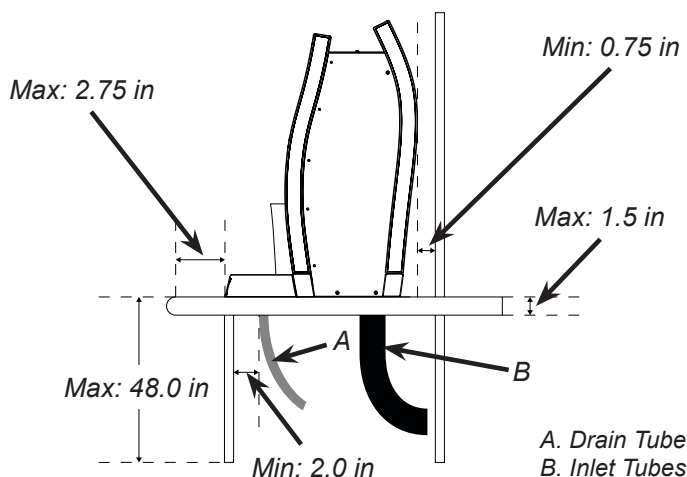
The dispenser should only be installed in a location where it can be overseen by trained personnel

1. Select a location that is in close proximity to a properly grounded electrical outlet, within five (5) feet (1.5 m) of a drain, and a water supply that meets the requirements shown in the Specifications section found on page 2.

⚠ ATTENTION

Inspect the counter location where the unit is to be installed. Verify the selected counter is strong enough to safely support the weight of the installed unit, after the cutout for the unit is made. The ideal counter for installation should measure at least 25 mm (1 inch) thick.

2. Select a location that utilizes the clearances/space required for installation.



3. Select a location for the remote chiller system or carbonator (if necessary), syrup pumps, CO₂ tank, syrup containers, and water filter (recommended).
4. Using Counter Cutout Template provided (and on the back of this manual) cut out required opening for the tower installation in the designated location.

NOTE

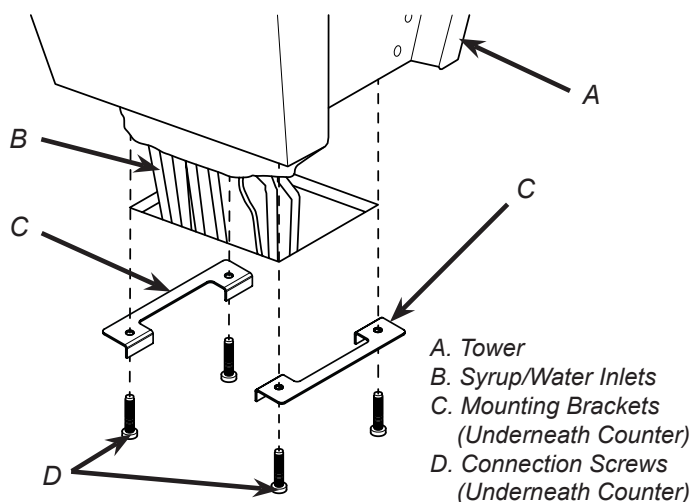
To assure that beverage service is accessible to all customers, Lancer recommends that counter height and equipment selection be planned carefully. The 2010 ADA Standards for Accessible Design states that the maximum reach height from the floor should be no more than 48 in (1.2 m) if touch point is less than 10 in (254 mm) from the front of the counter, or a maximum of 46 in (1.17 m) if the touch point is more than 10 in (254 mm) and less than 27 in (685 mm) from the front of the counter. For more information about the customer's legal requirements for the accessibility of installed equipment, refer to 2010 ADA Standards for Accessible Design - <http://www.ada.gov>.

Dispenser Installation

1. Using proper lifting techniques, lift the tower over the counter top, then route end of power cord through the designated opening in the counter.
2. Slide the tower into the cutout in the counter and use the screws and mounting brackets provided to secure the tower to the counter.

⚠ ATTENTION

When attaching the tower to the counter, make sure the screws do not extend more than 0.75 in (19 mm) from the top of the counter. These could damage the valves when installing the dispenser.

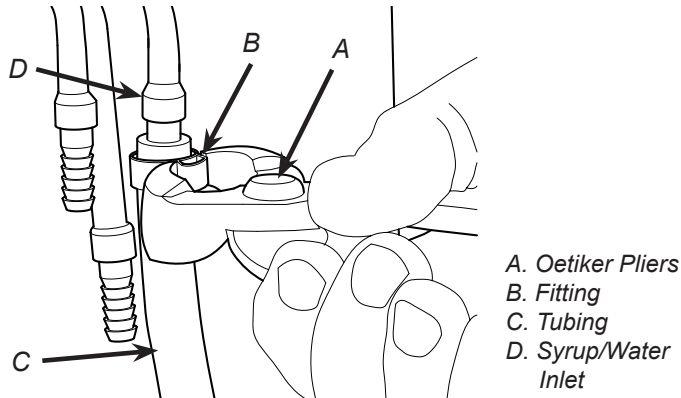


NOTE

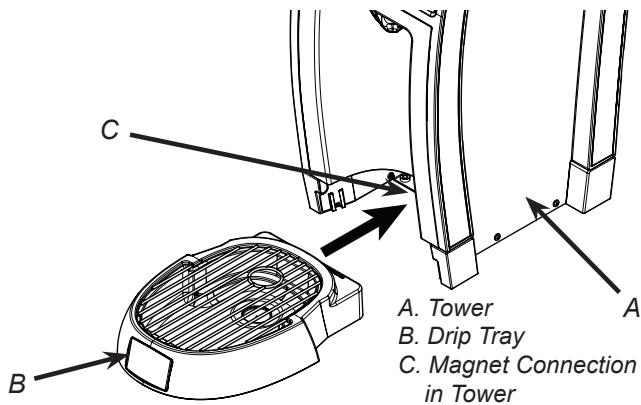
NSF listed units must be sealed to the counter.

3. Route appropriate tubing from the syrup pump location to the syrup inlets on the tower. Connect tubing to inlets using the oetiker pliers and fittings. Repeat for all syrup connections.

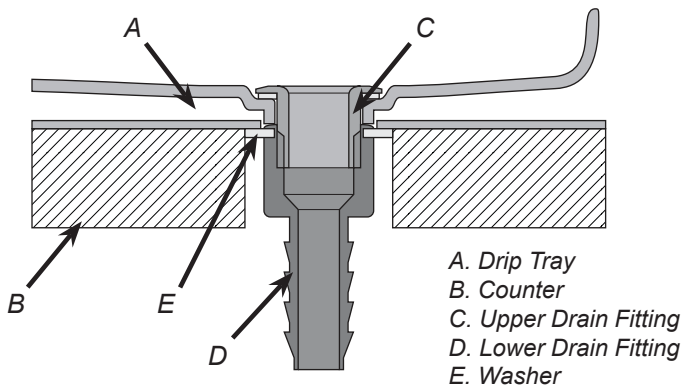
- Route appropriate tubing for the carbonated/plain water inlets then connect tubing to inlet. Repeat for all water connections including the return inlet.



- Slide drip tray into opening in tower until magnets engage and lock drip tray in place. Connect ADA wire harness from drip tray to ADA wire harness in tower.



- If a drain line is to be utilized, place gasket at the bottom of the drain then attach drain fitting to drip tray.



⚠ ATTENTION

If a drain line is utilized, then connect ADA wire harness in drip tray to the wire harness behind splash plate before attaching drip tray.

- Plug in power cord to power supply then route power supply cord to the designated grounded electrical outlet.

⚠ WARNING

DO NOT PLUG UNIT INTO GROUNDED ELECTRICAL OUTLET AT THIS TIME. Make sure that all water lines are tight and unit is dry before making any electrical connections

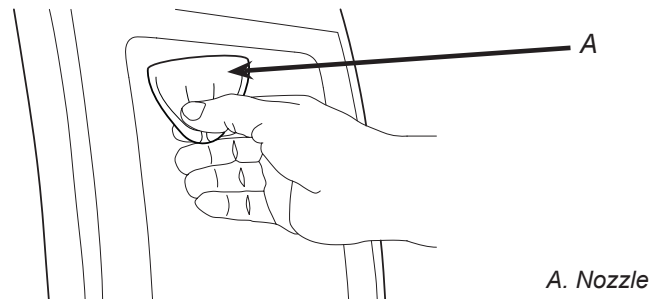
NOTE

Unit is designed to be supported by a remote chiller system or remote ice cooled system. Please see the manufacturer's specifications and instructions for installation. The following are the instructions for plumbing the remote chiller system to the tower.

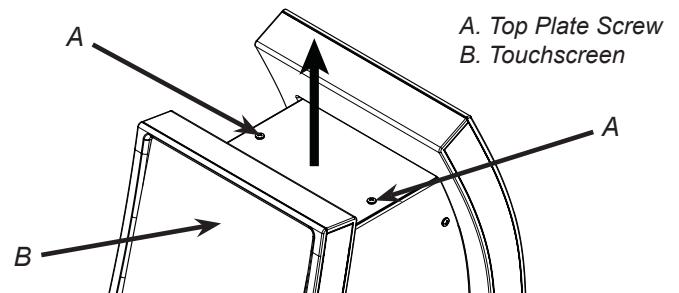
- Route appropriate tubing from the syrup pump location to the syrup inlets at the remote chiller. Repeat for all syrup connections.
- Route appropriate tubing from the water source to the water inlet at the remote chiller and only connect tubing to the water source.
- Turn on the water and flush the water line thoroughly.
- Turn off the water and connect water line to the plain water inlet at the remote chiller.

Dispenser Setup

- Remove the cup rest from drip tray.
- Remove the nozzle by twisting clockwise and pulling down.



- Remove the splash plate.
- Turn on the water supply.
- Verify all Bag-in-Box contain syrup and check for leaks.
- Open the pressure relief valve located on the remote chiller system by flipping up on the valve cap lever. Hold open until water flows from the relief valve then close (flip down) relief valve. (If applicable)
- Using a screwdriver, remove the top two screws of the top plate then slide plate back slightly and lift from the front edge to remove.



- Connect power cord to grounded electrical outlet.

⚠ WARNING

The dispenser must be properly electrically grounded to avoid serious injury or fatal electrical shock. The power cord has a three-prong grounded plug. If a three-hole grounded electrical outlet is not available, use an approved method to ground the unit. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords. Do not connect multiple electrical devices on the same outlet.

9. Turn on the power to the dispenser by flipping the power switch, located underneath the top plate removed in Step 7.
10. Once the screen has booted up, access the service menu by placing your finger at the top, right corner of the screen.
11. In one swift, fluid motion slide your finger along the top of the screen to the left till you reach the upper left corner of the screen, then hold your finger to the screen for a minimum of two (2) seconds.



- Slide Finger to Left and Hold

12. After you have held your finger to the upper left corner for a minimum of two (2) seconds, tap all four corners of the screen in any order.



13. A keypad will appear, enter the designated pin number to access the service menu.

NOTE

Contact Lancer Technical Support for the units' designated pin number.



- Enter Designated PIN #

14. For manager's access to the service menu, press and hold the upper, right-hand corner of the screen for a minimum of five (5) seconds and enter the manager's pin number (6655).

NOTE

The manager's access to the service menu allows access to the Lighting screen (page 12), the Sold Out screen (page 11), and the Time & Delays screen (page 13).

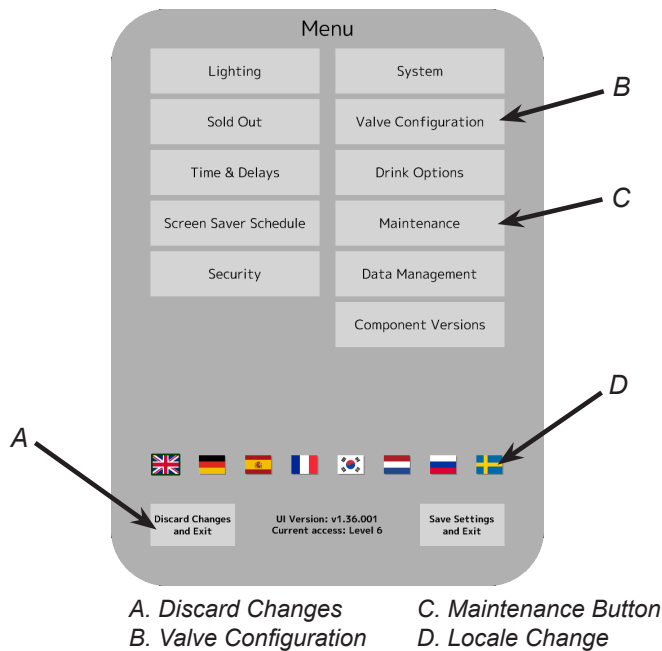
15. To lock the dispenser, or put it in "sleep" mode, repeat Step 13 but instead enter the lock code (3.14).

NOTE

This mode prevents users from dispensing drinks and acts as a power saving tool while the unit is not in use.

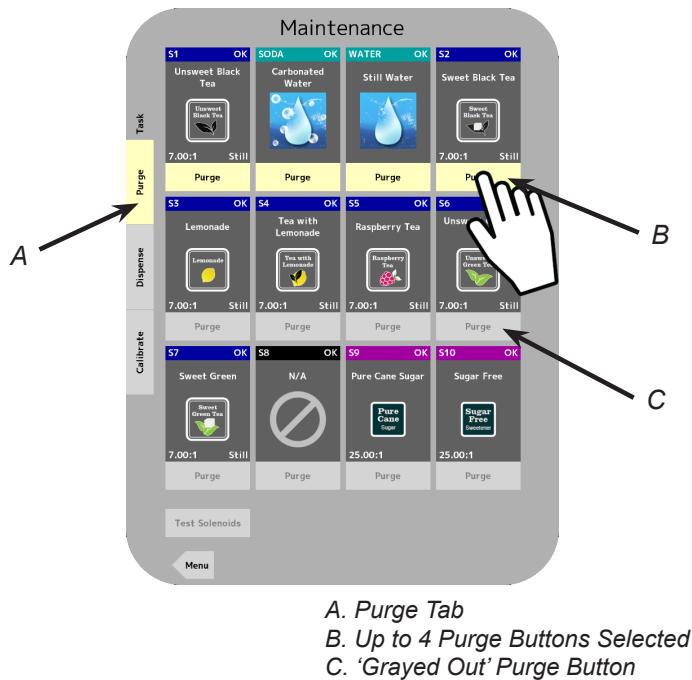
16. For access to only the Sold Out Menu, repeat Step 13 and enter the Sold Out pin (963.).

17. From the service menu press the *Maintenance* button.



18. Press the *Purge* tab on the far left side of the screen.

19. Press the *Purge* buttons for both the plain water and the carbonated water modules.



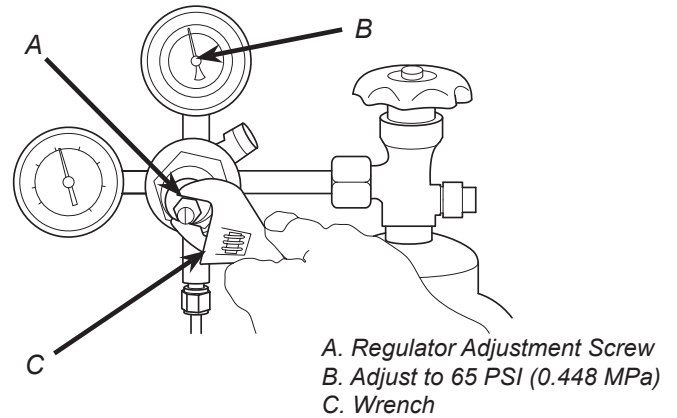
NOTE

Once the purge is activated, it will continue to dispense product until it is deactivated. To deactivate the purge, simply press the *Purge* button again. Up to four modules can be purged at one time. Once four modules are selected, all other modules are grayed out and cannot be selected.

20. Once a steady flow of water is achieved, press the *Purge* button again to deactivate the modules.

21. Ensure that the pump deck at the remote chiller is turned off before turning on the CO₂.

22. Turn on CO₂ at the source then, using a screwdriver, adjust the high pressure regulator at the source to 65 PSI (0.448 MPa) then tighten locknut with wrench.



23. Purge the carbonated water module until gas-out.

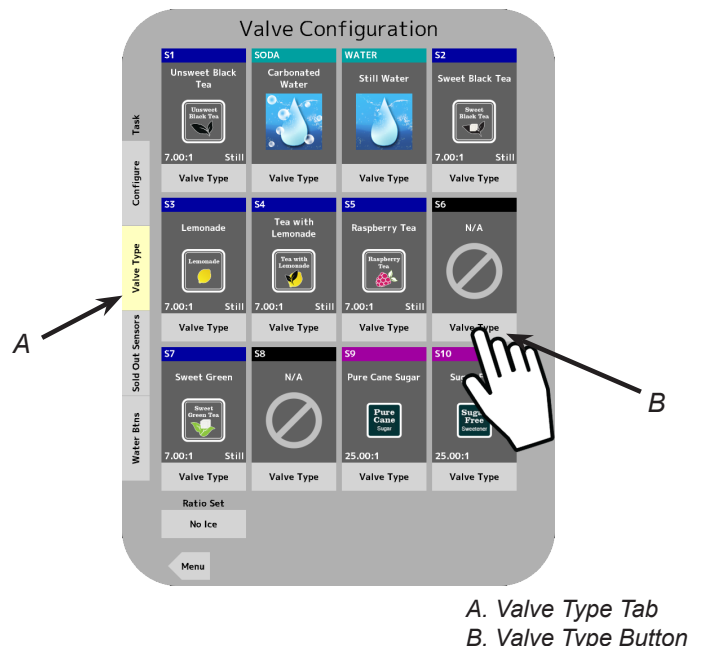
24. Reactivate the pump deck at the remote chiller.

25. Purge the carbonated water module again until a steady flow of carbonated water is achieved.

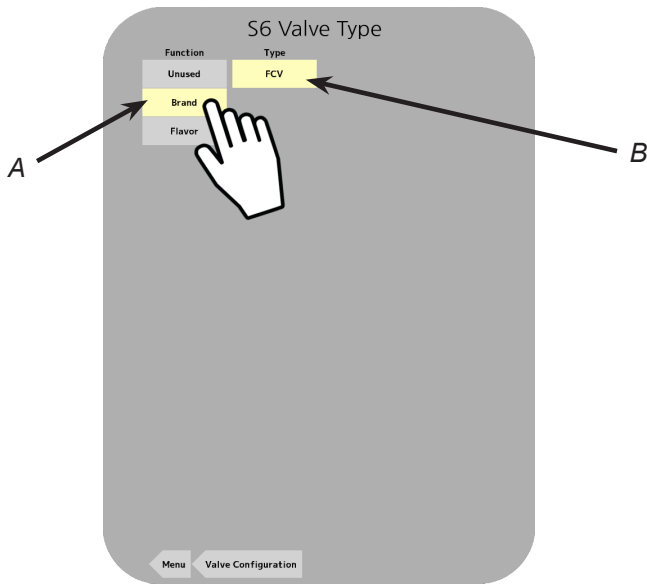
26. Purge each syrup module until a steady flow of syrup is achieved.

Adding New Brand/Flavor Module

1. In order to add a new brand or flavor module, the module must first be activated.
2. From the Service menu, press the *Valve Configuration* button.
3. Press the *Valve Type* tab on the far left side of the screen, then select any of the inactive modules.

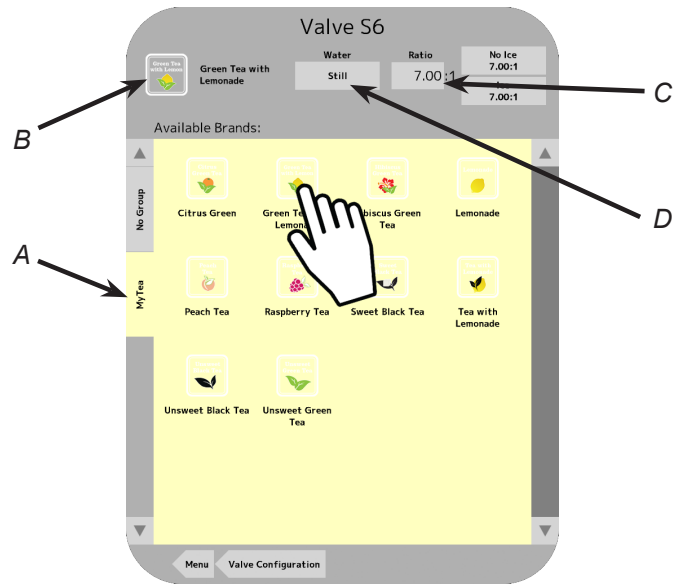


- From here, choose the desired function and valve type for the incorporated valve module.



A. Valve Function
B. Valve Type

- Select a new brand from the available Brands Library tabs on the left side of the screen.



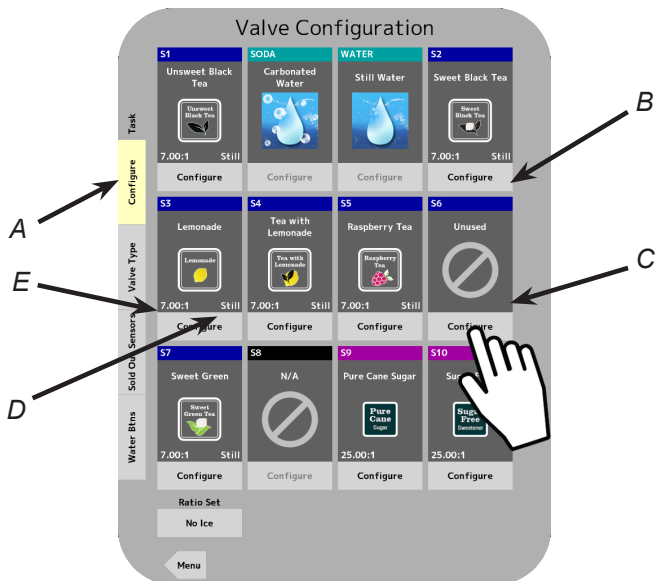
A. Brand Library Tab
B. Replacement Brand
C. Brand Ratio
D. Water Type

- Press the *Valve Configuration* button to return to the Valve Configuration menu.
- Repeat steps 3 and 4 for any other desired brand or flavor modules.
- From the Valve Configuration menu, press the *Configure* tab on the far left side of the screen.
- Press the *Configure* button under any of the activated brand or flavor modules to open its Configuration Page.

NOTE

Each brand has a default water type and ratio when they are selected. The water type and ratio can be adjusted if necessary, however, adjusting the ratio here is purely representational and does not set the ratio for the finished drink. Adjust the ratio by selecting the Ice or No Ice ratio using the buttons in the upper right corner of the screen, or by manually adjusting the ratio by tapping the number and entering the new value on the keypad.

- Once a brand/brand has been selected to a corresponding module, press the *Valve Configuration* button to return to the Valve Configuration Screen.
- Repeat Steps 8 and 9 for any other desired brand or flavor modules.
- Press the *Menu* button to return to the Service menu.
- From the Service Menu, press the *Maintenance* button.
- Press the *Purge* tab on the far left side of the screen.
- Purge any new brand or flavor module until there is a steady flow of syrup. (See page 6)
- Press the *Menu* button to return to the Service Menu.



A. Configure Tab
B. Configure Button
C. Activated Module
D. Brand Water Type
E. Brand Ratio

CALIBRATION & MAINTENANCE

Calibrating Plain Water Module

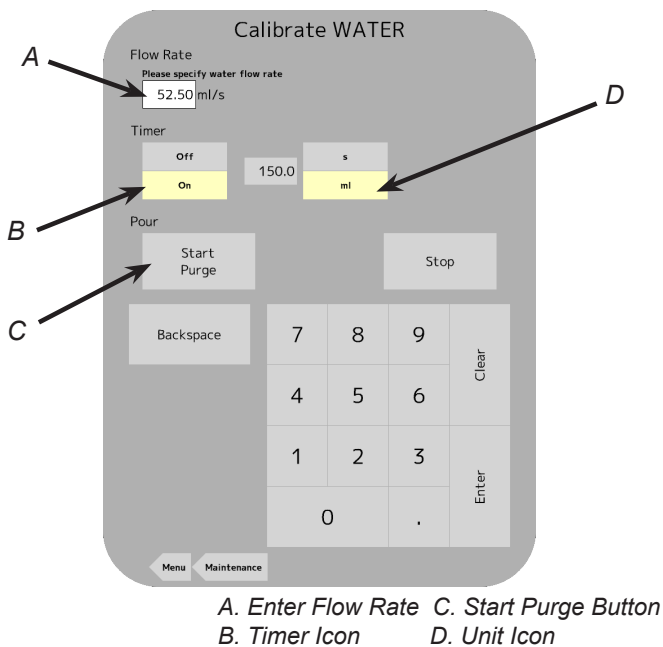
1. Re-install nozzle. (See page 4)
2. From the Service menu, press the *Maintenance* button.
3. Press the *Calibrate* tab on the far left side of the screen and press the *Calibrate* button for the plain water module.
4. Enter the desired flow rate in milliliters per second (ml/sec).
This number is based on the target finished drink flow rate of 60 ml/sec and the desired drink ratio.

EXAMPLE

Finished drink flow rate = 60 ml/sec
Ratio = 7:1

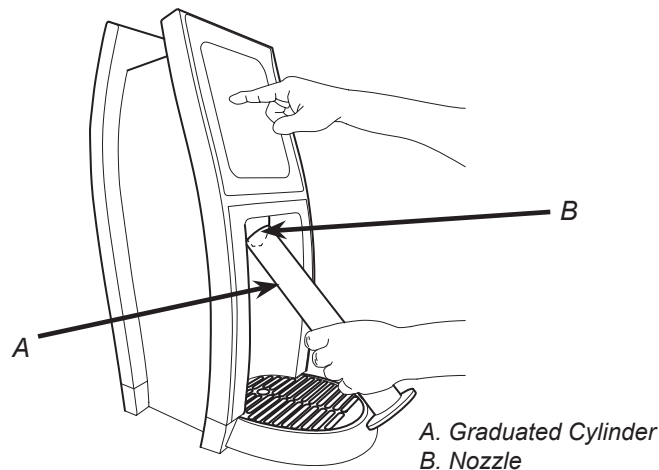
$60 \text{ ml/s} \times 7 / (7 + 1) = 52.5 \text{ ml/sec}$ water flow rate

$60 \text{ ml/s} \times 1 / (7 + 1) = 7.5 \text{ ml/sec}$ syrup flow rate

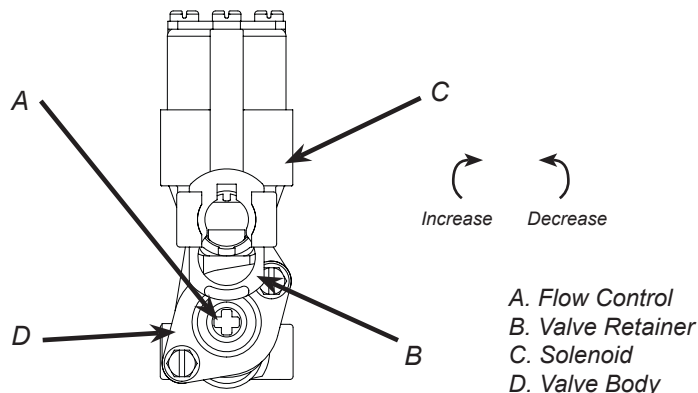


5. Set the Timer to the ON position and select milliliters (ml) as the desired unit of measurement.
6. Using the keypad, enter a specific volume to be dispensed based on the size of the graduated cylinder being used to calibrate the plain water module. The larger the volume dispensed, the more accurate the results. Use the example 150 ml.

7. With the graduated cylinder placed in a position below the nozzle, press the *Start Purge* button. The unit will dispense the volume designated in the previous step.



8. Examine the dispensed volume in the graduated cylinder.
9. If the dispensed volume does not match the value (150 ml) entered on the screen in step 5, remove the protective cap for the corresponding valve and use a screwdriver to adjust the water flow control. (See Plumbing Diagram on page 16 for reference).



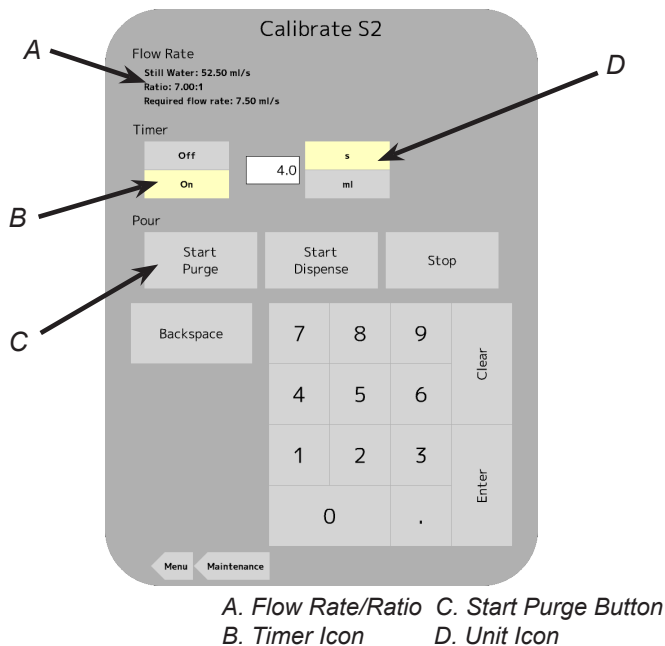
10. Repeat steps 7-9 until the designated volume of 150 ml in step 5 is achieved.
11. Repeat steps 3-10 for the carbonated water module, if valve is present.

Calibrating Brand Syrup Modules

NOTE

The refrigeration unit should have been running for at least one (1) hour before attempting to set flow rates on valves. The drink temperature should be no higher than 40°F (4.4°C) when flow rates are set. This is best done after the remote chiller has already made an ice bank. (If applicable)

1. From the Service menu, press the *Maintenance* button.
2. Press the *Calibrate* tab on the far left side of the screen and press the *Calibrate* button for the first brand syrup module.
3. The water flow rate should be set from the calibration of the plain water module in the previous section and the ratio should be determined from when the brand was configured. (See page 6, *Adding New Brand/Flavor Module*)



NOTE

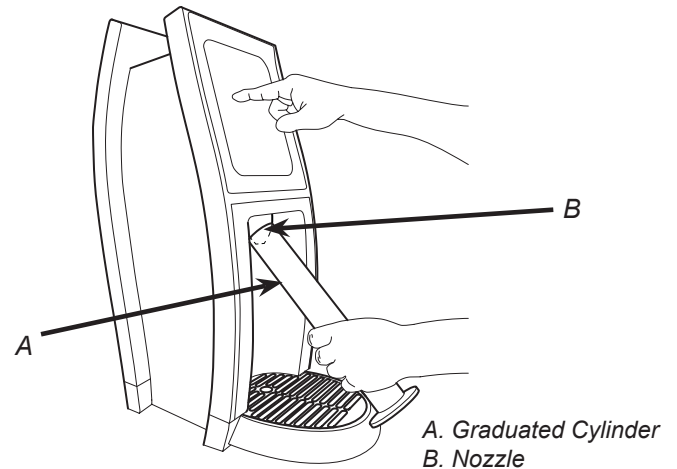
The brand syrup modules can be calibrated the same as the plain water module by using volume (ml). Below are the steps to calibrate the modules using the unit of time (seconds) instead of volume (ml).

4. Set the Timer to the ON position and select seconds (s) as the desired unit of measurement.
5. Using the keypad, enter in a time of 4 seconds as the preset dispensing time.

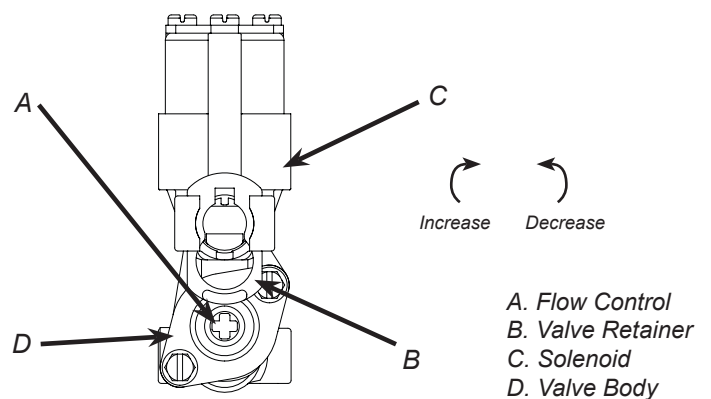
NOTE

The finished drink flow rate was set to 60 ml/sec, which makes the finished syrup flow rate 7.5 ml/s. In 4 seconds, the volume of syrup that should be dispensed is 30 ml.

6. With the graduated cylinder placed in a position below the nozzle, press the *Start Purge* button. The unit will dispense the designated syrup for 4 seconds.



7. Examine the dispensed volume in the graduated cylinder.
8. If the dispensed volume does not match the value of 30.0 ml, (see table on next page) remove the protective cap for the corresponding valve and use a screwdriver to adjust the brand syrup flow control.



9. Repeat steps 6-8 until the designated volume of 30 ml is achieved.
10. Repeat steps 2-9 for the remaining brand syrup modules.
11. Press the *Maintenance* button to return to the Maintenance screen and then press the *Menu* button to return to the Service menu.

Ratio Settings Table:

The table below shows the flow rate for the plain water modules and the volume of syrup dispensed after a 4 second pour, for different ratio settings (All at a finished drink flow rate of 60 ml/sec):

Ratio	5	5.2	5.4	5.6	5.8	6	6.2	6.4	6.6	6.8	7
Plain Water Flow Rate (ml/s)	50	50.32	50.63	50.91	51.18	51.43	51.67	51.89	52.11	52.31	52.50
Volume of Syrup (4 sec.) (ml)	40	38.71	37.50	36.36	35.29	34.29	33.33	32.43	31.58	30.77	30

Ratio	7.2	7.4	7.5	7.6	7.8	8	8.2	8.4	8.6	8.8	9
Plain Water Flow Rate	52.68	52.86	52.94	53.02	53.18	53.33	53.48	53.62	53.75	53.88	54
Volume of Syrup (4 sec.)	29.27	28.57	28.24	27.91	27.27	26.67	26.09	25.53	25	24.49	24

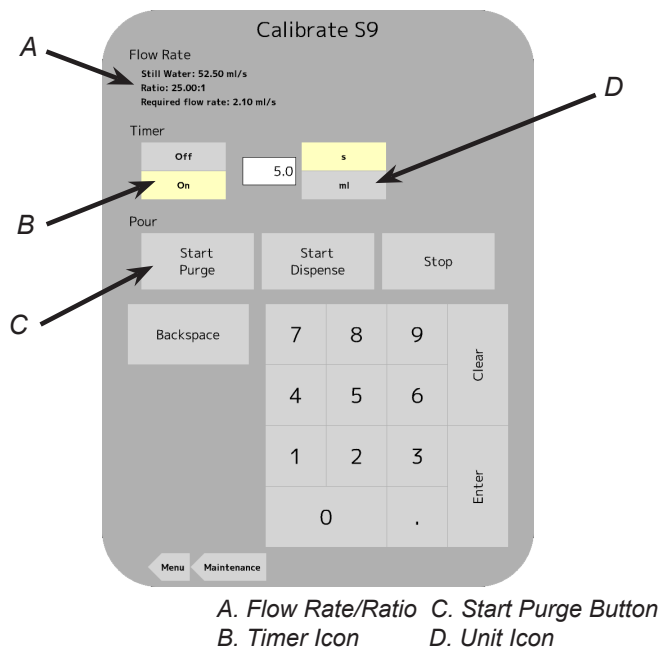
Calibrating Flavor Modules

- From the Maintenance menu, press the *Calibrate* tab on the far left side of the screen and press the *Calibrate* button for any designated flavor module.
- The water flow rate should be set from the calibration of the plain water module in the previous section and the ratio should be determined from when the flavor was configured. (See page 6, *Adding New Brand/Flavor Module*)

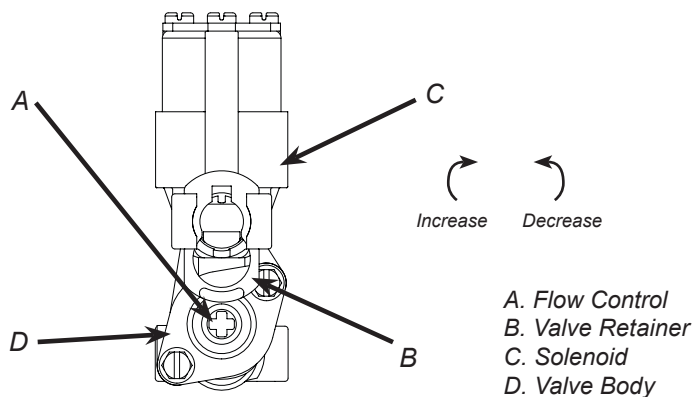
NOTE

The finished drink flow rate was set to 60 ml/sec, which makes the finished flavor flow rate 2.1 ml/s. In 5 seconds, the volume of syrup that should be dispensed is 10.5 ml.

- With the graduated cylinder placed in a position below the nozzle, press the *Start Purge* button. The unit will dispense the designated flavor for 5 seconds.
- Examine the dispensed volume in the graduated cylinder.
- If the dispensed volume does not match the value of 10.5 ml, (see note above) remove the protective cap for the corresponding valve and use a screwdriver to adjust the flavor flow control.



- Set the Timer to the ON position and select seconds (s) as the desired unit of measurement.
- Using the keypad, enter in a time of 5 seconds as the preset dispensing time.



- Repeat steps 5-7 if any more bonus flavor flow adjustment is necessary.
- Repeat steps 2-8 for any remaining bonus flavor module.
- Re-install top plate, splash plate, and cup rest. (See page 4)

Scheduled Maintenance

As Needed	<ul style="list-style-type: none"> Keep exterior surfaces of dispenser (include drip tray and cup rest) clean using a clean, damp cloth.
Daily	<ul style="list-style-type: none"> Remove outer nozzle and rinse well in warm water. DO NOT use soap or detergent. This will cause foaming and off taste in finished product. Using a soft cloth and cleaning solution, clean the nozzle injectors. See Cleaning and Sanitizing Nozzle section on page 13 for reference. Remove cup rest and wash in cleaning solution. Pour warm cleaning solution into the drip tray and wipe with a clean cloth. With a clean cloth and cleaning solution, wipe off all of the unit's exterior surfaces and splash areas. DO NOT USE ABRASIVE SOAPS OR STRONG DETERGENTS. DO NOT USE AMMONIA BASED PRODUCTS WHEN CLEANING THE SCREEN OR SURROUNDING PLASTICS. Replace the cup rest and nozzle.
Weekly	<ul style="list-style-type: none"> Taste each product for off tastes. If off taste occurs clean and sanitize the unit using the appropriate procedures outlined in the Cleaning and Sanitizing section of this manual.
Monthly	<ul style="list-style-type: none"> Clean and sanitize the unit using the appropriate procedures outlined in the Cleaning and Sanitizing section of this manual.
Every Six Months	<ul style="list-style-type: none"> Clean remote chiller according to manufacturer's instructions (if necessary). Clean the entire exterior of the unit.

FEATURES OF THE TOUCHSCREEN TOWER

NOTE

The following are the features only available from the manager's access to the service menu (PIN: 6655, see page 5). For information on more available features, see the TsT User Guide (Lancer PN: 28-0975) and Operation Manual (Lancer PN: 28-0945/02) located on the Lancer website (lancercorp.com) or by the QR code at the beginning of this Installation Guide.

Sold-Out Feature

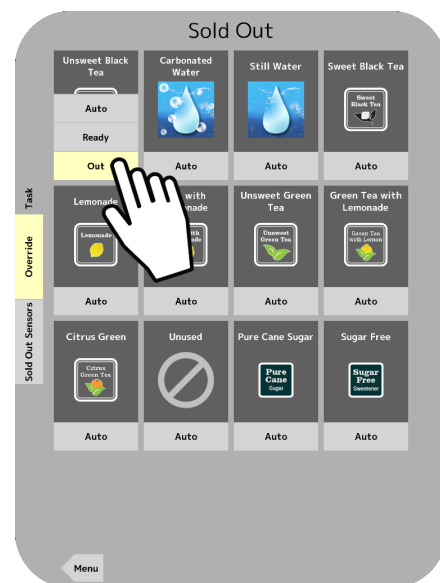
- From the Service Menu, press the *Sold Out* button.
- Manually adjust specific brands to read *Ready*, *Out*, or *Auto*.

NOTE

Ready - signifies there is available product and the valve will dispense when activated

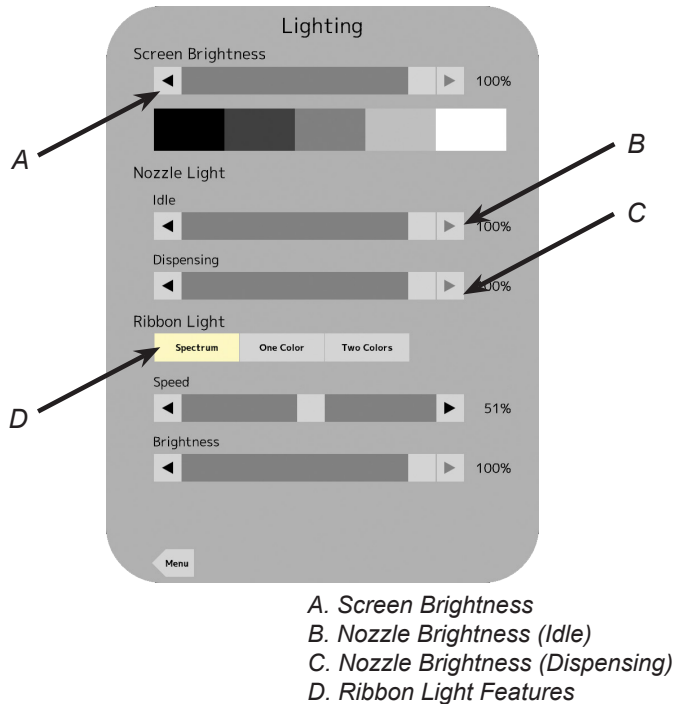
Out - signifies there is no available product or there is a problem with the specified brand and will not dispense when activated.

Auto - signifies that the configured Sold Out Sensor controls whether the brand can be dispensed. This feature requires an optional sold out sensor kit, which does not come standard, and is available for up to ten (10) brands at one time. If no sold out sensor is assigned then the Auto feature acts the same as the Ready feature.



Lighting Features

1. From the Service menu, press the *Lighting* button.
2. From this menu, the user can adjust the *Screen Brightness* as well as the brightness of the *Nozzle Light* when the unit is dispensing and when the unit is not dispensing (Idle).



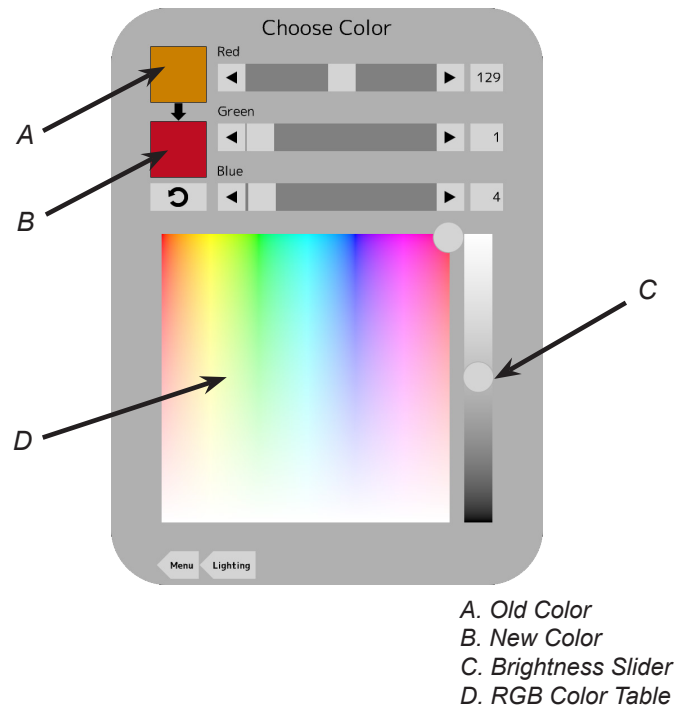
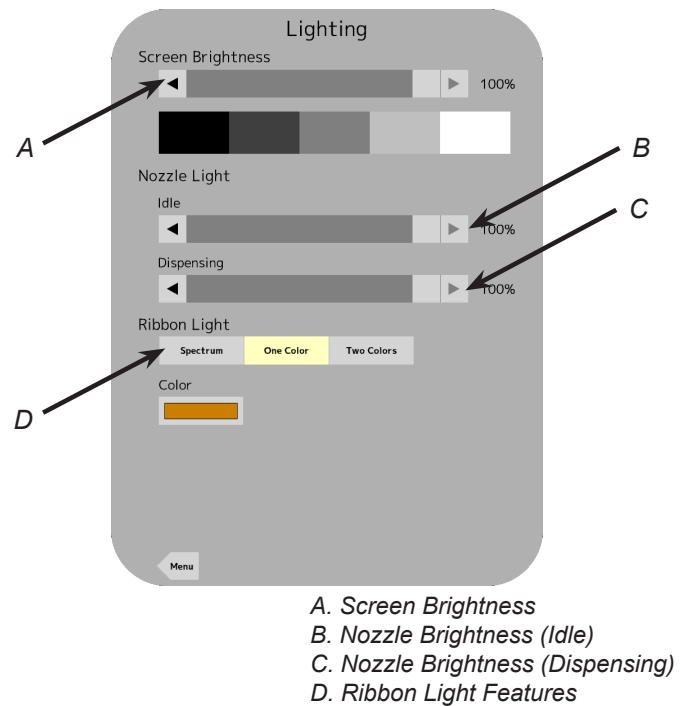
3. Below the *Nozzle Light* sliders, the user can change how the ribbon lights on the side of the dispenser are displayed.

NOTE

Spectrum - Ribbon lights cycle through preset colors. The brightness and the speed at which the colors cycle can be adjusted using the sliders.

One Color - Ribbon lights are displayed using only one color determined by the user. Press the *Color* bar to change the color using the *RGB Color Table*.

Two Colors - Ribbon lights cycle through two colors determined by the user. Press the *Color* bars to change the colors using the *RGB Color Table*. The speed at which the colors cycle can be adjusted using the slider.



Time & Delays Settings

1. From the Service Menu, press the *Time & Delays* button to access the Time & Delays Menu.
2. Update the current *Date & Time*, if necessary, by tapping the field and using the keypad to enter the correct date or time. Press *Set* to save the changes.
3. Enable or Disable any of the four (4) Delay functions by tapping underneath their designated function names: *Brand Timeout*, *Screen Saver*, *Sleep*, and *Dispense Timeout*.

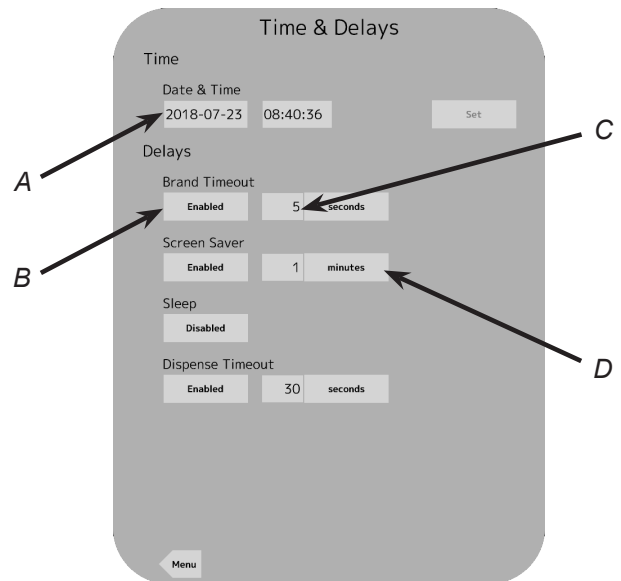
NOTE

Brand Timeout - the amount of time for a selected brand on the Pour Screen to be unselected after inactivity

Screen Saver - the amount of time for the screen saver to be initiated after inactivity

Sleep - the amount of time for the unit to enter Sleep Mode (see page 5) after inactivity.

Dispense Timeout - the amount of time a valve will pour before automatic shutoff.



- A. Current Date/Time
B. Enable/Disable
C. Frequency
D. Units of Time

4. Adjust the *Frequency* and *Units of Time* by selecting their corresponding fields.

CLEANING AND SANITIZING

GENERAL INFORMATION

Lancer equipment (new or reconditioned) is shipped from the factory cleaned and sanitized in accordance with NSF guidelines. The operator of the equipment must provide continuous maintenance as required by this manual and/or state and local health department guidelines to ensure proper operation and sanitation requirements are maintained.

The cleaning procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established by the manufacturer for that equipment.

Cleaning should be accomplished only by trained personnel. Sanitary gloves are to be used during cleaning operations. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

⚠ ATTENTION

- Use sanitary gloves when cleaning the unit and observe all applicable safety precautions.
- **DO NOT** use a water jet to clean or sanitize the unit.
- **DO NOT** disconnect water lines when cleaning and sanitizing syrup lines, to avoid contamination.
- **DO NOT** use strong bleaches or detergents; These can discolor and corrode various materials.
- **DO NOT** use metal scrapers, sharp objects, steel wool, scouring pads, abrasives, or solvents on the dispenser.
- **DO NOT** use hot water above 140° F (60° C). This can damage the dispenser.
- **DO NOT** spill sanitizing solution on any circuit boards. Insure all sanitizing solution is removed from the system.

Cleaning Solution

Mix a mild, non-abrasive detergent (e.g. Sodium Laureth Sulfate, dish soap) with clean, potable water at a temperature of 90°F to 110°F (32°C to 43°C). The mixture ratio is one ounce of cleaner to two gallons of water. Prepare a minimum of five gallons of cleaning solution. Do not use abrasive cleaners or solvents because they can cause permanent damage to the unit. Ensure rinsing is thorough, using clean, potable water at a temperature of 90°F to 110°F. Extended lengths of product lines may require additional cleaning solution.

Sanitizing Solution

Prepare the sanitizing solution in accordance with the manufacturer's written recommendations and safety guidelines. The type and concentration of sanitizing agent recommended in the instructions by the manufacturer shall comply with 40 CFR §180.940. The solution must provide 100 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach) and a minimum of five gallons of sanitizing solution should be prepared.

Cleaning and Sanitizing Product Lines

1. Disconnect product lines from BIB's or other product supply.
2. Place product lines, with BIB connectors, in a bucket of warm water.
3. Activate each valve to fill the lines with warm water and flush out product remaining in the lines.
4. Prepare Cleaning Solution described above.
5. Place product lines, with BIB connectors, into cleaning solution.
6. Activate each valve until lines are filled with cleaning solution then let stand for ten (10) minutes.
7. Flush out cleaning solution from the syrup lines using clean, warm water.
8. Prepare Sanitizing Solution described above.
9. Place product lines into sanitizing solution and activate each valve to fill lines with sanitizer. Let sit for ten (10) minutes.
10. Reconnect product lines to BIB's and draw drinks to flush solution from the dispenser.
11. Taste the drink to verify that there is no off-taste. If off-taste is found, flush product system again.

⚠ CAUTION

Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

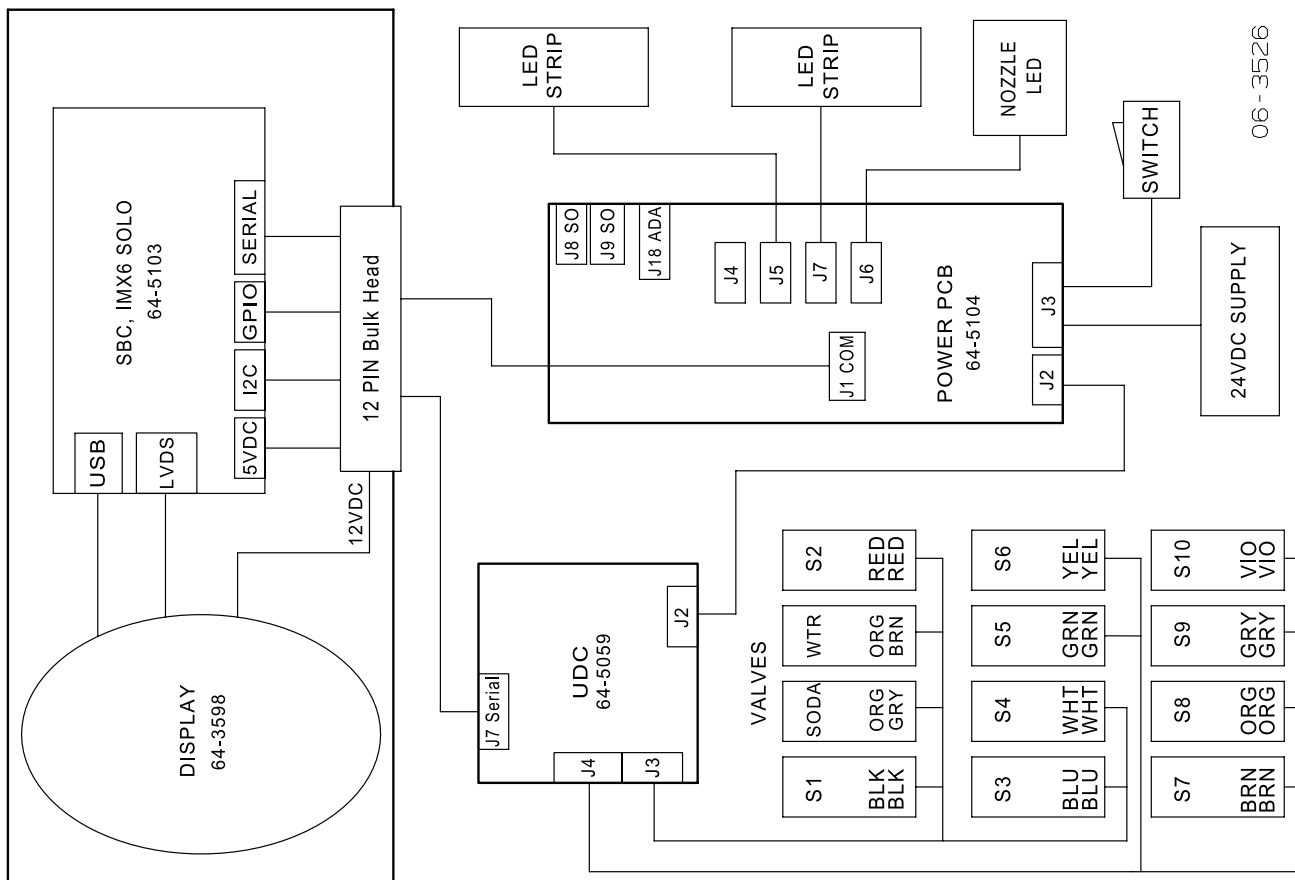
Cleaning and Sanitizing Nozzle

1. Disconnect power, so as to not activate valve while cleaning.
2. Remove outer nozzle by twisting counter clockwise and pulling down.
3. Rinse nozzle with warm water.
4. Wash nozzle with cleaning solution then immerse in sanitizing solution and let sit for fifteen (15) minutes.
5. Set nozzle aside and let air dry. **DO NOT** rinse with water after sanitizing.
6. Using a soft, clean cloth and cleaning solution, clean the nozzle injectors.
7. Using a soft, clean cloth sanitize the nozzle injectors and let air dry.
8. Reconnect nozzle.
9. Connect power.
10. Taste the drink to verify that there is no off-taste. If off-taste is found, sanitize the nozzle and nozzle injectors again.

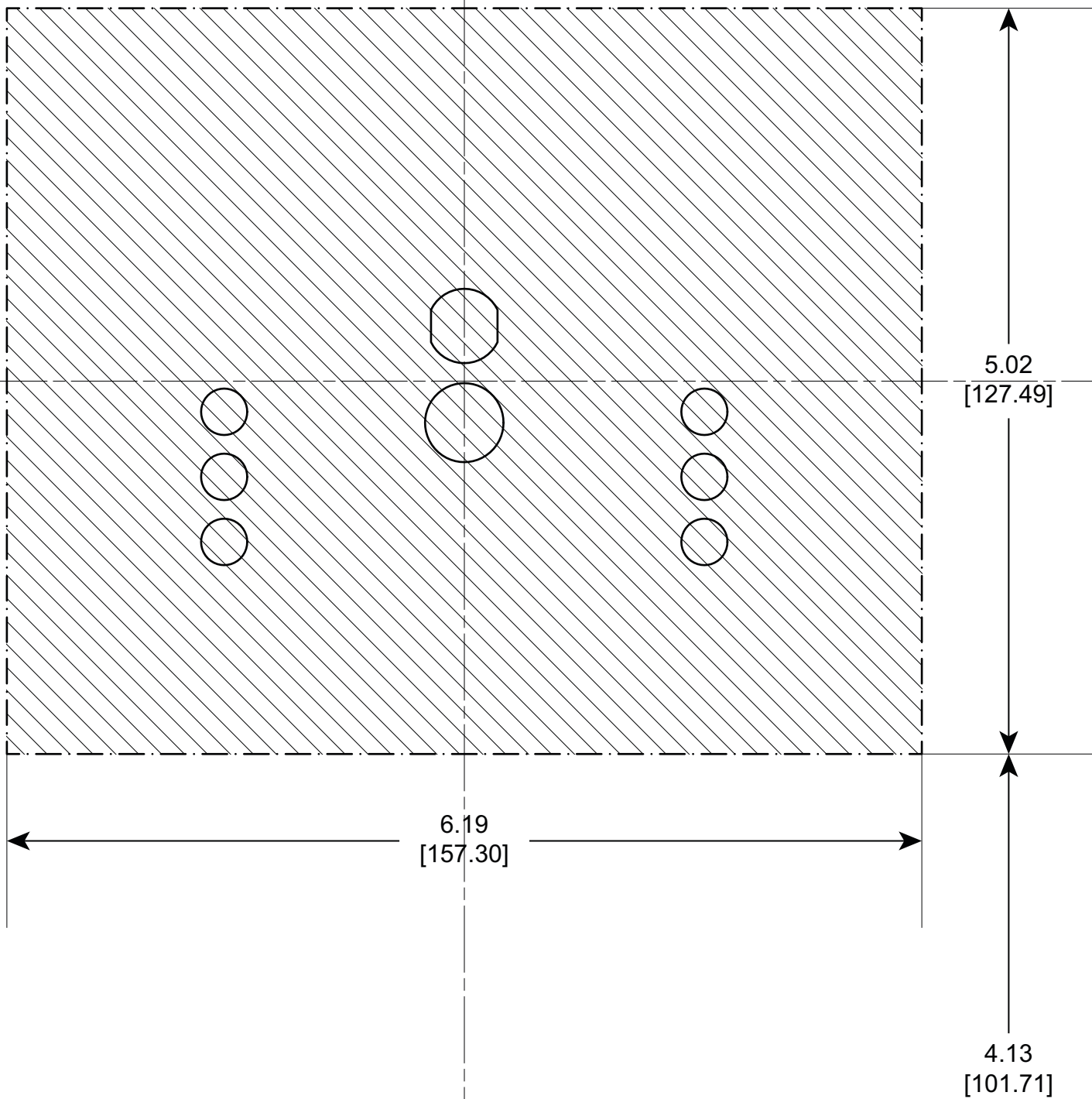
⚠ CAUTION

Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

Wiring Diagram



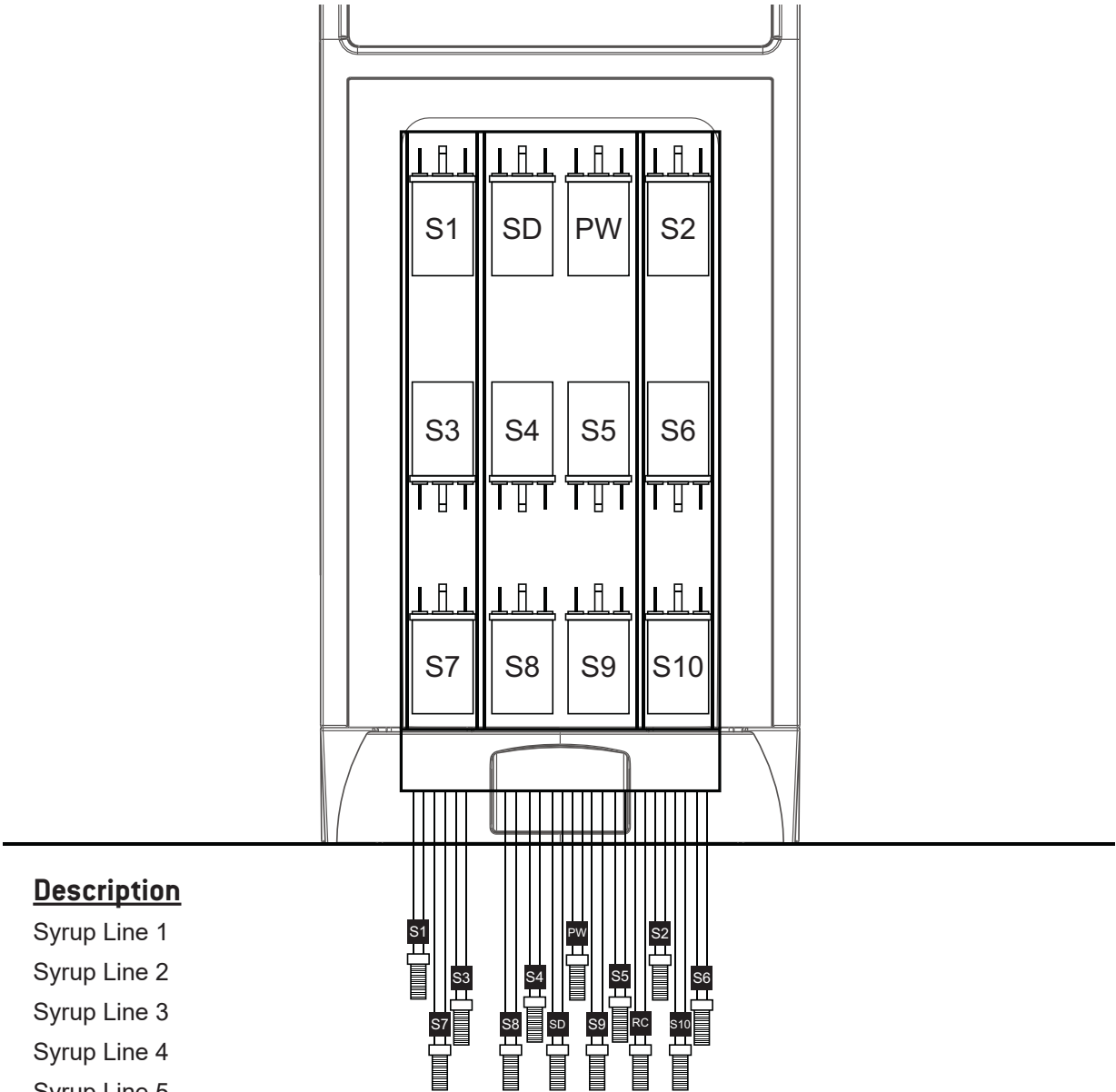
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Counter Cut-out (To Scale)

FRONT OF UNIT

Plumbing Diagram



Item	Description
S1	Syrup Line 1
S2	Syrup Line 2
S3	Syrup Line 3
S4	Syrup Line 4
S5	Syrup Line 5
S6	Syrup Line 6
S7	Syrup Line 7
S8	Syrup Line 8
S9	Syrup Line 9
S10	Syrup Line 10
PW	Plain Water Line
SD	Soda Line
RC	Recirculation Line

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