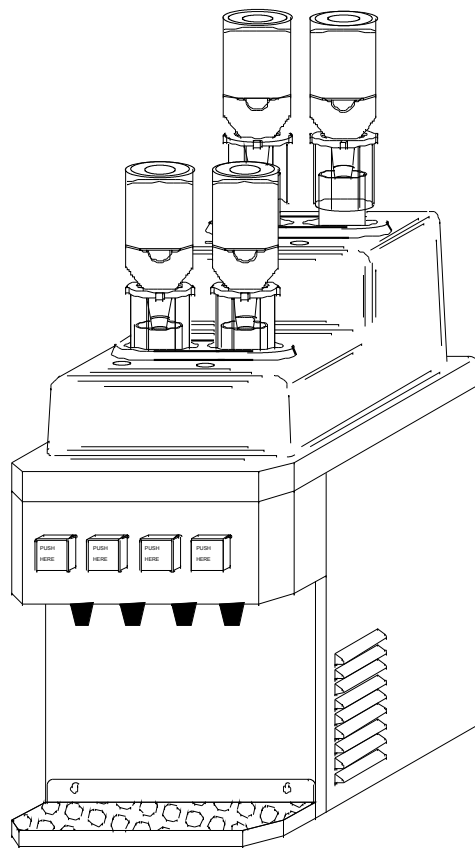
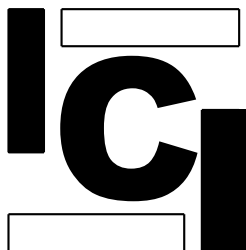


Chill Shot - 4 Brand

CS-4



Installation and Service Manual



INTERNATIONAL CARBONIC INC.

16630 Koala Rd.

Adelanto, California 92301

800 854-1177

IMPORTANT: This manual is a guide for installing, operating, servicing and maintaining this equipment. Refer to Table of Contents for page location of detailed information to answer questions that arise during installation, operating, service and maintenance, or installation of this equipment.

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PREFACE

INTERNATIONAL CARBONIC INC. has enjoyed over 56 years of manufacturing excellence in the field of carbonation and in the beverage related industry. We have been located in the Southern California area since 1952 and have a long and proud history with quality as our standard and innovation as our goal. Originally started just after World War II in Canfield Ohio as Carbonic Dispensers we enjoyed patents on the first Sodajet type carbonator. This method of carbonation instantaneously carbonated the water to 100% saturation. We developed the first patented dispensing valve to dispense bulk beverage with carbonation equal to or in excess of bottled beverages. A valve with three flavors and soda was another first. We were the first to incorporate the total post-mix package; i.e., carbonation, refrigeration & the ability to dispense from one self contained unit. We have pioneered many such firsts and will continue to develop advance systems for the future, such as electronic interrogatable portion controls to electronic liquid level controls.

We hope you enjoy this product that has been produced to give many years of trouble free service. We thank you for your purchase and hope we may serve you in the future.

CS-4

CHAPTER I

GENERAL DESCRIPTION

This chapter gives the description, theory of operation, and design data for the CS-4 unit.

SYSTEM DESCRIPTION

The CS-4 unit is a complete self-contained liquor dispenser which when supplied with liquor will dispense four different brands at a temperature colder than ice. The unit consists of a cabinet, refrigeration system, modular pumps, and LED lights for merchandising. The cabinet housing is attractive black vinyl coated steel with vibrant custom decals. The front plate, switch housing and drain pan are formed from attractive grained stainless steel. The CS-4 unit has been designed to fit in the smallest possible space while dispensing a maximum amount of chilled liquor.

Essentially the CS-4 unit is designed to plug and play. For proper function the CS-4 unit must have 115-volt electrical supply and proper space around unit to allow the refrigeration to breath during operation.

DESIGN DATA

Cabinet:

Height	17 1/2
Width.....	11 3/4
Depth	14 7/8
Depth w/Switch Housing.....	17 3/4

Weights:

Shipping.....	75 LBS.
Operational weight.....	69 LBS.

Refrigerant requirement (R-134a).....	1.94 ounces
Refrigerant requirement (R-134a).....	55 grams

Ambient operating temperature.....	40 F to 100 F
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Electrical Requirements:

The cooling unit requires a 120-VAC, single phase, 60-Hertz power circuit.

Circuit Ampacity.....	6.1 Amps
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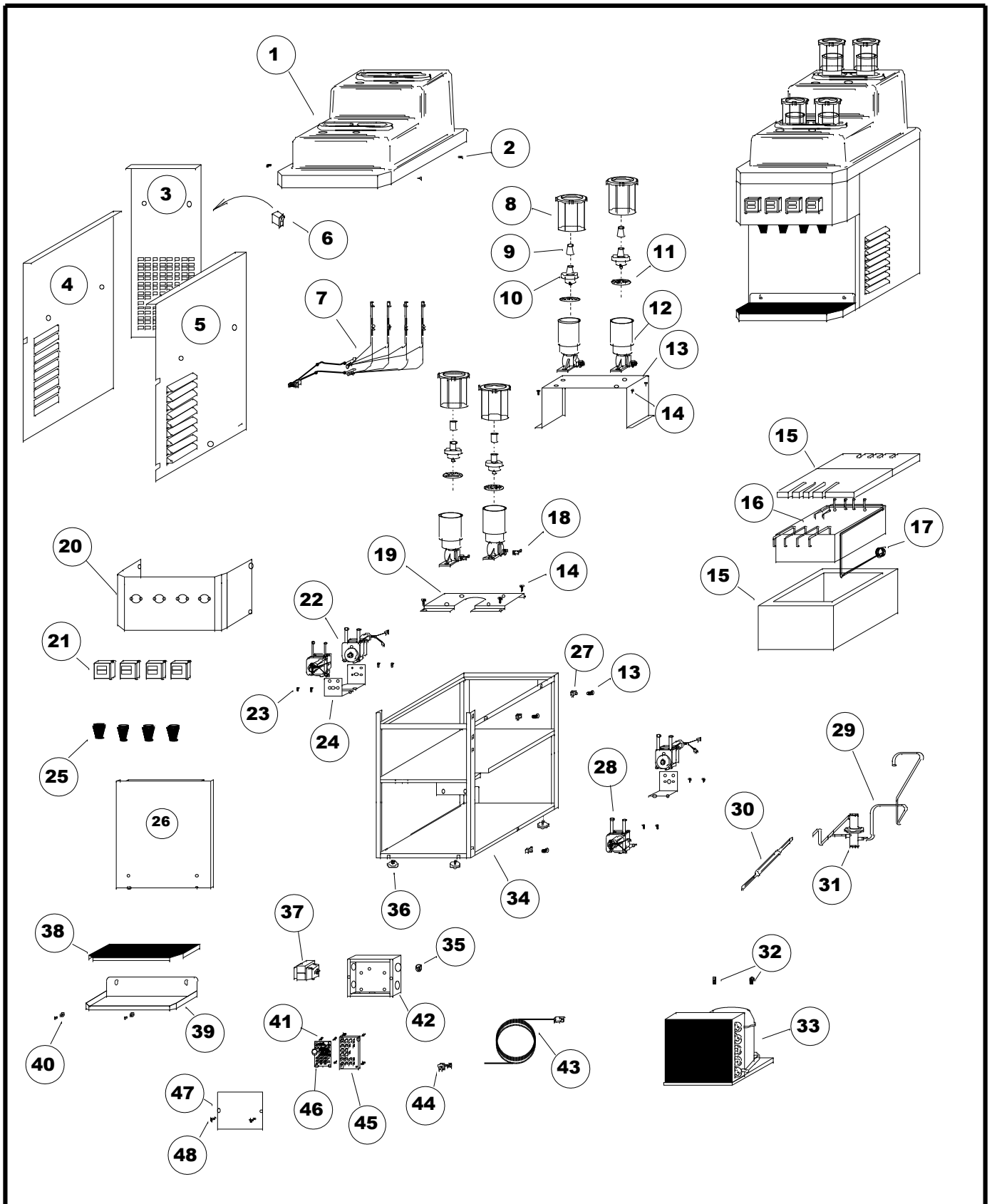
Condensing Unit.....	2.1 Amps
Peristaltic Pump Assemblies.....	4 Amps

REFRIGERATION 1/9 H.P. capillary air-cooled.

THEORY OF OPERATION

The CS-4 unit was designed to cool and dispense a chilled serving of liquor using a minimum amount of counter space. After connecting the unit to an electrical outlet and after placing the liquor bottles in the bottle reservoirs. Depress the push button switch to dispense a small portion of liquor. In approximately 45 minutes from the time the unit is electrically activated the unit will dispense a chilled shot between 5 to 10 degrees. The CS-4 temperature can be set higher for liquors with a lower % alcohol.

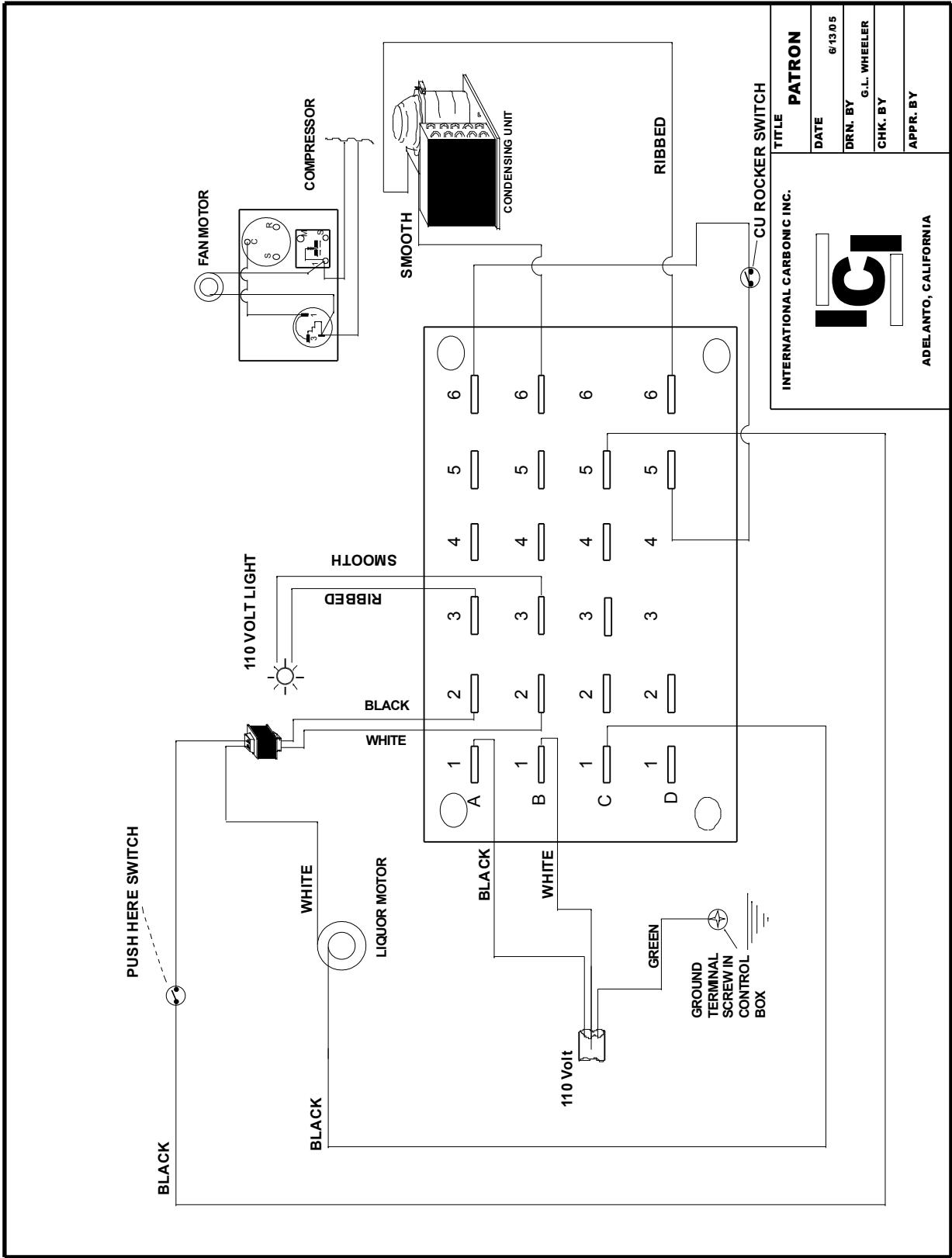
When the Push Switch is pushed the incoming liquor is routed to a peristaltic pump, and then through a cooling coil that is housed in an aluminum cold plate. This aluminum cold plate also houses our refrigeration evaporator turning the aluminum cold plate into an extension of our evaporator. This evaporator assembly is thoroughly insulated. The temperature of the incoming liquor is at ambient temperature as it enters the cooling coil. As the incoming liquor passes through the cooling coil the heat is removed from the liquor and chilled to a temperature acceptable for a cold shot, normally a temperature of 5 to 10 degrees. The liquor is now directed to a dispensing nozzle where it is dispensed.



ICI	International Carbonic Inc. Adelanto, California	Unit: Chill Shot 4 Brand	Drm By: GLW/JGS
		Item No: CS-4	Ck By: LL/AM
		Spl Note:	Date: 6/17/08

CS-4

SYM	QTY	PART NO.	DESCRIPTION	SYM	QTY	PART NO.	DESCRIPTION
1	1	S1893	Top Cover	23	8	A0020	Screw, 8-32 X 3/8, P.H. T.H. S.S.
2	6	A0063	Screw, 8-32 X 3/8 P.H. T.H. Black Oxide	24	4	S1897	Peristaltic Pump Bracket, CS-4
3	1	S1827	Service Panel, Rear	25	4	E0581B	Nozzle
4	1	S1828	Service Panel, Left	26	1	S1830	Front Plate
5	1	S1829	Service Panel, Right	27	19	S1335	Nut, Square Grommet, Nylon
6	1	S0783	Switch, ON/OFF	28	4	S1737-CS-4	Peristaltic Pump Module w/ CS-4 Mtg. Brkt.
7	1	S1894	LED Harness Assembly	29	1	S1838	Hot Gas By-Pass Valve, Assembly
8	4	12074	Bottle Support Assembly	30	1	S1545	Drier
9	4	18014	Sleeve, Bottle Cap, Small	31	1	S1839	Hot Gas By-Pass Valve
9	4	18016	Sleeve, Bottle Cap, Medium	32	2	A0046	Screw, 5/16-18 X 3/4 H.H. Flange
9	4	18017	Sleeve, Bottle Cap, Medium/Large	33	1	AZA0307YXAXA	Condensing Unit, 1/9TH hp
9	4	18018	Sleeve, Bottle Cap, Large	34	1	S1833	Frame
10	4	12008-CS	Bottle Cap Assembly, CS	35	3	S0046	Bushing
11	4	18013-CS	Strainer, 2" S.S. Perforated	36	4	S1318	Cushioned Foot
12	4	12004-R-1/4"	One Bottle Reserve Assembly	37	1	E0276	Transformer
13	1	S1896	Bracket, Rear Bottle Reserve, CS-4	38	1	S1843	Shot Rest
14	18	A0014	Screw, #10 X 1/2 P.H. T.H. S.S.	39	1	S1842	Drip Pan
15	1	S1847	Insulation Kit, CS-4	40	1	S0743	Drip Pan Mtg. Hardware, Set
16	1	S1834-CP-4	Cold Plate	41	8	S1335	Terminal Spacer
17	1	Z0009	Cap Tube, 12' -.042	42	1	S1308	Control Box
18	4	18020	Elbow, 1/4 P X 1/4 H, Plastic	43	1	E0141-8-CS	Power Cord
19	1	S1836	Bracket, Front Bottle Reserve	44	1	E0664	Strain Relief
20	1	S1841-4	Switch Housing	45	1	S1309	Terminal Board
21	4	S1313	Switch, "PUSH HERE"	46	1	S1950-CS	Controller Board, CS-4
22	4	S1737	Peristaltic Pump Module	47	1	S1310	Cover, Terminal Box



CHAPTER II
INSTALLATION
PATRON

This chapter covers unpacking and inspection, selecting location, installing PATRON unit and electrical requirements.

UNPACKING AND INSPECTION

Upon receiving unit, immediately remove PATRON unit from shipping carton and inspect for shipping damage.

NOTE: Remove the PATRON unit from the shipping carton and inspect for shipping damage. If shipping damage is found immediately contact Sentry BevCon at (800) 661-3003. Do not discard the shipping carton or any shipping materials in the event a freight claim must be filed.

SELECTING LOCATION

IMPORTANT: Ambient temperature for cooling unit should not exceed 100 degrees "F". Operation of cooling unit in ambient above 100 degrees "F" can and will contribute to early failure of condensing unit and poor quality of finished product.

LOCATION RECOMMENDATIONS FOR THE PATRON UNIT

1. Position unit as close as possible to proper electrical source, 120V 60Hz.
2. Position unit with a minimum of 2" space between bulkhead and cabinet for sufficient space for ventilation. Allow enough space between ceiling and unit for bottle removal.

LOOSE - SHIPPED PARTS

Item No.	Part No.	Name	Qty
1	-----	Installation instructions	1
2	S1842	Drain pan	1
3	12008	Bottle Cap Assembly	2
4	18013	Strainer	2
5	12074	Support Assembly	2
6	18018	Large Sleeve	2

ELECTRICAL REQUIREMENTS:

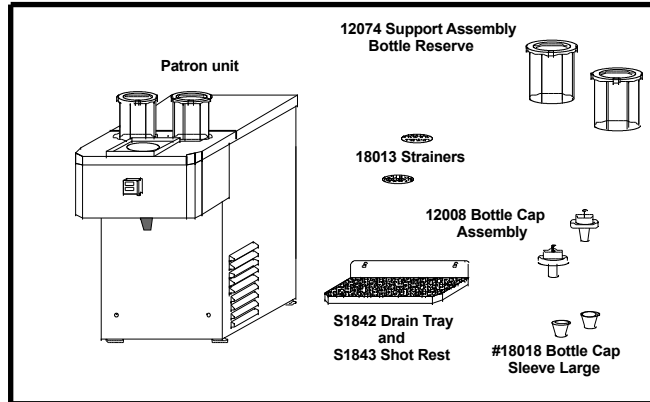
The PATRON unit must be wire in accordance with N.E.C. or local ordinance.

Patron Installation Instructions

Remove the Patron unit from the shipping carton and inspect for shipping damage. If shipping damage is found immediately contact Sentry BevCon at 800 661-3003. Do not discard the shipping carton or any shipping materials in the event a freight claim must be filed.

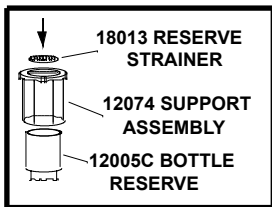
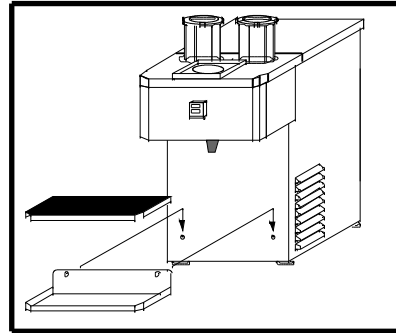
1. The following parts are included with this Shipment.

2. Find a convenient location to place the unit.



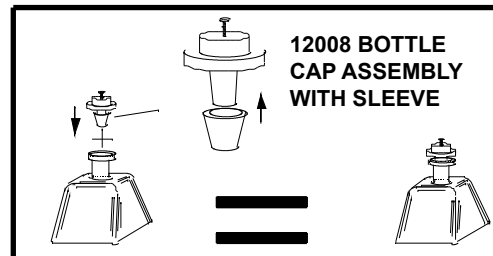
3. DO NOT PLUG UNIT INTO ELECTRICAL OUTLET.

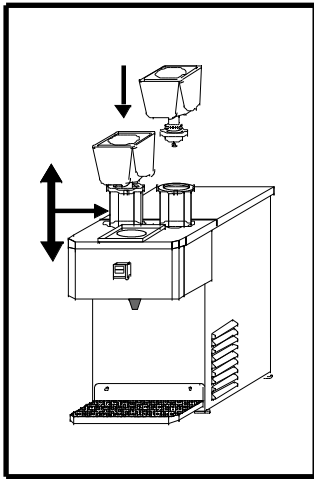
4. Remove protective plastic from drip Tray. Align mounting holes over the mounting screws on front of the machine.



5. Install both stainless steel strainers in bottle reserves.

6. Slip bottle caps into the Patron bottles.





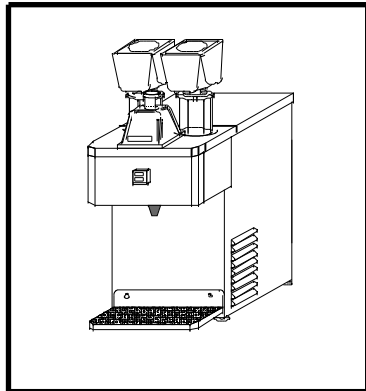
7. Turn Patron bottle upside down and insert into bottle reserve. Adjust support assembly to stabilize bottle.

8. Plug unit into a 110 volt outlet. The refrigeration system will automatically start. If refrigeration does not come on go to step #12.

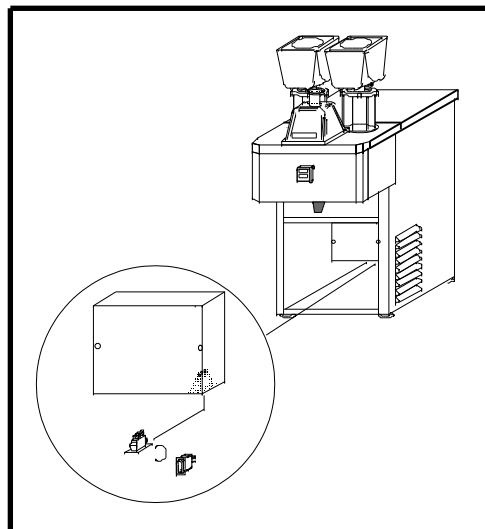
9. Activate the "PUSH HERE" switch until the Patron is dispensed. The level of the Patron in the bottles will drop as the cooling coils are filled. Dispense 6-8 ounces in order to flush unit. **DO NOT REUSE!**

10. In approximately 15 minutes the unit will dispense ice-cold Patron shots.

11. Place a Patron bottle on the front-lighted bottle support to merchandise.



12. Your unit is equipped with an on/off switch. This switch is supplied to shut off the refrigeration during time of flushing. If refrigeration does not initially come on remove front panel and check switch to make sure it is in the on position.



Note: to increase your customers enjoyment cool your shot glasses before serving shots.

**For Service and/or Installation Assistance
Please Call Sentry BevCon
800 661-3003**



This chapter covers operators' responsibilities for daily pre-operation check, adjustments, cleaning, and sanitizing.

DAILY PRE-OPERATION CHECK

1. Make sure PATRON reservoir is full and ready to dispense.
2. Make sure nozzle is clean.
3. Make sure electrical power is supplied to unit.
4. Make sure unit is clean.

COOLING UNIT MAINTENANCE

NOTE: Air circulation through the condenser coil required to cool the condenser coil/compressor, is drawn in through grills on cooling unit, through condenser coil and is exhausted out grills on the other side of the unit. Restricting air circulation through the cooling unit will decrease its cooling capacity.

To avoid needless and sometimes costly repairs, it is imperative to keep condenser fins clean. This may be accomplished by one of three methods. One method is use of a condenser brush (a longhaired, soft bristle brush) to gently sweep fins of condenser clean. Second method is to use a strong vacuum. The third method is to use CO₂ or an air hose to blow out condenser. The latter method should only be attempted after normal business hours to avoid dust contamination.

CLEAN NOZZLE

Use a bottlebrush and clean nozzle nightly.

PERIODIC INSPECTION AND CLEANING

Daily:

1. Clean PATRON bottles and reservoir area with warm water.
2. Clean the beverage dispensing area.
3. Clean nozzle and all exposed areas on valve plate.
4. Wipe exterior of unit with moist towel.

Weekly:

1. Order PATRON to maintain product inventory.
2. Check condenser coil for obstructions or dirt.

Monthly:

1. Clean condenser fins or filter to make sure the refrigeration unit has adequate airflow.
2. Check entire system for leaks or damaged components. Repair as necessary.

DO NOT USE ABRASIVE TYPE CLEANERS.

CLEANING CONDENSER COIL

IMPORTANT: Air circulation through the condenser coil required to cool the condenser coil/compressor, is drawn in through grills on cooling unit, through condenser coil and exhausted out grills on the other side of unit. Restricting air circulation through the cooling unit will decrease its cooling capacity.

NOTE: *Cleaning condenser coil should be done during non-business hours.*

1. Unplug refrigeration unit power cord from electrical socket.
2. Remove 9 screws securing service panels, 3 screws per service panel. Remove panels in preparation for service.
3. Vacuum or use a soft brush to clean fins of condenser coil.
4. Replace panels.
5. Plug refrigeration unit power cord in electrical socket.

FLUSHING LIQUOR COIL

It is recommended to flush the Liquor Coil periodically. To accomplish this task shut off the condensing unit at condensing unit on off switch located under the control box on the lower right hand side.

Flush all liquor out of liquor coil and into a container to be reused.

After condensing unit has been off for at least one hour fill liquor reservoir with hot water and flush through coil. Flush coil until water comes out clear.

Refill reservoir with saved liquor and flush all water out of liquor coil.

When all water is flushed out of system turn on condensing unit. In approximately 1 hour cold shots can be dispensed.

CLEANING AND SANITIZING

Your local Health Department rules and general area cleanliness should determine the frequency of which the unit should be sanitized.

SANITIZING PROCEDURES

Your local health department rules and general area cleanliness should determine the frequency at which the unit should be sanitized. Note: Your Liquor plumbing will not need cleaning as often as the Lime mix section of your unit if at all.

EQUIPMENT REQUIRED:

1. Stainless Steel container, (product tank), or large volume container.
2. Cleaning Agent.
3. Sanitizing Solution.
4. Phenolphthalein.

NOTE: One recommended cleaning agent and sanitizing agent is manufactured by:

MT. HOOD CHEMICAL CORP.
4444 N.W. Yeon Avenue
Portland, Oregon 97210

Trade names are: STAR - CHLORINATED CLEANER
CROWN - 12.5% SODIUM HYPOCHLORITE BLEACH

Use STAR at 18 oz. per 1 gallon of water yields 2% Sodium Hydroxide Solution.

Use Crown at 2 ounce per 9 gallons of water (gives 200 PPM of available chlorine) at a minimum contact time of 10 minutes.

1. Turn off PATRON by unplugging unit. Remove front panel and then remove control access panel. Disconnect wires at A6 and B6 on control terminal board. Plug PATRON into 110-volt outlet, activate push switch and empty out product from tubing by flushing with warm water.
2. Visually inspect valve by removing nozzle and inspecting nozzle and valve cavity. Clean nozzle with cleaning agent, then sanitizing solution, then with potable water. Inspect valve cavity and if dirty clean with soft bristle brush. Clean exteriors of nozzle tubes with a soft clothe and warm water. Replace valve nozzle then go to step #3.
3. Fill bottle reserve with a caustic-based (low sudsing, non-perfumed, and rinsed) detergent solution, (STAR). The solution should be prepared in accordance with the manufacturers recommendations, but should be at least 2 percent sodium hydroxide. Make sure the syrup lines are completely filled and allow standing for at least 10 minutes.
4. Flush the detergent solution from the bottle reserve with clean water. Continue rinsing until testing with phenolphthalein shows that the rinse water is free of residual detergent.
5. Fill the bottle reserve with a low PH (7.0) chloride solution containing maximum 200-PPM chlorine. Make sure that lines are completely filled and allow standing for 30 minutes.
6. Refill bottle reserve with clean hot water.
7. Draw water until chloride solution is dispensed from unit and liquor reservoir is empty.
8. Fill reservoir with PATRON.
9. Push switch until PATRON is dispensed.
10. Replace wires at control box terminal, i.e., A6 and B6.
11. Replace panel and control box cover.
12. Wait 15 minutes and then taste the beverage to verify that there is no off taste.

FREQUENTLY ASKED QUESTION:

Q. Should the machine be left on all the time?

A. Yes, your electrical usage will be minimal and the PATRON unit will have less electrical and refrigeration problems.

Q. If the machine is left on how much will the electricity bill go up?

A. The amount will vary depending on your area but on average the cost will be approximately \$.75 per day.

Q. How often should I clean the unit.

A. As often as necessary, refer to previous section PERIODIC INSPECTION AND CLEANING.

Q. What happens if the PATRON gets low?

A. When you reservoirs are low the nozzle will have a noticeable drip wasting your product.

Q. Is there any periodic maintenance that must be performed?

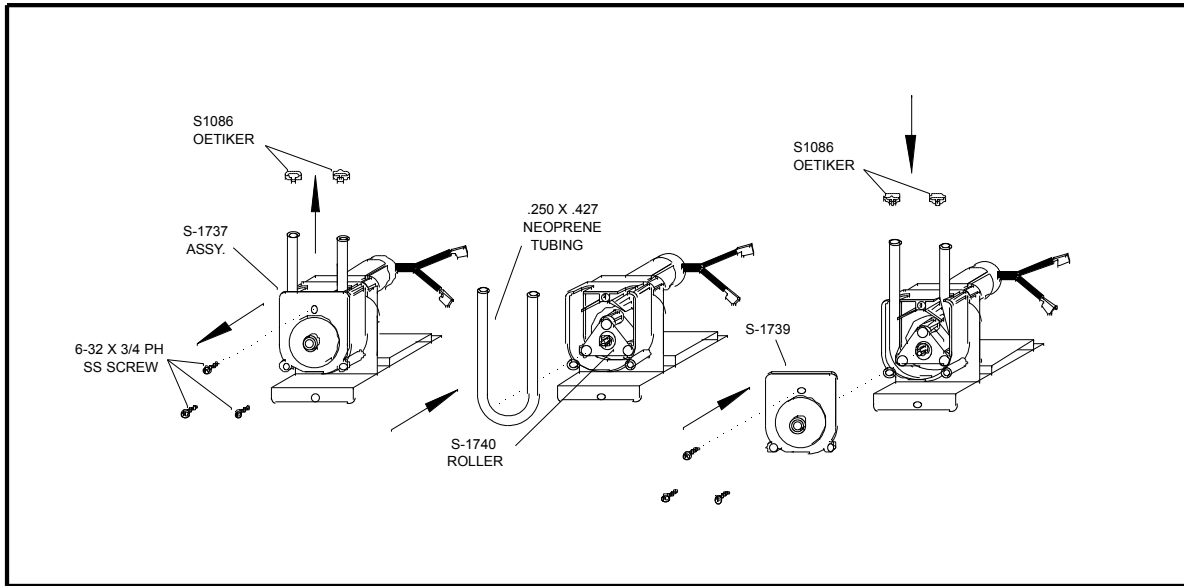
A. Yes, again depending on usage your peristaltic pump tubing will have to be changed.

Q. How often must this tubing be changed?

A. Again depending on the usage approximately every 6 months to a year.

CHANGING PERISTALTIC PUMP TUBING

1. Remove #10 X 1/2" Phillips TH. Screw. Then slide out S-1027 Assy.
2. Remove three 6-32 x 3/4 PH screws.
3. Remove S-1739 cover.
4. Remove neoprene tubing by pulling tubing while turn S-1740 roller.
5. Replace old neoprene tubing with new.
6. Squeeze new tubing with pliers two insert tubing in between first roller and housing wall. Force tubing into position at second roller by spinning roller while inserting tubing.
7. Reverse procedure to reinstall S-1737 assembly.



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TROUBLE SHOOTING

IMPORTANT: Only qualified personnel should service PATRON unit and components.

WARNING: To avoid personal injury and or property damage, always disconnect electrical power, before starting any repairs. If repairs are to be made to the PATRON unit, drain PATRON unit before proceeding.

COOLING UNIT

Trouble		Probable Cause		Remedy
Cooling or condensing unit non-operational	1.	No electrical power.	1.	Plug power cord into electrical box.
	2.	Improper voltage/amperage	2.	Check for proper voltage/amperage.
	3.	Loss of refrigerant.	3.	Repair leak and replenish refrigerant.
	4.	Bad overload and relay.	4.	Replace overload and relay
	5.	Compressor bad.	5.	Replace compressor.
	6.	Restriction (pinched or crimped line).	6.	Repair, straighten or replace defective line.
	7.	Condenser Dirty	7.	Clean condenser unit w/vacuum cleaner.
Condenser fan motor not	1.	Electrical cord loose or disconnected from condenser fan	1.	Tighten connections or replace cord.

operating	2. 3.	motor or compressor terminals. Fan blade obstructed. Inoperative condenser fan motor.	2. 3.	Remove obstruction. Replace condenser fan motor.
Compressor does not operate	1. 2. 3. 4. 5. 6.	No power source. Electrical power to cooling unit turned off. Low voltage. Loose, disconnected, or broken wire. Inoperative overload protector or start relay. Inoperative compressor.	1. 2. 3. 4. 5. 6.	Plug power cord to electrical box. Check line voltage. Voltage must be at least 110 V at compressor terminals at start. Tighten connection or replace broken wiring. Replace defective part. Replace compressor.
Note: During overload protector shut off condenser fan motor will continue to work. Otherwise, troubleshooting condenser fan motor problems is the same as "Compressor does not operate", paragraph in addition to the following.				
Condenser fan motor not operating	1. 2. 3.	Electrical cord loose or disconnected from condenser fan motor or compressor terminals. Fan blade obstructed. Inoperative condenser fan motor.	1. 2. 3.	Tighten connections or replace cord. Remove obstruction. Replace condenser fan motor.

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PATRON leaking from nozzle after actuation	1.	Peristaltic pump tubing has lost its elasticity.	1.	a. Replace PPM tubing.
No PATRON being dispensed	1. 2. 3. 4. 5. 6. 7.	No electrical power. Pinched or crimped lines. Broken liquor switch. Bad transformer. Disconnected wire. Defective PPM assy. Worn or defective neoprene tubing in PPM assy.	1. 2. 3. 4. 5. 6. 7.	Plug power cord into electrical box. Check line voltage. Repair defective line. Replace defective switch. Replace defective transformer. Attach disconnected wire. Replace PPM assy. Replace defective tubing.
No PATRON being dispensed	1. 2. 3. 4.	PATRON reservoir empty. PPM Assy defective. Defective neoprene tubing. Defective transformer.	1. 2. 3. 4.	Replenish PATRON supply. Replace PPM Assy. Replace neoprene tubing. Replace transformer.

NOTE SECTION

Frequently Called Numbers:
