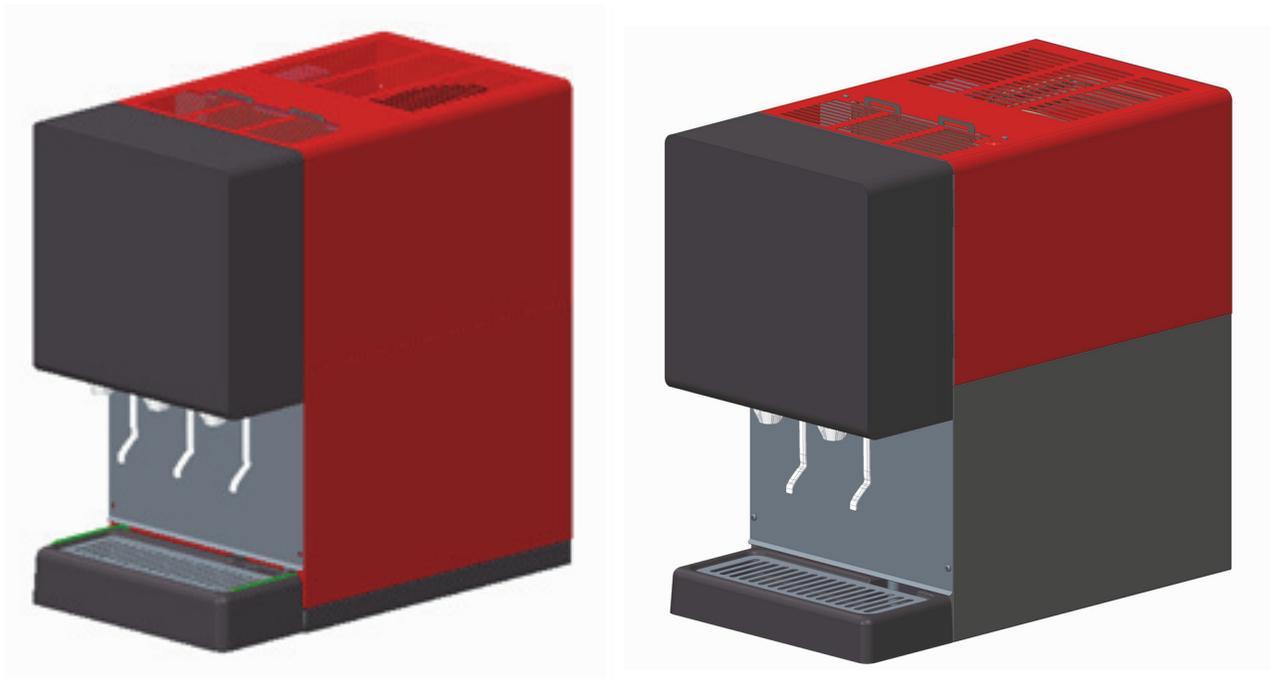


GENESIS 2/3V

POST-MIX BEVERAGE DISPENSER

Installation manual



Publication Number: 911000301INS (Genesis 3V) / 911000001INS (Genesis 2V)

Revision Date: August 26, 2016

Revision: A

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The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

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Contact Information:

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

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This document contains the original instructions for the unit described.

Marmon food & beverage technologies India private limited

#49A & 49 B, 3rd Phase

Peenya industrial Area

Bangalore – 560058

India.

Correct Disposal of this Product



This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling



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SAFETY INSTRUCTIONS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

Safety Overview

- Read and follow **ALL SAFETY INSTRUCTIONS** in this manual and any warning/caution labels on the unit (decals, labels or laminated cards).
- Read and understand ALL applicable OSHA (Occupational Safety and Health Administration) “safety regulations before operating this unit”.

Recognition



DIFFERENT TYPES OF ALERTS

DANGER:

Indicates an immediate hazardous situation which if not avoided **WILL** result in serious injury, death or equipment damage.

WARNING:

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in serious injury, death, or equipment damage.

CAUTION:

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury or equipment damage.

SAFETY TIPS

- Carefully read and follow all safety messages in this manual and safety signs on the unit.
- Keep safety signs in good condition and replace missing or damaged items.
- Learn how to operate the unit and how to use the controls properly.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Keep your unit in proper working condition and do not allow unauthorized modifications to the unit.

QUALIFIED SERVICE PERSONNEL

WARNING:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. **ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

SAFETY PRECAUTIONS

This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following:

WARNING:

Disconnect power to the unit before servicing following all lock out/tag out procedures established by the user. Verify all of the power is off to the unit before any work is performed.

Failure to disconnect the power could result in serious injury, death or equipment damage.

CAUTION:

Always be sure to keep area around the unit clean and free of clutter. Failure to keep this area clean may result in injury or equipment damage.

SHIPPING AND STORAGE

CAUTION:

Before shipping, storing, or relocating the unit, the unit must be sanitized and all sanitizing solution must be drained from the system. A freezing ambient environment will cause residual sanitizing solution or water remaining inside the unit to freeze resulting in damage to internal components.

CO₂ (CARBON DIOXIDE) WARNING

DANGER:

CO₂ displaces oxygen. Strict attention **MUST** be observed in the prevention of CO₂ gas leaks in the entire CO₂ and soft drink system. If a CO₂ gas leak is suspected, particularly in a small area, **IMMEDIATELY** ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentrations of CO₂ gas experience tremors which are followed rapidly by loss of consciousness and **DEATH**.

POWER CORD

If the power cord is damaged, it must be replaced by a special cord available from the manufacturer or its service agent. Detachable cord sets should meet the below requirements:

- Cord type should be H05VV-F or stronger, with earthing conductor;
- Cord section should be minimum nominal cross-sectional area of 1.0mm²;
- Plug should also be earthing type and obtain approval with above cord.

SOUND LEVEL

The A-weighted sound pressure level has been determined to be below 70dBA.

UNIT LOCATION

This unit is not designed for use in outdoor locations.

CAUTION:

Appliance is not suitable for installation in an area where a water jet could be used.

CAUTION:

The appliance must be placed in a horizontal position.

IMPORTANT:

This unit is not intended to use, altitudes exceeding 2000m.



GENERAL INSTRUCTIONS

UNIT SPECIFICATION

The Genesis 2/3V is an over counter Ice bank system beverage dispenser. It contains three valves for drink dispense. Valve number 2 can be converted from carbonated drink to non-carbonated drink dispense. It is a supervised type Class 1 appliance.

Unit Weight	60 kg
Ice Bank Capacity	8.2 kg
Number of Valves	3 Nos.
Operating Ambient	10°C to 40°C (50°F to 104° F) 45% - 75% RH
Electrical	230 VAC, 50Hz 3.6 Amps of total unit draw
Dimensions	380mm Width* 670mm Depth* 760mm Height
IP Rating	IP 20

THEORY OF OPERATION

NOTE: The unit is factory set to dispense carbonated water as per customer's requirement.

A CO₂ cylinder delivers carbon dioxide (CO₂) gas through adjustable CO₂ regulators to the applicable syrup tanks or bag-in-box syrup pumps and also the integral (built-in) carbonator. Plain water enters the integral carbonator carbonated water tank and is carbonated by CO₂ gas pressure also entering the water tank. When dispensing valve is activated, CO₂ gas pressure exerted upon the applicable syrup tank contents or bag-in-box syrup pump pushes syrup from the syrup supply, through the Unit syrup cooling coil, and on to the dispensing valve.

Carbonated water is pushed from the integral carbonator carbonated water tank by CO₂ gas head pressure and is pushed through the carbonated water manifold to the dispensing valve. Syrup and carbonated water meet simultaneous at the dispensing valve resulting in a carbonated drink being dispensed. A still (non-carbonated) drink is dispensed in the same manner as the carbonated drink except plain water is substituted for carbonated water.

FEATURES:

- External removable condenser filter.
- Optional interchangeable large LED illuminated graphic for maximum branding impact.
- SFV1 dispense valves can be individually isolated and serviced.
- Deep drip tray design.
- Improved air flow control; optimized refrigeration system and compatible with condition "D".
- Optional non-carbonated drinks available through easy changeover.
- Valve ON/OFF switch.

INSTALLATION


CAUTION:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.


CAUTION:

This appliance is for indoor use only. The appliance is only to be installed in locations where its use and maintenance is restricted to trained personnel.

ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES.


WARNING:

It is the responsibility of the installer to ensure that the water supply to the dispensing equipment is provided with protection back flow by an air gap as defined in ANSI A 112.1.2-1979; or an approved vacuum breaker or other such method as proved effective by test and must comply with all federal, state and local codes.

Failure to comply could result in serious injury, death or damage to the equipment.

Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained according to Federal, State and Local laws.

DELIVERY INSPECTION AND UNPACKING

Each unit is completely tested thoroughly and inspected before shipment. Upon receiving the units from shipment carrier, carefully inspect the unit for visible indication of damage. If any damages exist, file a claim with the shipment carrier.

Accessories	Part No.	Quantity
Drain Hose	50119	1
Clamps	70339	2
Decals	Varies with Dispenser	1 set
Manual	911000301INS	1

DIMENSIONS

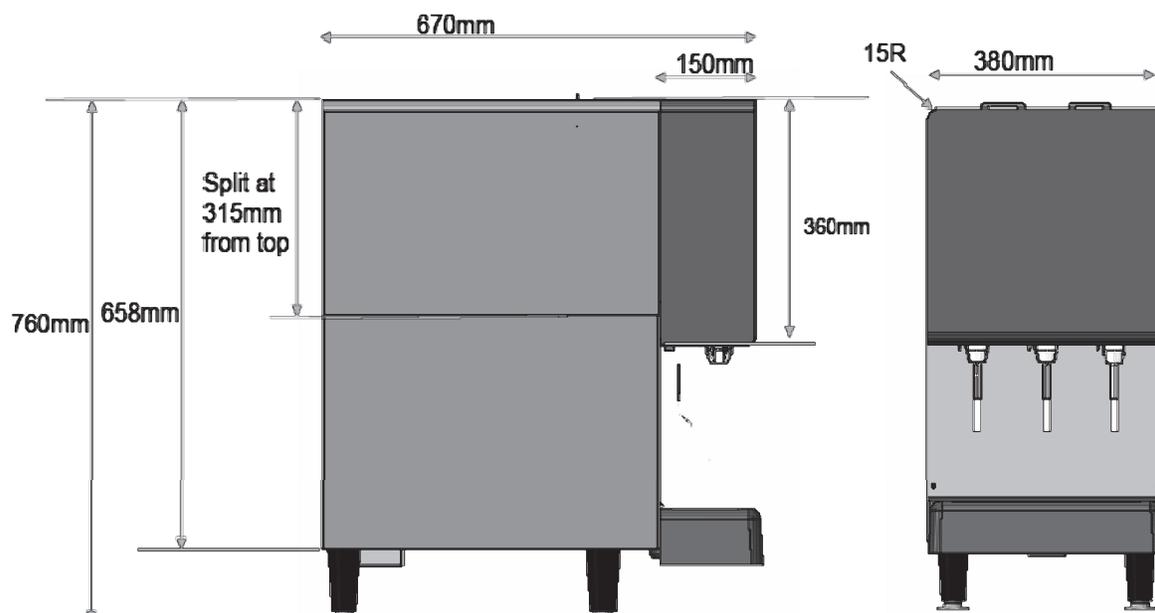


Figure 1

CAPACITY

At 104°F ambient temperature

- Two 12 Oz (340g) drinks per min at 3 Oz/sec flow rate.

Drink temperature $\leq 40^{\circ}\text{F}$ (4.4°C) for CSD or NCB

INSTALLATION REQUIREMENTS

Weight	Front or rear counter must be level and able to support 100 kg.
Environment	Indoor installation only
Temperature	10°C to 40°C (50°F to 104° F) ambient temperature
Clearance	18-inches above top of the unit Distance between wall & Unit is 4" from rear side and 2" from LH & RH side
CO2	0.52 Mpa (75 psi) (5.25 bar) at unit with internal carbonator
Syrup	0.41 Mpa (60 psi)
Water	0.34 Mpa (50 psi)
Electrical	See nameplate on unit for electrical requirements

ELECTRICAL REQUIREMENTS

WARNING:

Before connecting electrical power to the unit refer to nameplate to verify power requirements. To avoid possible serious injury or death use 6Amp rated MCB at the power supply, must be installed in electrical circuit of all 50 Hz units.

WARNING:

To avoid possible electrical shock the unit must be electrically grounded using the grounding screw provided.

CAUTION:

The wiring must be properly grounded and connected through a 15-amp disconnect switch (slow-blow fuse or equivalent HVAC/R circuit breaker).

ALL WIRING MUST CONFORM TO NATIONAL AND LOCAL CODES. MAKE SURE UNIT IS PROPERLY GROUNDED.

INSTALLATION PROCEDURE

Counter-top Installation

NOTE: Optional 4-inch legs (P/N 70970) will elevate the unit 4 inches above the counter (order 4 legs). If the unit is installed without legs, the gaps must be sealed with RTV.



WARNING:

The unit is heavy and extreme care should be taken when moving or lifting the unit. Do not attempt to lift the unit manually.

Failure to comply could result in serious injury, death or damage to the equipment.

1. Move the fountain lift with the unit to the front edge of the counter where it will be installed.
2. Carefully jack up the fountain lift so that the bottom of the unit is flush or slightly above the level of the counter.
3. Carefully slide the unit off of the fountain lift and on to the counter.
4. Place the unit on a level counter capable of supporting at least 300 pounds.
5. Remove drip tray and splash panel.

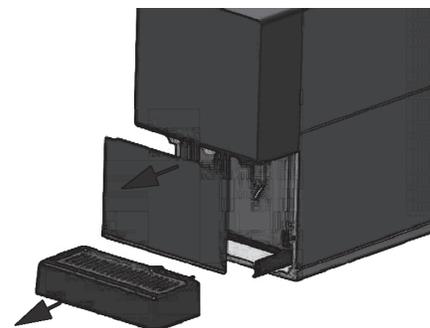


Figure 2

6. Turn off the power switch.
7. Pull water, syrup, and CO₂ lines through counter or wall. To comply with NSF International requirements the unit must be sealed to the counter top and all access holes in the unit base must be sealed, or the unit can be installed using the optional 4-inch legs (P/N 70970). Caulk/seal the unit to the counter using Dow Corning RTV 731 or equivalent approved sealant.
8. Fill the water bath with clean water around the carbonator tank until it comes out the Overflow tube. Make sure the overflow tube is not blocked or plugged. Use low-mineral tap water, not distilled or deionized water.

NOTE: Water bath must be filled with water before the unit is Switched ON. Before connecting electrical power to the unit, refer to nameplate to verify the power requirements.

NOTE: Water bath should be filled up through a hose pipe at 0.137 Mpa (20 psig) - 0.206 Mpa (30 psig) pressure.

9. Connect power cord to the receptacle on the refrigeration deck.
10. Check and observe that the agitator motor has started. After three minutes the compressor should start. If the agitator or compressor do not start, call technical services.
11. Assemble the drip tray and splash panel back on to the unit.

Connect Syrup, Water and Carbonated Water Lines

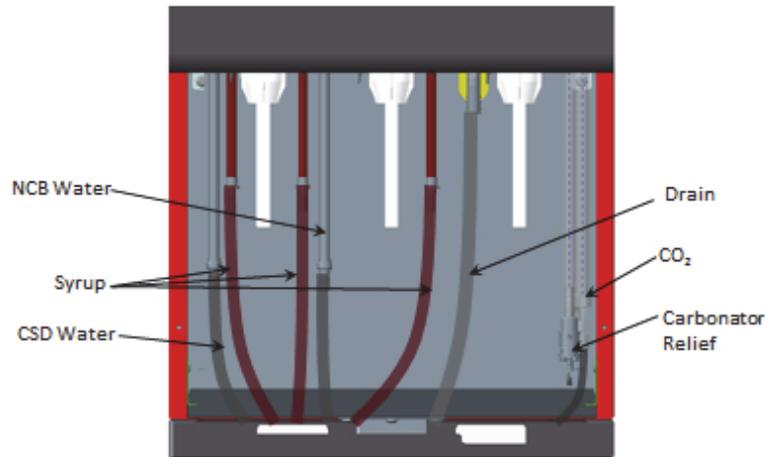


Figure 3

1. Route syrup and plain water lines from the back side of the unit and under the unit to the front. Connect them to the appropriate inlet connections.

NOTE: If RO water supply pressure to the unit is less than 0.28 Mpa (40 psi), a water pressure booster is required. If water supply pressure to the unit is more than 0.34 Mpa (50 psi), a water pressure regulator must be installed in the supply line. A water shutoff valve and water filter in the water supply line are recommended.

⚠ CAUTION:
Ensure RO water TDS is below 70 PPM.

NOTE: Maximum RO water pressure will be 0.6 Mpa (60psig).

2. Connect the CO₂ lines. Be sure the water and CO₂ are on. CO₂ should be set to 0.52 Mpa (75 psi) (5.25 bar) maximum. Higher CO₂ pressure will result in lower carbonation.
3. Bleed the air out of the carbonator by pulling up on the metal ring on the bleed valve. Bleed each valve into a bucket until water comes out for 2-3 seconds.



Figure 4

5. Be sure that all syrup sources are connected and on. Bleed each valve into a bucket until syrup comes out.
6. Reinstall drip tray and position water bath overflow hose in drip tray indent.
7. Check the system for gas leaks by pressurizing the system and then turning off the cylinder valve. Wait a couple of minutes and check the cylinder gauge to see if the pressure has dropped.
8. Check the system for water and syrup leaks.

Primary and Secondary CO₂ Regulator Settings

1. Open CO₂ cylinder valve slightly to allow lines to slowly fill with gas. When lines are fully pressurized open the valve all the way until it back-seats itself (this prevents leaks from the valve).
2. Adjust the cylinder CO₂ regulator to 0.52 Mpa (5.2 bar) (75 psi) for bag-in-box applications, 0.28 Mpa (2.8 bar) (40 psi) for sugar base tank applications and 0.07 Mpa (0.69 bar) (10 psi) for diet base tank applications.
3. The Genesis 2/3V with integral cold carbonator requires CO₂ supply pressures of 0.52 Mpa (5.2 bar) (75 psi).
4. Bleed air from the lines with the carbonator tank relief valve.
5. Check the system for gas leaks.

Connect Electrical Power

NOTE: Before connecting electrical power to the dispenser, refer to nameplate to verify the power requirements.

1. Plug the dispenser into the power receptacle.
2. Turn electrical power ON

Check for Leaks

1. Bleed air from the lines by activating dispensing valves.
2. Remove air from carbonator (if dispenser has built-in carbonator) by opening carbonator relief valve until water escapes.
3. Check the system for CO₂ leaks by pressurizing and then turning off the cylinder valve. Wait at least two minutes and check the cylinder pressure gauge 12.41 Mpa (1800 psi gauge) to see if the pressure has dropped.
4. Check the system for water and syrup leaks.

Reinstall Panels

1. Shut the power off. Then reinstall top panel, close front merchandiser panel, and front splash panel.
2. Turn power ON.
3. Check to see that the refrigeration system started after the built-in 3 minute delay.
4. Allow dispenser to form an ice bank before dispensing beverages. This will take 8 hours at 40°C (104° F).

Adjust Water-To-Syrup Ratio

1. Remove valve front cover and install syrup diversion assembly in place of nozzle.
2. Adjust carbonated water flow to the desired rate (such as 2.50 Oz./sec.).
3. Turn the adjuster 1/4 of a turn at a time and recheck the flow. To increase flow turn clockwise.
4. Adjust the syrup-to-water ratio of each valve using the syrup adjuster on the left side of each valve. Hold cup under valve and dispense beverage for a specific time (such as 4 seconds).

Adjusting Flow Rates

Flow rates of the water and syrup are adjusted based on the desired ratio. For example: if the desired ratio is 5:1, then the flow rate of the water is 5 times that of the syrup.

If the desired finished drink flow rate is 3.0 ounces per second, then the water flow rate is 2.5 Oz./sec. and the syrup flow rate is 0.5 Oz./sec (The water at 2.5 Oz./sec. is five times the 0.5 Oz./sec. syrup flow rate).

Table 1. Flow Rates Oz./sec. Based on 5:1 Ratio

Finished Drink Oz./Sec.	Water Oz./Sec.	Syrup Oz./Sec.
1.5	1.25	0.25
2.0	1.67	0.33
2.5	2.08	0.42
3.0	2.5	0.50

OPERATION

INSTRUCTIONS

Switch on the power supply to power on the unit.

Dispensing Product

Turn on the valve dispense key switch.

To dispense beverage press drink container against the lever or push the button on the valve cover.

Replenishing Syrup Supply

Tank System

1. Remove the empty syrup tank by disconnecting the syrup tube first, then the CO₂ tube.
2. Rinse the disconnects in warm water to remove any syrup residue.
3. Move a full tank into position and connect the CO₂ tube first, then the syrup tube.

Bag-In-Box System

1. Disconnect the syrup tube from the empty bag-in-box and remove the empty box.
2. Rinse the disconnects in warm water to remove any syrup residue.
3. Install a full bag-in-box and connect the syrup tube.

ADJUSTMENTS

Water-to-Syrup Ratio Adjustment

The ratio adjustment should only be done by a qualified service person.

CLEANING AND CHECKS

Daily Cleaning

1. Remove nozzle assembly and rinse with warm (not hot) water. It is recommended to soak nozzle assembly over night in carbonated water then rinse with warm water.
2. Wash external surfaces with mild soap solution, rinse with clean water, and wipe dry. Remove the drip tray, wash with mild soap solution, rinse and dry.

NOTE: Do not use abrasive or harsh cleaners on the unit.

Daily Checks

1. Check CO₂ supply.
2. Check syrup supply.

Sanitizing Syrup Systems

The syrup systems should be sanitized at least every 120-day and before or after storage. Prepare the sanitizer and detergent solutions as per the instructions below.

Sanitizer solution: Use ½ ounce of household bleach in 1 gallon of potable water. Preparing a sanitizing solution to this ratio will create a solution of 200PPM.

Detergent solution: Using a clean empty syrup tank, mix 1/2 oz. (14 g) liquid dish washing detergent per gallon of 70°F - 100°F (20°C - 38°C) potable water. Shake tank to mix.

Sanitizing Syrup Tank Systems



CAUTION:

To avoid possible personal injury or property damage, DO NOT remove the syrup tank cover until CO₂ pressure has been released from the tank.

1. **Disconnect Syrup:** Remove quick disconnects from syrup tanks and rinse in potable water.
2. **Wash System**

- A. Connect the tank containing the detergent solution to one of the syrup circuits.
- B. Place the waste water container under dispensing valve. Dispense for one minute to purge all syrup from the circuit.
- C. Repeat this process for each syrup circuit.

3. Flush System

- A. Connect a tank containing clean potable water to syrup circuit and pressurize to 0.41-0.55 Mpa (60-80 psi.) (4-5.5 bar).
- B. Place the waste container under dispensing valve. Dispense from the valve for one minute to flush the circuit.
- C. Repeat this process for each syrup circuit.

4. Sanitize System

- A. Connect the tank containing the sanitizer solution to syrup circuit and pressurize to 0.41-0.55 Mpa (60-80 psi.) (4-5.5 bar).
- A. Place the waste container under dispensing valve. Dispense from the valve for till the sanitizing solution is dispensed for 30 seconds.
- B. Flush with potable water for one minute, sanitization solution dispense for 30 seconds.
- C. Hold sanitization solution for 10 minutes but no longer than 15 minutes and flush with potable water for one minute again.
- D. Change the sanitization dispense time to one minute to be consistent.
- E. Keep sanitization solution at 24°C (75°F) @ 200PPM using Clorox Bleach.
- F. Detergent solution should be at 24°C (75°F) @ 2.5oz / 5gal water.
- G. Dispense from the valve until the whole sanitization solution is used up.
- H. Repeat this process for each syrup circuit.

NOTE: If unit is de-scaling, then procedure in maintenance area should clearly addressed.

5. Flush System

IMPORTANT: The flushing solution must not exceed 200 PPM chlorine.

- A. Connect a tank containing clean potable water to the syrup circuit and pressurize to 0.41-0.55 Mpa (60-80 psi.) (4-5.5 bar).
- B. Place waste container under dispensing valve. Dispense from the valve for one minute to flush the circuit.
- C. Repeat this process for each syrup circuit.



CAUTION:

Flush the system thoroughly, residual sanitizing solution left in the system could create a health hazard.

Sanitizing Bag-In-Box Syrup System

To sanitize a Bag-in-Box system follow the same procedure as the tank system described above, with following exceptions:

1. Use a clean container (like a 5 gallon (20 l) plastic bucket) to mix solutions and hold flushing water.
2. Cut bag valves from empty BIB containers. Clean them and connect them to the ends of the syrup lines.
3. Place syrup lines with bag valves into the container of solution.

Double Liquid Check Valve Inspection & Cleaning

CAUTION:

The carbonator double-liquid check valve must be inspected after any disruptions to the water supply system (plumbing work, earth quakes, etc.). It should also be inspected at least once a year under normal conditions. If particles lodge in the check valve CO₂ gas could back flow into the water system and create a health hazard.

1. Shut off CO₂, syrup, and water supplies to the unit.
2. Disconnect the water line from the double check valve then remove the check valve.
3. Disassemble the check valve. Clean and inspect each part, especially check the ball for damage. Replace damaged or worn out parts.
4. Always install a new seat (P/N 315-250-12).
5. Re-assemble and install the check valves.
6. Turn on the CO₂, syrup, and water supplies, and reconnect the electrical power.

Condenser Cleaning

Accumulation of dust and grease on the refrigeration condenser can cause overheating. The condenser should be cleaned as often as necessary to avoid overheating using the following procedure.

1. Vacuum or use a soft brush to clean condenser coil. If available, use low pressure compressed air.
2. Clean around top of refrigeration assembly.
3. Close the merchandiser and lock it.

Clean Air Filter

CAUTION:

Accumulation of dust and grease on the air filter can cause condenser overheating. The filter should be cleaned as often as necessary to avoid overheating using the following procedure.

1. Disconnect electrical power to the dispenser.
2. Remove the air filter through the cut out on top panel.
3. Vacuum and use soft brush to clean the filter.
4. Place the cleaned filter back in position.

NCB-CSD CONVERSION

The unit is equipped with a conversion mechanism which enables the operator to change the dispensed product from non carbonated to carbonated and vice versa. To access this:

1. Power off the unit, remove deck plate/refrigeration plate.

NOTE: valve 2 can be switched between NCB and CSD.

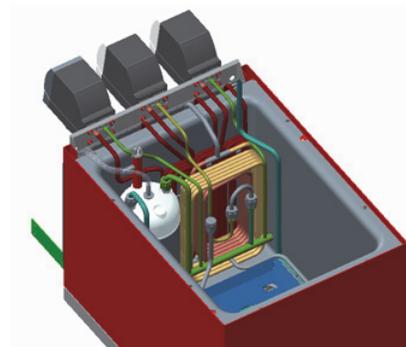


Figure 5

2. To convert valve 2 from NCB to CSD, connect the left side of the U tube to soda water inlet & install the cap to the unoccupied water inlet connection.
3. Connect the left side of the U tube to the soda water inlet and install the cap to the unoccupied Still water inlet connection.

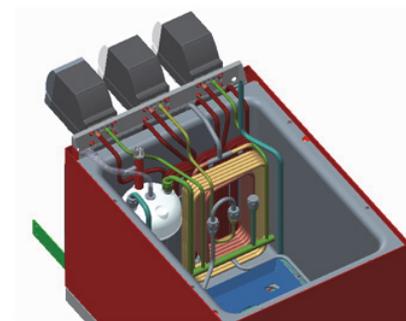


Figure 6

SERVICE

CAUTION:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.

WARNING:

Appliance must not be cleaned by a water jet.

ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES.

PREVENTATIVE MAINTENANCE

Preventative Maintenance Summary

Preventative Maintenance Summary	
Procedure	Frequency
Sanitize Unit	3 months
Check Ratio	6 months
Clean Condenser	3 months and as needed
Carbonator Double Liquid Check Valve	Annually
Check for Leaks	Annually
Clean BIB Connectors	Annually
Clean air Filter	As needed

CAUTION:

Before connecting the Syrup BIB, check for the expiry date mentioned on the BIB.

Sanitizing

The syrup systems should be sanitized every 3 months using non-scented liquid household bleach containing a 5.25% sodium hypochlorite concentration. See the Operation section of this manual for sanitizing procedure.

Double Liquid Check Valve Inspection & Cleaning

The carbonator double-liquid check valve must be inspected after any disruptions to the water supply system (plumbing work, earth quakes, etc.) It should also be inspected at least once a year under normal conditions. If particles lodge in the check valve CO₂ gas could back flow into the water system and create a health hazard.

1. Disconnect electrical power to the dispenser.
2. Shut off CO₂, syrup, and water supplies to the dispenser.
3. Check seat and O-rings. Replace if necessary.

Check for Leaks

Periodically check syrup, water, CO₂, and drain for leaks.

Check Ratio

Should be done whenever flavors are changed or any service is performed.

Clean Condenser

Accumulation of dust and grease on the refrigeration condenser can cause overheating. The condenser should be cleaned as often as necessary to avoid overheating using the following procedure.

1. Disconnect electrical power to the dispenser.
2. Remove the condenser filter from top accessible slot.
3. Lift the merchandiser up.

3. Remove top panel and side cladding.
4. Vacuum or use a soft brush to clean condenser coil. If available, use low pressure compressed air.
5. Clean around top of refrigeration assembly.
6. Reinstall side panels and top panel and close the merchandiser.

Clean BIB Connectors

See the Operation section of this manual.

Clean Air Filter

Accumulation of dust and grease on the air filter can cause overheating. The filter should be cleaned as often as necessary to avoid overheating using the following procedure.

1. Disconnect electrical power to the dispenser.
2. Remove the condenser filter from top accessible slot.
3. Take out the filter and clean it with water.

ADJUSTMENTS

CO₂ Connection

1. Unscrew protector cap (with chain attached) from CO₂ cylinder valve. Open CO₂ cylinder valve slightly counter clockwise to blow any dirt or dust from outlet fitting before installing primary CO₂ regulator, then close valve.
2. Remove shipping plug from primary CO₂ regulator assembly coupling nut and make sure gasket is in place inside nut. Install regulator assembly on CO₂ cylinder so gages can be easily read, then tighten coupling.
3. Connect soft drink tanks CO₂ lines to primary CO₂ regulator manifold assembly.
4. Install gas quick disconnects on ends of soft drink tank CO₂ lines.

CAUTION:

To avoid personal injury and property damage. Always secure CO₂ cylinder in upright position with a safety chain to prevent it from falling over.

WARNING:

CO₂ displaces oxygen. Persons exposed to high concentrations of CO₂ will experience tremors, followed by loss of consciousness and death. It is very important to prevent CO₂ leaks, especially in small unventilated areas. If a CO₂ leak occurs ventilate the area before fixing the leak.

Primary and Secondary CO₂ Regulator Settings

1. Open CO₂ cylinder valve slightly to allow lines to slowly fill with gas. When lines are fully pressurized open the valve all the way until it back-seats itself (this prevents leaks from the valve).
2. Adjust the cylinder CO₂ regulator to 0.48 Mpa (70 psi) (4.8 bar) for bag-in-box applications. 0.28 Mpa (40 psi) (2.8 bar) for sugar base tank applications and 0.07 Mpa (10 psi) (0.7 bar) for diet base tank applications.
3. The Genesis 2/3V with integral cold carbonator requires CO₂ supply pressure of 0.52 Mpa (75 psi) (5.2 bar).
4. Bleed air from the lines with the relief valves.
5. Check the system for gas leaks.

LIFTING THE REFRIGERATION DECK

Handles are provided at the either sides of the refrigeration deck to aid in safe lifting and handling of the deck during service. To access these handles remove the side panels.

NOTE: Remove the two screws at the diagonal corners, and keep it safe for reuse.



CAUTION:

Ensure that only these handles are used to lift the deck. Do not hold to any other components or structures.

Failure to comply could result in serious injury, death or damage to the equipment.

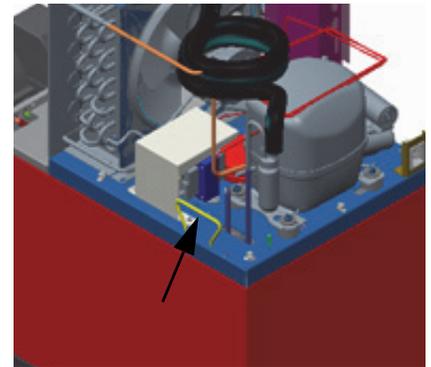


Figure 7

COMPONENT SERVICE

The following are procedures for replacing the major components of the Genesis 2/3V.

CARBONATOR PUMP REPLACEMENT

1. Disconnect power to the unit.
2. Shut off water and CO₂ at their sources.
3. Remove top panel and side cladding.
4. De-pressurize carbonator by removing the solenoid dust cover from any dispensing valve and press valve lever to release the pressure.
5. Disconnect water in and out lines.
6. Loosen the V-band clamp and remove pump.
7. Install new pump.

PUMP MOTOR REPLACEMENT

1. Disconnect power to the unit.
2. Remove top panel and side cladding.
3. Unplug motor harness.
4. Loosen the V - band clamp and remove pump.
5. Remove bolts and remove the motor.
6. Install new motor by reversing this procedure.

AGITATOR MOTOR REPLACEMENT

1. Disconnect power to the unit.
2. Remove top panel and side cladding.
3. Unplug motor harness.
4. Remove mounting screw.
5. Install new motor by reversing this procedure.

CONTROLLER BOARD REPLACEMENT

1. Disconnect power to the unit.
2. Remove top panel and side cladding.
 - Lift up controller cover.
 - Remove mounting screw.
 - Push back controller cover.
3. Unplug all connectors.
4. Squeeze all four standoffs and remove the board.
5. Install new controller board by reversing this procedure.

CONDENSER FAN MOTOR REPLACEMENT

1. Disconnect power to the unit.
2. Remove top panel, side panels and back panel.
3. Unplug motor harness.
4. Remove fan mounting Screw
5. Lift up fan Motor Assembly.
6. Remove fan motor.
7. Install new motor by reversing this procedure.

TROUBLE SHOOTING

⚠ WARNING:
Only an authorized service person should service internal components or electrical components.

⚠ CAUTION:
If repairs are to be made to one of the syrup circuits, disconnect applicable syrup tank and bleed pressure from the system before proceeding.

⚠ WARNING:
If repairs will be made to the CO₂ or carbonated water systems, disconnect electrical power to the carbonator, shut off CO₂ and water supplies, then bleed systems before proceeding.

⚠ WARNING:
To avoid personal injury disconnect electrical power to the unit before attempting any electrical repairs or working on the internal parts of the unit.

Table 2. Troubleshooting Post-mix System

Trouble	Probable Cause	Remedy
Adjustment of dispensing valve syrup flow regulator does not increase to desired water-to syrup ratio.	<ol style="list-style-type: none"> 1. No syrup supply. 2. Syrup supply container not securely connected into system. 3. Tanks System-Syrup tanks secondary CO₂ regulator out of adjustment. Bag-in-Box System- Primary CO₂ regulator out of adjustment. 4. Inoperative dispensing valve syrup flow control. 5. Tapered washer inside tube swivel nut connection distorted from being over tightened restricting syrup flow. 6. Pressure to BIB/Syrup tank is too low. 	<ol style="list-style-type: none"> 1. Replenish syrup supply. 2. Securely connect syrup supply container into syrup system. 3. Adjust syrup tanks secondary CO₂ regulator as instructed. Adjust primary CO₂ regulator as instructed. 4. Repair dispensing valve syrup flow control. 5. Replace tapered gasket. Make sure it seats properly. 6. Adjust the pressure as per the specifications.
Adjustment of dispensing valve syrup flow regulator does not decrease to desired water-to-syrup ratio.	<ol style="list-style-type: none"> 1. Dirty or inoperative dispensing valve syrup flow control. 	<ol style="list-style-type: none"> 1. Disassemble and clean dispensing valve syrup flow control/
Dispensed product carbonation too low.	<ol style="list-style-type: none"> 1. Primary CO₂ regulator out of adjustment for existing water conditions or temperature. 2. Air in carbonator water tank. 3. Water, oil, or dirt, in CO₂ supply. 4. CO₂ supply depleted. 	<ol style="list-style-type: none"> 1. Adjust primary CO₂ regulator. As instructed. 2. Vent air out of carbonator water tank through relief valve. 3. Remove contaminated CO₂. Clean CO₂ system (lines, regulator, etc.) using a mild detergent. Install a clean CO₂ supply. 4. Replenish CO₂ supply.
Dispensed product comes out of dispensing valve clear but foams in cup or glass.		<ol style="list-style-type: none"> 1. Use clean cups or glasses. 2. Do not use ice directly from freezer. Allow ice to become "wet" before using. (refer to following NOTE).

NOTE: Crushed ice also causes dispensing problems. When finished drink hits sharp edges of ice, carbonation is released from dispensed drink.

<p>Dispensed product produces foam as it leaves dispensing valve.</p>	<ol style="list-style-type: none"> 1. Recovery rate of refrigeration of system exceeded, ice bank depleted. 2. Primary CO₂ regulator pressure too high for existing water conditions or temperature. 3. Tanks System-Syrup over-carbonated with CO₂ as indicated by bubbles in inlet syrup lines leading to unit. 4. Dispensing valve restricted or dirty. 5. Tapered gasket inside carbonated water line swivel nut connector distorted restricting carbonated water flow. 6. Dirty water supply. 7. Finished drink above 4.4° C (40° F). 	<ol style="list-style-type: none"> 1. Allow ice bank to recover. 2. Reduce primary CO₂ regulator pressure settings. 3. Remove syrup tanks quick disconnects. Relieve tank CO₂ pressure as many times as necessary to remove over-carbonation. 4. Sanitize syrup system as instructed in Service and Maintenance Manual. 5. Replace tapered gasket. Make sure it is properly seated. 6. Check water filter. Replace cartridge. 7. Check refrigeration system.
<p>No product dispensed.</p>	<ol style="list-style-type: none"> 1. No electrical power to dispenser. 2. Disconnected dispensing valves power cord. 3. Disconnected or broken wiring to dispensing valve. 4. Inoperative transformer or dispensing valve solenoids. 	<ol style="list-style-type: none"> 1. Plug in dispenser power cord or check for blown power fuse or tripped circuit breaker. 2. Connect dispensing valves power cord. 3. Connect or replace wiring. 4. Replace inoperative part.
<p>Only carbonated water dispensed.</p>	<ol style="list-style-type: none"> 1. Syrup supply container not securely connected into syrup system. 2. No syrup supply. 3. Bag-in-Box System – Inoperative syrup pump. Tanks System – Syrup tanks CO₂ regulator not properly adjusted. 4. Inoperative dispensing valve. 5. Dispensing valve syrup flow control not properly adjusted. 	<ol style="list-style-type: none"> 1. Securely connect syrup supply container into syrup system. 2. Replenish syrup supply. 3. Replace inoperative syrup pump. Adjust syrup tanks CO₂ regulator as instructed. 4. Repair dispensing valve. 5. Adjust dispensing valve syrup flow control (Water-to-Syrup ratio) as instructed.
<p>Compressor will not stop after sufficient ice bank is produced.</p>	<ol style="list-style-type: none"> 1. Ice bank probe location incorrect. 2. Ice temperature sensor inoperative. 3. Control board inoperative. 	<ol style="list-style-type: none"> 1. Place probe in proper location. 2. Replace ice temperature sensor. 3. Place power switch in ON position.
<p>Compressor operates continuously but does not form sufficient ice bank.</p>	<ol style="list-style-type: none"> 1. Cooling capacity is exceeded by overdrawing. 2. Unit located in excessively hot area or air circulation through condenser coil is restricted. 	<ol style="list-style-type: none"> 1. Reduce amount of drinks drawn per given time. 2. Relocate unit or check and if necessary, clean condenser coil as instructed.
<p>Carbonator pump not operating</p>	<ol style="list-style-type: none"> 1. 3 minutes run limit exceeded. 2. Water supply to carbonator disrupted. 3. Carbonated water tank water level probe electrical wiring disconnected. 4. Inoperative carbonated water tank water level probe. 5. Inoperative carbonator pump or motor. 6. Inoperative control board. 	<ol style="list-style-type: none"> 1. Turn power OFF for 15 second. 2. Correct water supply problem. 3. Connect electrical wiring to water level probe (see note). 4. Replace probe (see note). 5. Replace pump or motor. 6. Replace control board.

<p>Agitator motor not operating.</p>	<ol style="list-style-type: none"> 1. No power source (blown fuse or tripped circuit breaker). 2. Agitator motor propeller obstructed. 3. Low Voltage. 4. Loose, disconnected, or broken wiring. 5. Inoperative agitator motor. 	<ol style="list-style-type: none"> 1. Replace fuse or reset circuit breaker. (NOTE: Fuse or circuit breaker are not part of unit). 2. Remove obstruction. 3. Voltage must be 90- 135VAC (110-120 volt unit) or 180-260(230 VAC unit) at compressor terminals when compressor is trying to start. 4. Tighten connections or replace broken wiring. 5. Replace agitator motor.
<p>Refrigeration compressor does not operate.</p>	<ol style="list-style-type: none"> 1. Ice bank sufficient. 2. No water in water tank. 3. Control board power switch on top of unit in "OFF" position. 4. Unit power cord un-plugged, or drop-in refrigeration assembly power cord unplugged. 5. Ice sensor electrically disconnected. 6. No power source (blown fuse or tripped circuit breaker). 7. Low/high voltage. 8. Loose, disconnected, or broken wiring. 9. Overload protector cut out; overheated compressor. Condenser fan motor not operating as required. 10. Inoperative overload protector or start relay. 11. Inoperative ice bank probe. 12. Inoperative control board. 	<ol style="list-style-type: none"> 1. No refrigeration called for. 2. Fill water tank with water as instructed. 3. Place control board power switch in "ON" position (will be a built-in 3-minute time delay before refrigeration compressor starts). 4. Plug in power cord. 5. Electrically connect or replace inoperable sensor. 6. Replace fuse or reset circuit breaker. (Note: Fuse or circuit breaker are not part of unit). 7. Voltage must be 180- 255 Volts or 90 -130Volts. 8. Tighten connections or replace broken wiring. 9. Compressor will cool enough to restart, Do not overdraw cooling capacity of unit. Refer to "Condenser Fan Motor Not Operating" in this section. 10. Replace inoperative part. 11. Replace ice bank probe. 12. Replace control board.

REFERENCE MATERIAL

WIRING DIAGRAM

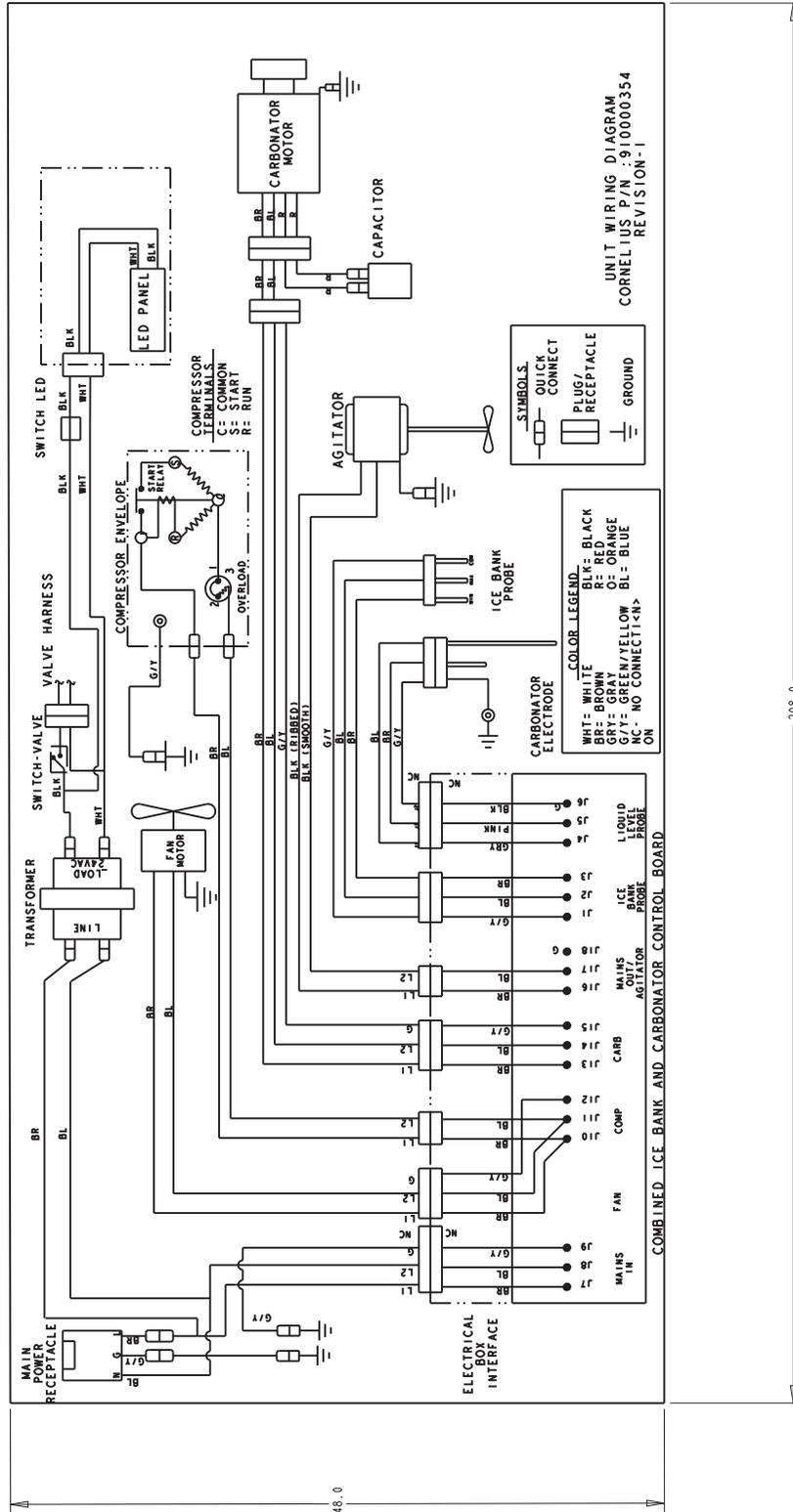


Figure 8

PLUMBING DIAGRAM

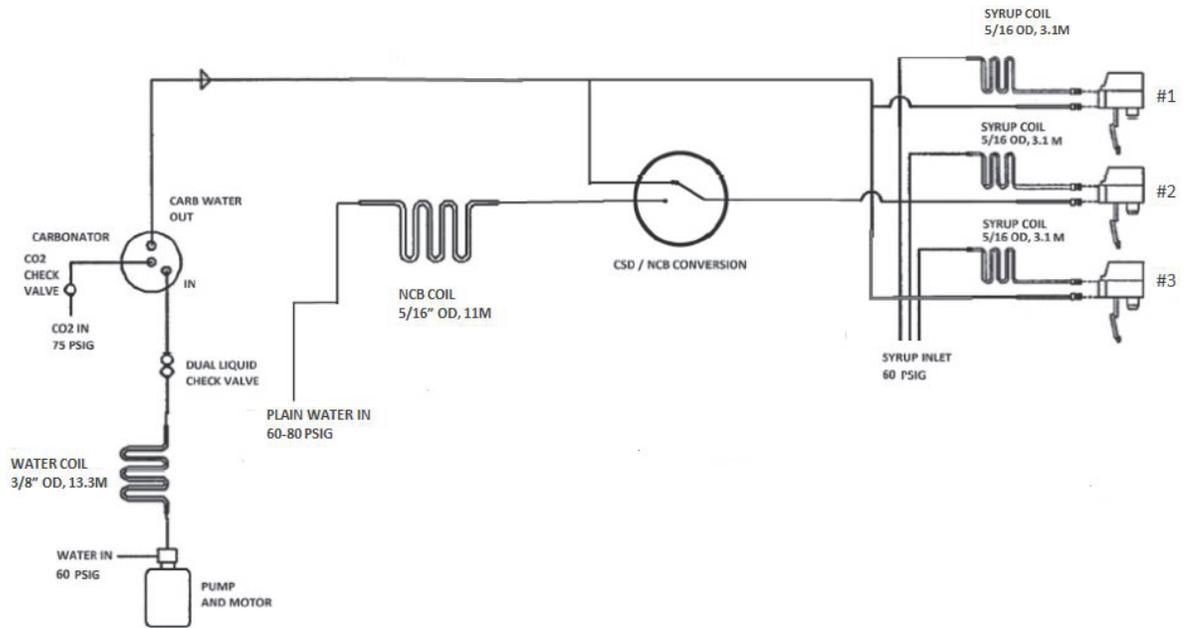


Figure 9

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