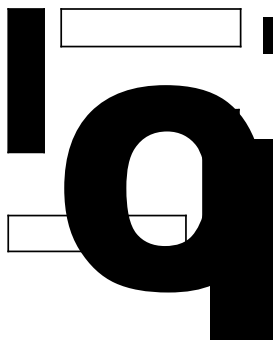
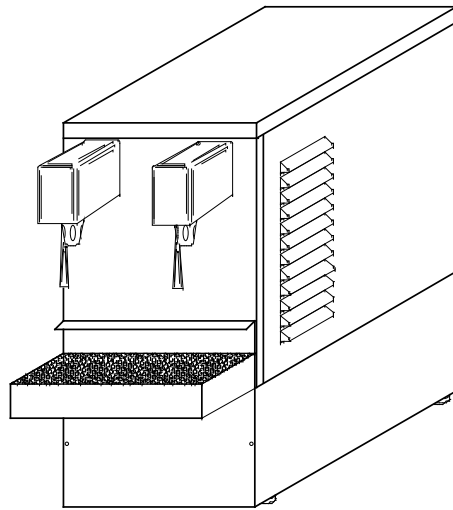


# **PREMIER 2000 PERISTALTIC PUMP P-2000-PP**

## **SERVICE AND INSTALLATION 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 53 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.**

## **P2000-PP CHAPTER I**

### **GENERAL DESCRIPTION**

**This chapter gives the description, theory of operation, and design data for the PREMIER 2000-Peristaltic Pump unit, (P2000-PP), and related components.**

### **SYSTEM DESCRIPTION**

**The P2000-PP is a complete self-contained Juice unit which when combined with B.I.B containers, will produce a variety of cooled non-carbonated beverages. The P2000-PP consists of a water bath, refrigeration system, valves, and modular peristaltic pump compartment. The cabinet is housed in an attractive black vinyl and the peristaltic pump module is housed in a rugged stainless steel housing. The P2000-PP has been designed to eliminate the use of bag in the box pumps and associated components. The P2000-PP will dispense product with B.I.B.'s at a distance of 100 feet horizontally or 17 feet vertically. THESE DISTANCES ARE ONLY POSSIBLE IF THE SUPPLY LINE HAS COMPLETE INTEGRITY. IF EVEN THE SMALLEST VACUUM LEAK IS ALLOWED THESE DISTANCES ARE NOT POSSIBLE. The P2000-PP can brix from one to one up to twenty to one by using a state of the art controller/potentiometer adjustment.**

**For proper function the P2000-PP must have a water supply, and electrical supply and drainage. The P2000-PP is designed with a unique lift off drain pan that can be emptied at any convenient drain outlet.**

**WARNING: Before shipping or relocating a P2000-PP into a freezing ambient environment empty plain water. Syrup systems should be flushed, ice bank melted, and water drained from water bath. A freezing ambient environment will cause existing water in unit to freeze possibly resulting in damage to water coil, peristaltic pumps, water bath, valve(s), etc.**

**Water Filter Recommended (Optional) See Manufacturer Specifications for Operating Conditions**

## DESIGN DATA

### Overall Cabinet/P.P. Base Dimensions:

Height: .....22 ½ inches  
Width..... 11 ¾ inches  
Depth..... 17 ½ inches

### Weights:

Shipping .....90 LBS  
Dry Weight .....80 LBS  
Operational Weight..... 111 LBS  
Ice Bank..... 6 LBS

### Capacities:

Unit Water bath (no ice bank) .....2.5 gallons  
Refrigerant Requirement (R-134a) .....90 grams/3.2 ounces

Ambient Operating Temperature.....40 F. to 100 F.

### Electrical Requirements:

The cooling unit requires 115 VAC, single phase, 60-hertz power circuit.

Circuit Ampacity.....4.0 Amps  
Condensing Unit .....2.2 Amps  
Agitator ..... .8 Amps  
Peristaltic Pump Assembly ..... 1.0 Amps

Refrigeration 1/9<sup>th</sup> capillary air-cooled.

Water Filter Recommended but Optional

## THEORY OF OPERATION

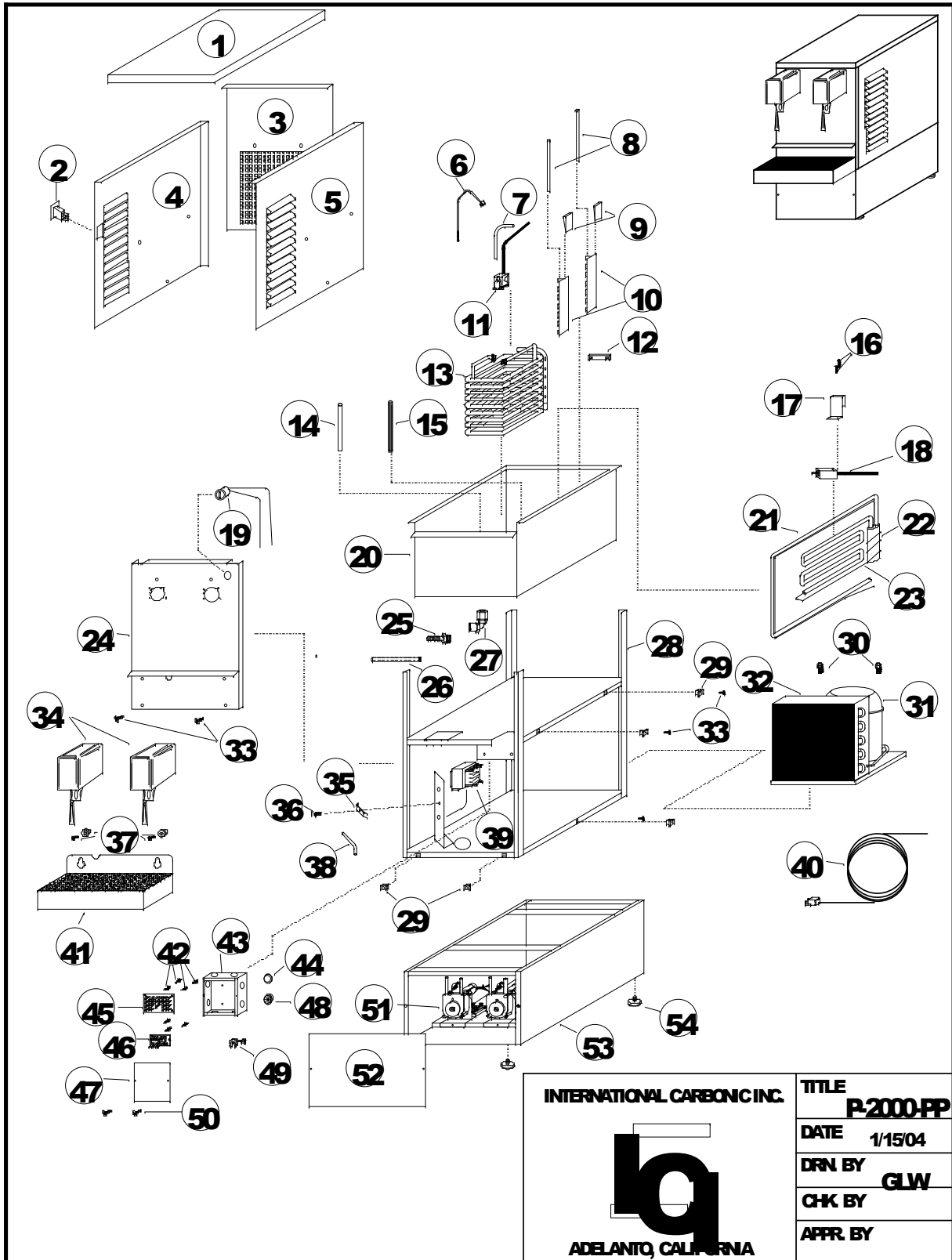
The P2000-PP was designed to manufacture and dispense non-carbonated beverages much like your local bottling plant that cans or bottles your favorite non-carbonated drink.

The water bath must be filled with approximately 2.5 gallons of water. After all connections are made and activation of the refrigeration a certain amount of this water will be transformed into ice, approximately 6 pounds. This water reserve and ice bank will act as a reservoir for refrigeration. This reserve is utilized during peak periods when the BTU output of the compressor is not sufficient to meet the demand of the draw.

**The incoming water is routed through a water coil that is submerged in the above mentioned water bath. The temperature of the incoming water is at ambient temperature as it enters the submerged water coil. As the incoming water passes through the water coil the heat is removed from the water in the water coil and chilled to a temperature acceptable for a quality drink, normally a temperature of 33 to 34 degrees is reached. The water is now directed to a valve where the water and syrup are mixed in proper proportions to dispense a quality drink. Depending on the ratio of water versus syrup the temperature will rise and be dispensed at approximately 40 degrees fahrenheit.**

**With the incorporation of the peristaltic pump the necessity for an air or CO2 supply is no longer necessary, this includes the low and high-pressure regulators normally needed for a standard juice unit. The peristaltic pumps will pull the syrup concentrate from the B.I.B., (bag in the box), and then push the syrup through syrup cooling coils, (optional), and then to the valve where the syrup concentrate and water are mixed in a proper ratio to dispense a quality drink. The syrup enters the P2000-PP through a unique 1/4" X 3/8 S-162 bulkhead fitting at the rear of the unit.**

**The water source should be regulated, this is normally performed by the use of an in line water regulator. If the water is not regulated then the water pressure can vary. This variance of water pressure can affect our dispensed product.**





# PREMIER 2000 PP

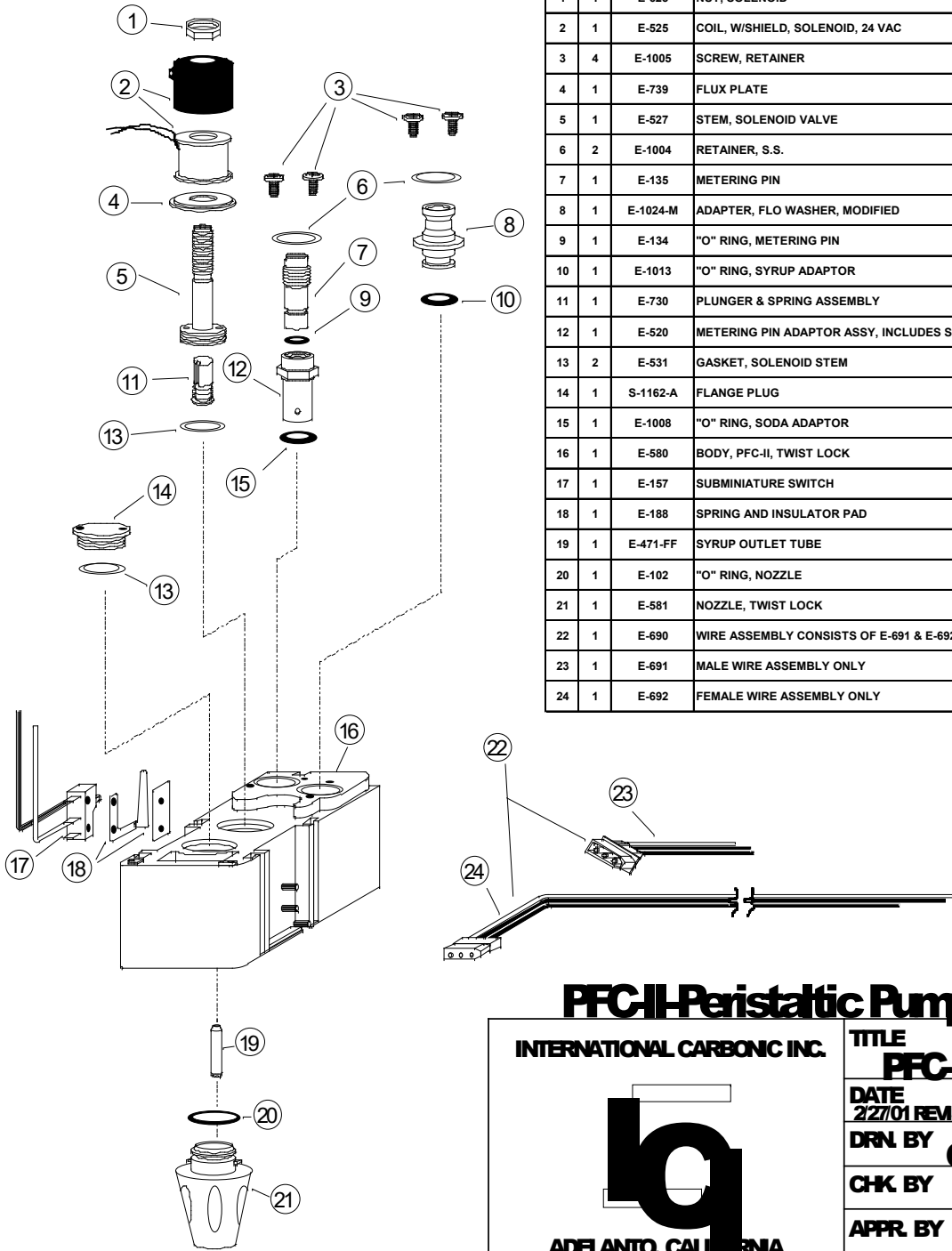
<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	1	S-1544	LID WITH INSULATION
2	1	S-783	UNIT ON/OFF SWITCH
3	1	S-1541	SERVICE PANEL, REAR
4	1	S-1542	SERVICE PANEL, LEFT SIDE
5	1	S-1543	SERVICE PANEL, RIGHT SIDE
6	1	G0016	TY-RAP, LARGE
7	1	....	3/8 CLEAR TUBING, 6"
8	2	S-741	EVAPORATOR COIL RETAINER
9	2	S-1323	EVAPORATOR GUIDE WEDGE
10	2	S-1540	EVAPORATOR COIL SUPPORT BRKT.
11	1	S-833	AGITATOR PUMP
12	2	S-1324	POSITIONING BAR
13	1	S-1533-J	WATER COIL
14	1	S-1547	STANDPIPE, 6 3/4", WHITE
15	1	S-1546	OVERFLOW, 7", GRAY
16	2	A0016	6-32 X 1 PH SS SCREW
17	1	S-1304-L	ICE BANK CONTROL BULB BRACKET
18	1	S-512-C	EIBC PROBE
19	1	S1330	SWITCH LOCK, W/KEYS
20	1	S-1531	BUCKET ASSY., WITH INSULATION
21	1	S-1532	EVAPORATOR COIL ASSEMBLY
22	1	S-509	ACCUMULATOR
23	1	X0121	CAP TUBE, 12' - .031
24	1	S-1539-2	VALVE MOUNTING PLATE
25	1	S-1535	CONDENSATE DRAIN NIPPLE
26	1	S-1554	6" CLEAR TUBING, 1/4 I.D. X 3/8 O.D.

# PREMIER 2000 PP Cont.

<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
27	1	S-1534	CONDENSATE DRAIN ELBOW
28	1	S-1530	FRAME COMPLETE
29	11	S-1325	SQUARE GROMMET NUT
30	2	A0046	5/16 X 18 FLANGE WHIZ LOCK SCREW, 3/4"
31	1	AZA0370YXA	COMPRESSOR ONLY
32	1	AZA0370YXAXA	CONDENSING UNIT, 1/9 H.P.
33	11	A0014	SCREW, #10 X 1/2" PHILLIPS T.H., SS COMBO
34	2	PFC-II	DISPENSING VALVE
35	1	S-1551	DRAIN TUBE HOLD DOWN BRACKET
36	1	A0025	10-24 X 1/2 TH SCREW
37	1	S-743	DRAIN PAN HARDWARE, SET
38	1	S-1552	DRAIN TUBE, 5/16 X 4" S.S. TUBING
39	1	S-1700	TRANSFORMER, 24V, 100VA
40	1	E-141-12	CORD
41	1	S-1549	DRAIN PAN W/CUP REST
42	7	S-1335	TERMINAL BOARD SPACER, NYLON
43	1	S-1537	TERMINAL BOX WITH COVER
44	1	S-7/8	HOLE PLUG
45	1	S-1309	TERMINAL BOARD
46	1	S-513-C	ELECTRONIC ICE BANK CONTROL, (EIBC)
47	1	S-1538	TERMINAL BOX COVER ONLY
48	5	S-46	BUSHING UNIVERSAL
49	1	E-664	STRAIN RELIEF BUSHING
50	4	A0020	8-32 X 3/8 TH SCREW, S.S.
51	2	S-1737	PP, PERISTALTIC PUMP ASSEMBLY COMPLETE
52	1	S-1556	BASE COVER
53	1	S-1555	BASE
54	1	S-1318	CUSHIONED FEET, SET OF 4
	1	S-765	LEGS, 4", SET OF 4, (OPTIONAL)

# PFC-II-PP

SYM	QTY	PART NO.	DESCRIPTION
1	1	E-623	NUT, SOLENOID
2	1	E-525	COIL, W/SHIELD, SOLENOID, 24 VAC
3	4	E-1005	SCREW, RETAINER
4	1	E-739	FLUX PLATE
5	1	E-527	STEM, SOLENOID VALVE
6	2	E-1004	RETAINER, S.S.
7	1	E-135	METERING PIN
8	1	E-1024-M	ADAPTER, FLO WASHER, MODIFIED
9	1	E-134	"O" RING, METERING PIN
10	1	E-1013	"O" RING, SYRUP ADAPTOR
11	1	E-730	PLUNGER & SPRING ASSEMBLY
12	1	E-520	METERING PIN ADAPTOR ASSY, INCLUDES SYM 7,9, & 12
13	2	E-531	GASKET, SOLENOID STEM
14	1	S-1162-A	FLANGE PLUG
15	1	E-1008	"O" RING, SODA ADAPTOR
16	1	E-580	BODY, PFC-II, TWIST LOCK
17	1	E-157	SUBMINIATURE SWITCH
18	1	E-188	SPRING AND INSULATOR PAD
19	1	E-471-FF	SYRUP OUTLET TUBE
20	1	E-102	"O" RING, NOZZLE
21	1	E-581	NOZZLE, TWIST LOCK
22	1	E-690	WIRE ASSEMBLY CONSISTS OF E-691 & E-692
23	1	E-691	MALE WIRE ASSEMBLY ONLY
24	1	E-692	FEMALE WIRE ASSEMBLY ONLY



## PFC-II Peristaltic Pump

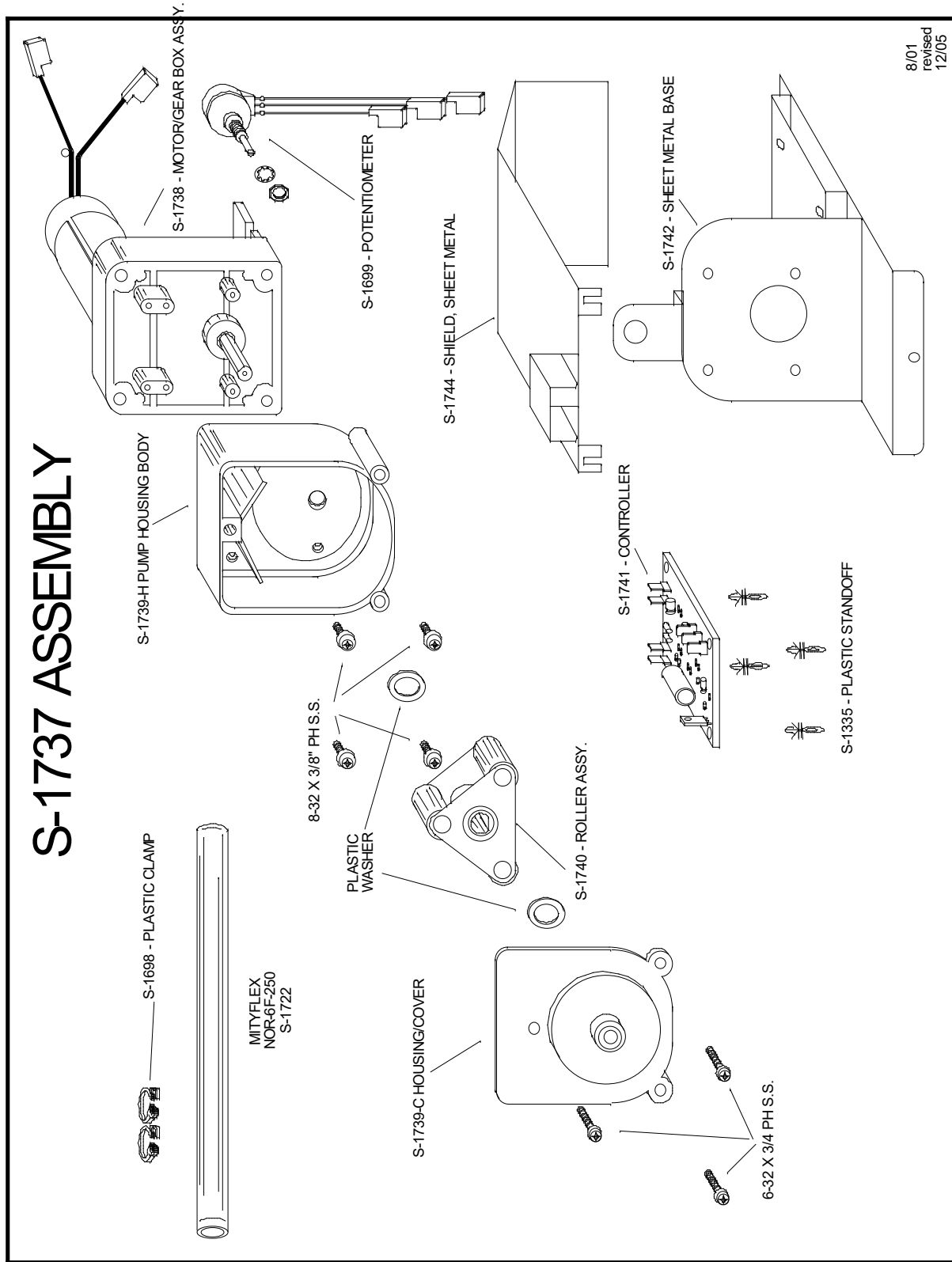
INTERNATIONAL CARBONIC INC.



ADELANTO, CALIFORNIA

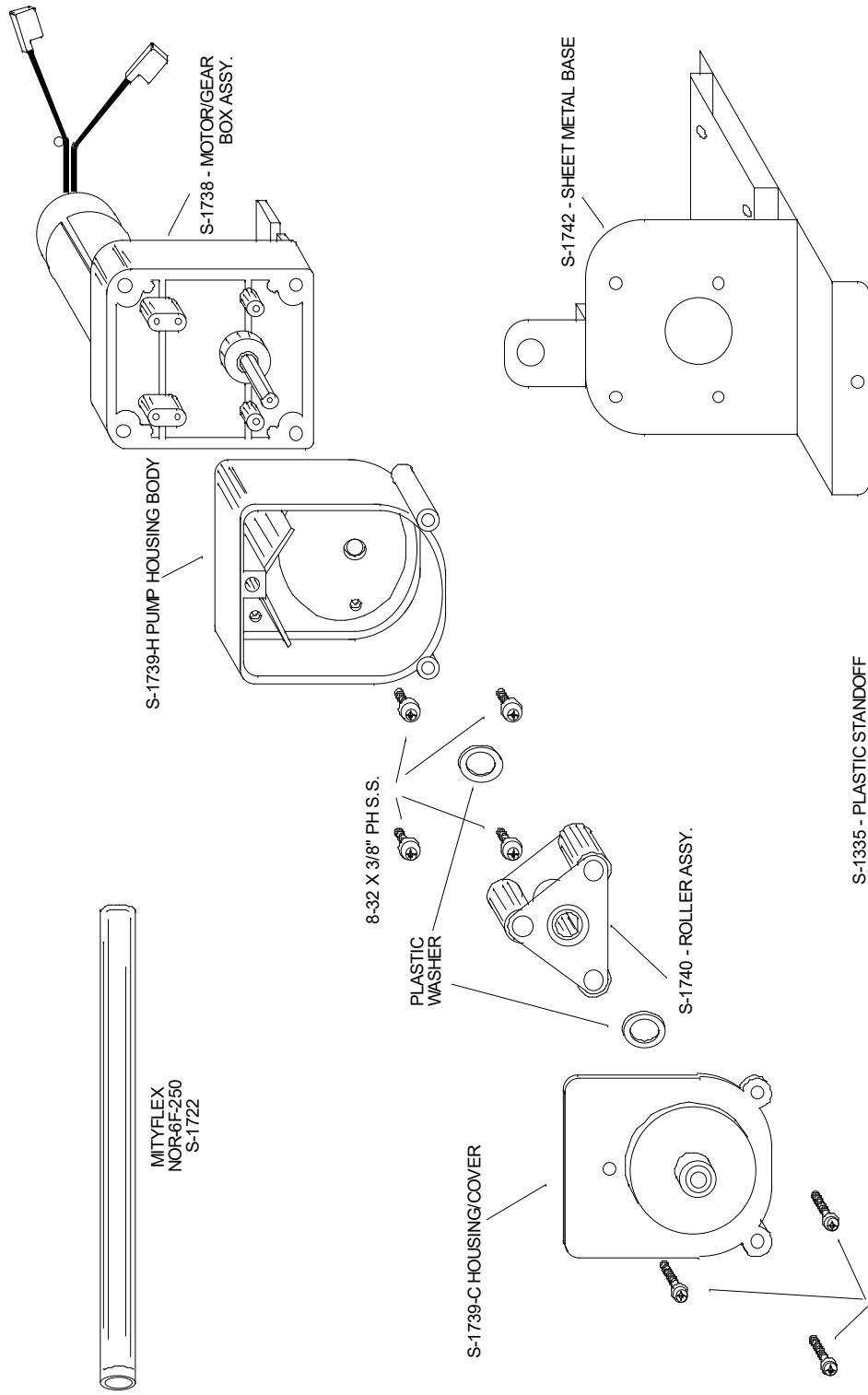
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CHK. BY	
APPR. BY	

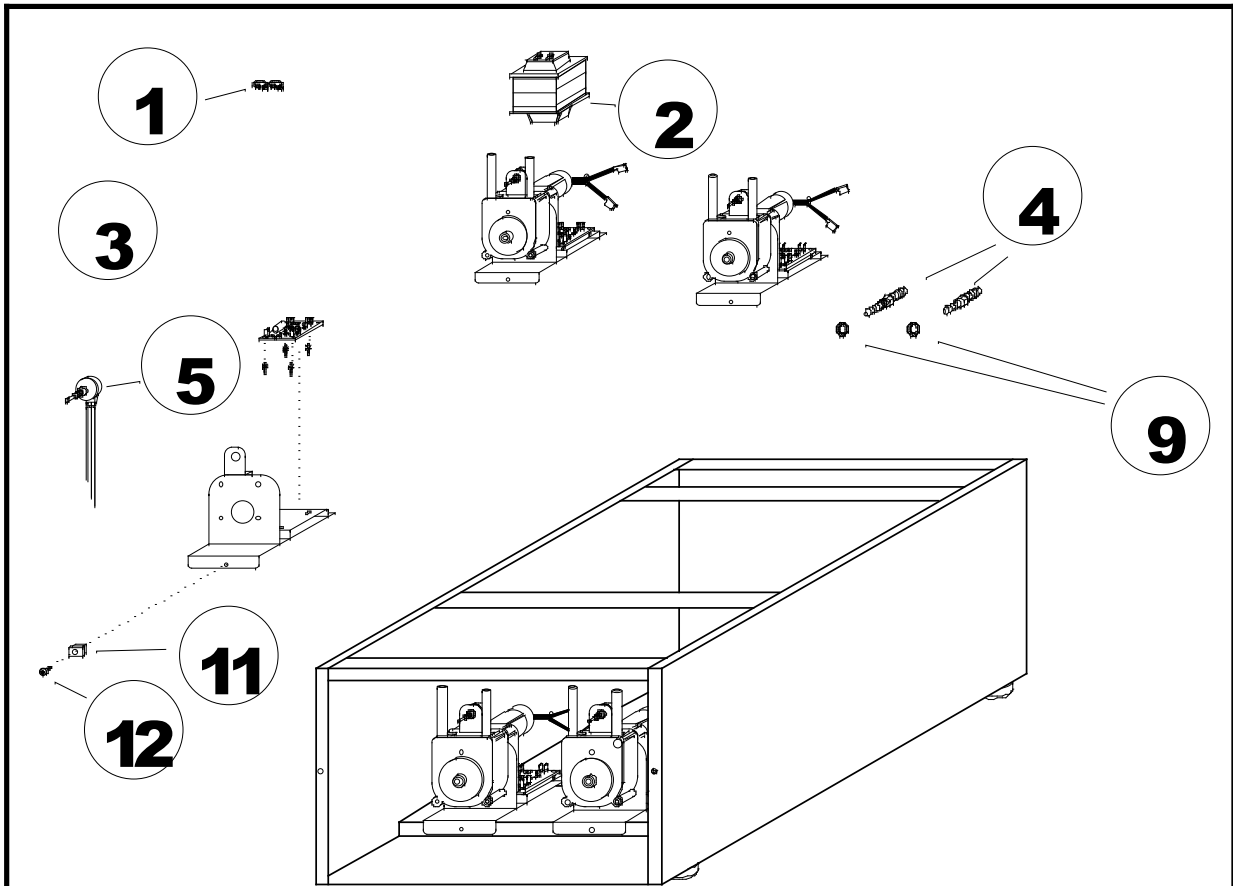
# S-1737 ASSEMBLY



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revised  
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# S-1743 REPLACEMENT ASSEMBLY





**PPM**

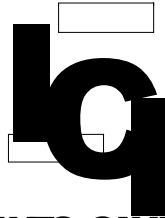
SYM	QTY	PART NO.	DESCRIPTION
1	2 **	S-1698	PLASTIC CLAMP
2	1	S-1700	TRANSFORMER
3	1 **	S-1743	P.P. ASSEMBLY, INCLUDES S-1742, S-1699
4	*	S-162	BULK HEAD FITTING
5	1 **	S-1699	POTENTIOMETER
6	1 **	S-1741	CONTROLLER
7	4 **	S-1335	PLASTIC STANDOFF
8	1***	***	BASE, MODULE
9	1 **	S-286-A	NUT, SS, LOCKING, 1/2" X 20 (USEW//S-162)
10	1 **	S-1742	BASE, PUMP
11	1 **	S-1325	SQUARE GROMMET NUT
12	1 **	A-14	SCREW #10 X 1/2" PHILLIPS HD S.S.
13	1***	***	COVER, MODULE BASE

\* ONE PER FLAVOR PLUS WATER SPECIFY NUMBER

\*\* = ONE PER FLAVOR, SPECIFY

\*\*\* = SPECIFY NUMBER/MODEL TYPE

**INTERNATIONAL CARBONIC INC.**



**ADELANTO, CALIFORNIA**

**TITLE**

**Peristaltic  
Module**

**DATE**

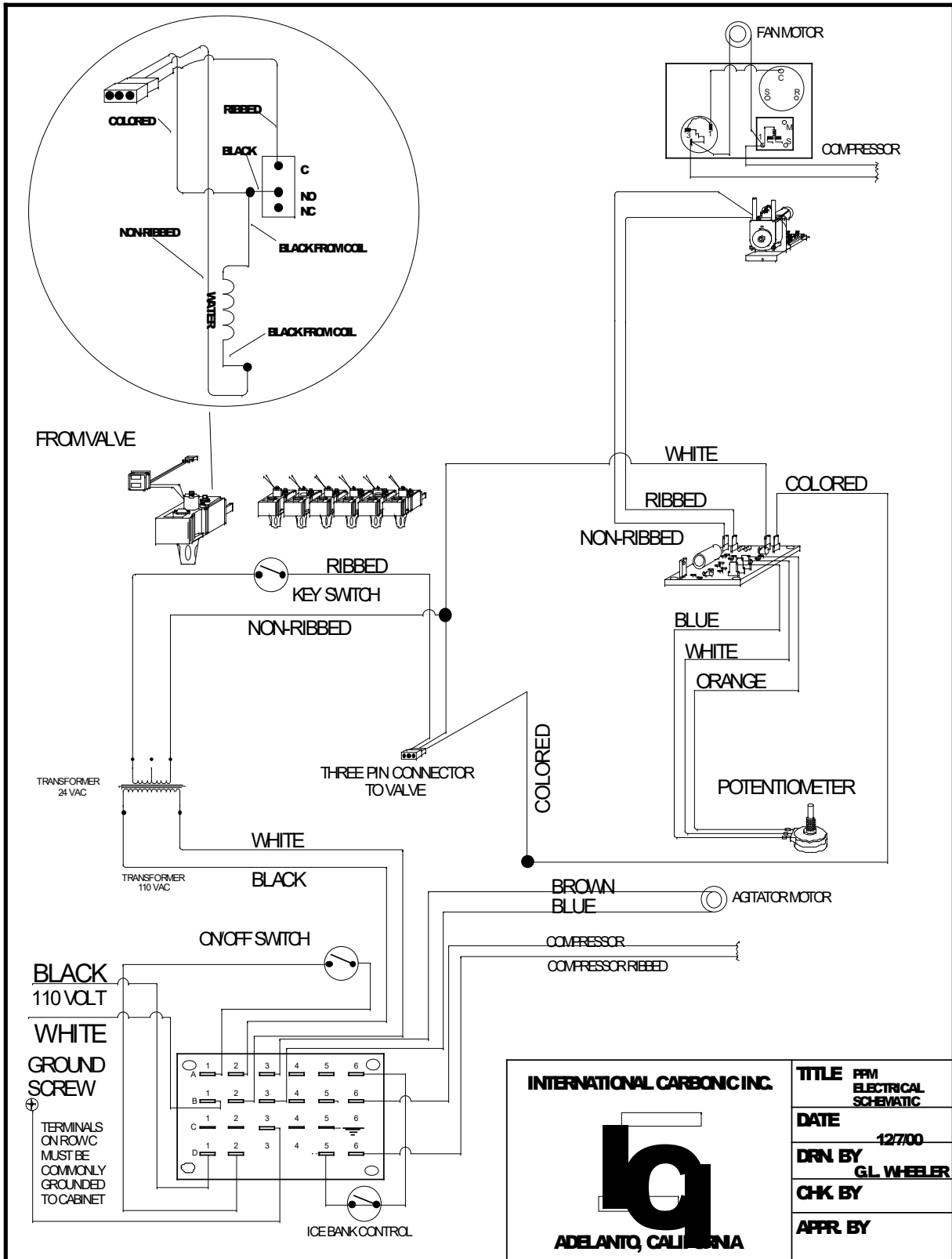
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**ELECTRICAL  
CHAPTER II  
INSTALLATION  
P2000-PP**

**This chapter covers unpacking and inspection, selecting location, installing P2000-PP and related components, and electrical requirements.**

**UNPACKING AND INSPECTION**

**Upon receiving unit, immediately remove P2000-PP from shipping carton and inspect for shipping damage.**

**NOTE: Before leaving the factory the P2000-PP unit was carefully inspected and the carrier has accepted and signed for it. Any damage or irregularities should be noted at the time of delivery and immediately reported to delivering carrier. Request a written inspection report from claims inspector to substantiate any necessary claim. File claim with delivering agency, not International Carbonic Inc!**

**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 LIL FELLA MID SIZE JUICE PERISTALTIC PUMP unit, P2000-PP**

- 1. Position unit as close as possible to proper electrical source, 115V 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 lid removal.**
- 3. Position unit as close as possible to floor drain.**
- 4. Position unit as close as possible to B.I.B. racks.**
- 5. Position unit as close as possible to water source. Half-inch gate valve recommended for water connection.**
- 6. THE P2000-PP IS DESIGNED FOR INDOOR APPLICATIONS ONLY.**

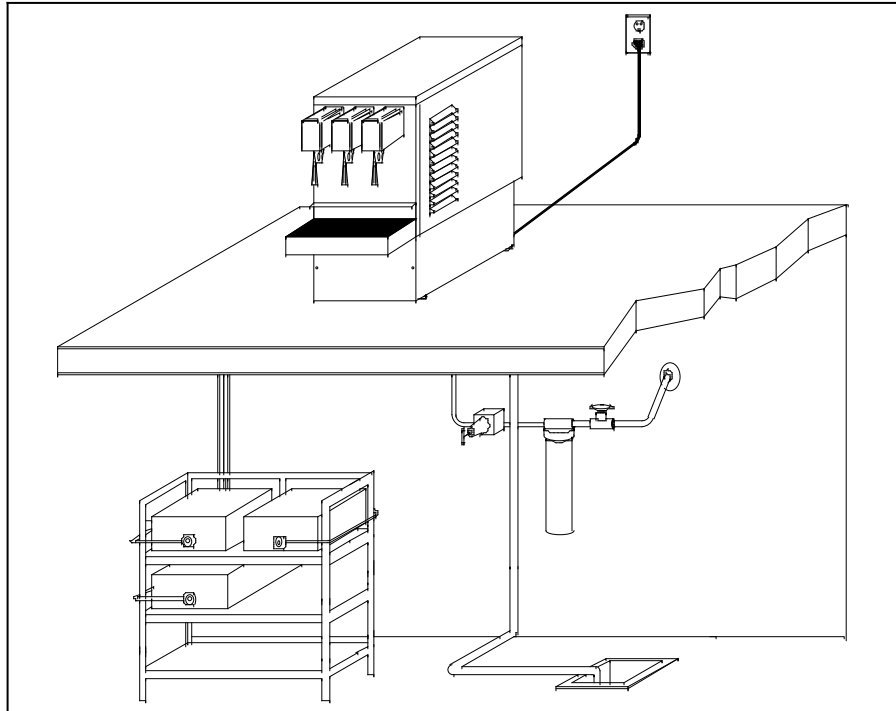


**TABLE 2-1**

**LOOSE - SHIPPED PARTS**

<b>Item No.</b>	<b>Part No.</b>	<b>Name</b>	<b>Qty</b>
1		Installation/Service Manual	1
2	S-1549	Drain pan/with cup rest	1
3	----	Product Decals	1 per flavor
4*		Water filter	1
5*	S-208A	Water Pressure Regulator	1

\* Optional



**FIGURE 2 SAMPLE OF POSSIBLE INSTALLATION.**

**INSTALLATION**

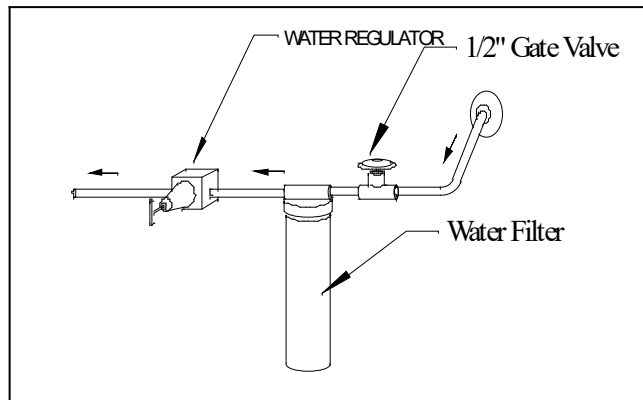
**INSTALL WATER FILTER ASSY. (OPTIONAL)**

- 1. Install water filter assembly on wall or other supporting structure.**
- 2. Connect water filter assembly to inlet of valve on water supply line using minimum 3/8" I.D. water line.**
- 3. Connect water filter assembly outlet to P2000-PP water inlet fitting using minimum 3/8" I.D. water line. See CONNECTING WATER INLET.**

**When a water filter is used, it is important to thoroughly flush out water filter and line prior to making unit connections.**

## **INSTALL WATER PRESSURE REGULATOR (OPTIONAL)**

If water pressure varies, a water pressure regulator or water pressure-reducing valve should be installed in the water supply line. The water regulator must have an orifice of at least 3/16" so as not to restrict the water flow through the valve. Valves that are built with 1/2" pipe thread connection usually have a sufficient orifice opening.



**FIGURE 2-4. SUGGESTED WATER FLOW INSTALLATION**

## **INSTALL DRAIN LINE**

- 1. Connect drain line on P2000-PP unit with drain using 1/2" I.D. clear plastic tubing to nearest outlet.**
- 2. Do not reduce drain connection from cabinet outlet.**
- 3. Be sure all connections are watertight.**

## **INSTALL B.I.B. (bag in the box)**

**Place B.I.B. as close as possible to P2000-PP unit, preferably no farther than 15 feet. The P2000-PP will dispense product with the B.I.B.'s at a distance of 100 feet horizontally or 17 feet vertically. THESE DISTANCES ARE ONLY POSSIBLE IF THE SUPPLY LINE HAS COMPLETE INTEGRITY. IF EVEN THE SMALLEST VACUUM LEAK IS ALLOWED THESE DISTANCES ARE NOT POSSIBLE.**

- 1. Lay out syrup lines from unit to B.I.B.**
- 2. Connect lines from B.I.B. to inlet on P2000-PP.**
- 3. Activate Q.C.D.**
- 4. Check all connections for leaks, (see Chapter IV).**

## **CONNECTING WATER INLET**

### **WATER PIPE CONNECTIONS AND FIXTURES DIRECTLY CONNECTED TO POTABLE WATER SUPPLY SHALL BE SIZED, INSTALLED AND MAINTAINED ACCORDING TO FEDERAL, STATE, AND LOCAL LAWS.**

The water connection on the P2000-PP is made to a flexible water line by means of a 3/8", hose or barb connection.

After all primary water lines are made up, but prior to connecting water supply to cabinet, be sure to thoroughly flush all incoming water lines to remove all scale and any impurities that may be in the lines. It is imperative that the fresh water-conduit has not less than 3/8" I.D. passageway for any distance greater than ten feet from the P2000-PP. It can be reduced to 3/8" O.D. copper tubing and connected to the water inlet connection with-in ten feet of the P2000-PP. All water inlet connections are clearly tagged.

### **ELECTRICAL REQUIREMENTS:**

The P2000-PP requires a 120 VAC, single phase, 60-Hertz power circuit, and must be wired in accordance with N.E.C. or local ordinance.

**NOTE:** Check CHAPTER I for running amperage and connect to appropriate electrical circuit.

**CHAPTER III**  
**P2000-PP**  
**PREPARATION**

**All steps in previous chapters should be understood and carried out before proceeding.**

**PREPARING SYSTEM FOR OPERATION**

**Be sure that electrical power is unplugged, valve on water supply line is closed.**

**PREPARING AND STARTING REFRIGERATION UNIT**

- 1. P2000-PP refrigeration is pre-set at factory and ready to operate.**
- 2. Remove lid.**
- 3. Fill water bath with clean water until water runs out of condensate drain outlet, (S-1547), (approximately ½" from top of water bath). DO NOT USE DISTILLED WATER.**
- 4. Open water inlet supply line.**
- 5. Plug P2000-PP power cord into electrical receptacle box, turn power switch to the "ON" position. Make sure compressor, condenser fan motor, agitator motor start. The process of cooling the water bath will commence after filling water bath. With ambient and water temperature of 75 degree "F" initial pull down or formation of complete ice bank will take approximately 3.5 hrs. When full ice bank has been formed, compressor and condenser fan motor will stop. Agitator will continue to operate, circulating water in water bath.**

**PURGE DISPENSING VALVES**

**Dispense water from dispensing valves until all air is purged from water lines.**

**ADJUST WATER FLOW RATE**

**Adjust dispensing valves water flow rate to approximately 6 oz. in 5 seconds.**

**ADJUST WATER-TO-SYRUP "RATIO"**

**Adjust dispensing valves for Water-to-syrup "Ratio". Contact supplier of syrup concentrate for recommended ratio.**

**CHAPTER IV**  
**P2000-PP**  
**OPERATORS INSTRUCTIONS**

**This chapter covers operators' responsibilities for daily pre-operation check, adjustments, replenishing CO<sub>2</sub> and cleaning, and sanitizing.**

**DAILY PRE-OPERATION CHECK**

- 1. Make sure B.I.B.'s full and ready to dispense.**
- 2. Make sure nozzles are clean and in place.**
- 3. Make sure electrical power is supplied to unit.**

**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 either side and back 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 CO<sub>2</sub> or an air hose to blow out condenser. The latter method should only be attempted after normal business hours to avoid dust contamination.**

**CHECKING WATER BATH**

**Periodically check water level in water bath. If water level is low, water should be added as instructed for maximum product cooling. This dehydration will normally not occur in normal temperate climate zones. With normal humidity the opposite will occur.**

**CHANGING WATER BATH**

**Drain water bath a minimum of twice a year. This can be accomplished by locating the white standpipe, (S-1547), in the water bath area and removing by twisting and pulling up. Once water is drained, water bath, water coils, bath walls, etc. should be cleaned. Replace standpipe and refill with water. Fill water bath to top of standpipe, (S-1547).**

**CLEAN NOZZLES**

**Remove nozzles nightly and let soak in warm water. DO NOT SOAK IN HOT HOT WATER OR BLEACH WATER!**

## **CHAPTER V**

### **SERVICE AND MAINTENANCE**

**This chapter describes service and maintenance procedures to be performed on P2000-PP JUICE unit systems and related components.**

#### **PERIODIC INSPECTION AND CLEANING**

##### **Daily:**

- 1. Clean any storage tanks/B.I.B. racks, connecting sockets/Q.C.D.'s and general storage area with warm water.**
- 2. Clean the beverage dispensing area.**
- 3. Remove and clean nozzles and all exposed areas on valves.**
- 4. Wipe exterior of unit with moist towel.**

##### **Weekly:**

- 1. Order syrup 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. Inspect components of cooling unit water bath for cleanliness.**
- 3. Check entire system for leaks or damaged components. Repair as necessary.**

#### **PERIODIC CLEANING**

**Periodically wash all external surfaces of cooling unit, rinse with clean water, than wipe dry with a clean soft cloth.**

**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 unit power cord from electrical socket.**
2. **Remove 11 screws securing service panels, 3 screws per service panel and valve plate, remove panels and lift up valve plate in preparation for service.**
3. **Vacuum or use a soft brush to clean fins of condenser coil. Use low-pressure compressed air or CO2 gas to blow through condenser fins. This should only be performed after normal business hours to prevent dust contamination. A damp cloth on backside of condenser coil will prevent some dust contamination.**
4. **Plug unit power cord in electrical socket.**

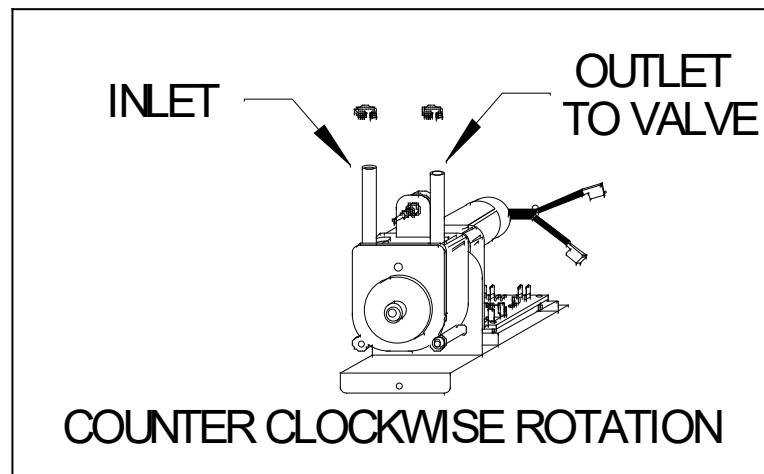
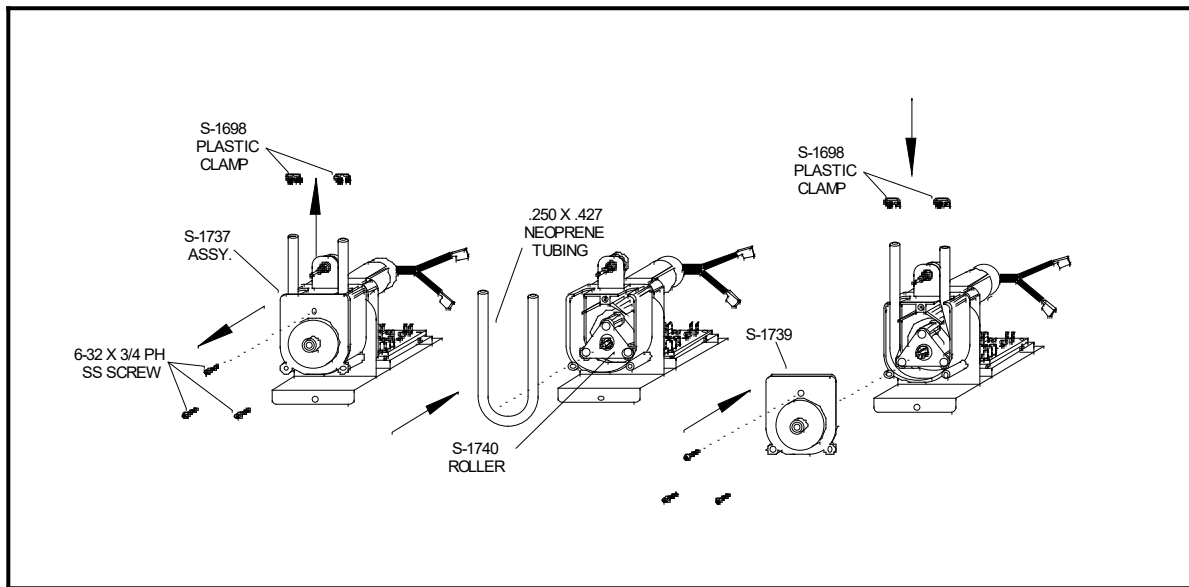
### **CHANGING WATER BATH**

**NOTE:** The water in the water bath should be changed and all components in water bath should be cleaned as often as necessary to keep it clean. A convenient time to perform this operation is when the system is being sanitized.

1. **Unplug unit power cord from electrical socket.**
2. **Remove lid from water bath.**
3. **Look down into water bath (if necessary, use flashlight) and inspect water bath, evaporator and all components for cleanliness. Water, refrigeration evaporator and all components should be clear and free of foreign particles. Note: special attention should be paid to ice bank control bulb.**
4. **Pull out standpipe and allow water to drain.**
5. **Use fiber brush and carefully clean mineral deposit from all components.**
6. **Wash evaporator coil with a mild soap. Copper cleans well with mild solution of citric acid. Stainless steel cleans well with carbonated water. Then rinse with clean water.**
7. **Rinse out water bath with clean water until water running out of drain hose is clean.**
8. **Reinstall standpipe in drain inlet.**
9. **Fill water bath to top of standpipe, (condensate drain), with fresh clean water.**
10. **Install lid.**
11. **Plug P2000-PP unit power cord in electrical socket.**

## **CHANGING PERISTALTIC PUMP TUBING**

- 1. Remove #10 X 1/2" Phillips TH. Screw. Then slide out S-1737 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.**





## **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.**

#### **EQUIPMENT REQUIRED:**

- 1. Stainless Steel containers (product tanks), or large volume container.**
- 2. CO2 Supply If applicable, (Same as used with dispensing unit).**
- 3. Cleaning Agent.**
- 4. Sanitizing Solution.**
- 5. 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.**

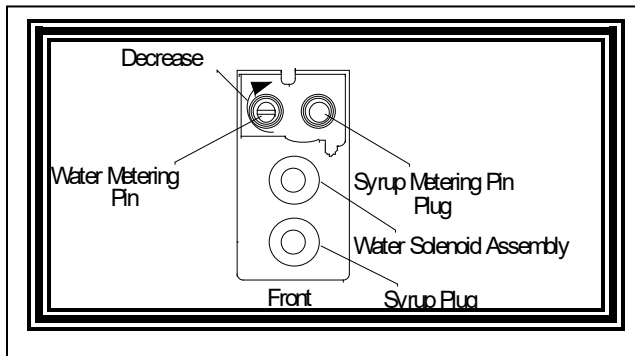
**Use Crown at 2 ounce per 9 gallons of water (gives 200 PPM of available chlorine) at a minimum contact time of 10 minutes.**

- 1. Disconnect syrup containers and remove product from tubing by purging with carbon dioxide or 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 valve with a soft clothe and warm water. Replace valve nozzle then go to step #3.**
- 3. Fill syrup lines 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 syrup lines with clean water. Continue rinsing until testing with phenolphthalein shows that the rinse water is free of residual detergent.**
- 5. Fill the syrup lines 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. Reconnect syrup containers and ready Unit for operation.**
- 7. A Draw drinks to refill syrup lines and flush the chloride solution from the dispenser.**
- 8. Taste the beverage to verify that there is no off taste.**

**NOTE: WHEN SANITIZING A TWO FLAVOR VALVE BOTH SYRUPS SHOULD BE FLUSHED SIMUTAINOUSLY, BOTH SYRUPS SHOULD BE CLEANED, (DETERGENT SOLUTION), SIMUTAINOUSLY, BOTH SYRUPS SHOULD BE FLUSHED UNTIL FREE OF DETERGENT SIMUTAINOUSLY AND BOTH SYRUPS SHOULD BE SANITIZED SIMUTAINOUSLY.**

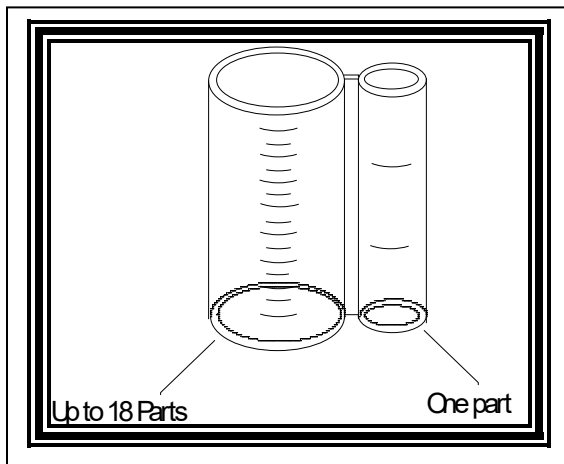
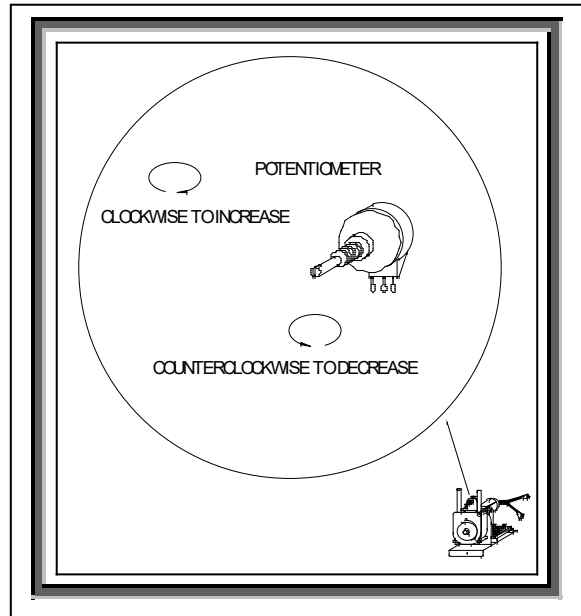
## BRIXING PFC-II-PP VALVE



The water and syrup flows are individually adjusted by their respective metering pin / potentiometer.

One recommended method utilizes the ratio brix cup, see illustration. The brix cup is divided into two sections, one to hold up to 9 parts water and the smaller section to hold one or two parts of syrup. When adjusting a flavor with a ratio of more than 9 to 1 syrup 2 line must be used. When using syrup 2 line the waterside is doubled to 18 to 1 vs. 9 to 1.

When facing the valve, the syrup is always to the right and the water/soda is to the left. To decrease syrup or water flow, turn metering pin clockwise. To decrease syrup or water flow, when using flow control valves turn counter-clockwise. To increase, reverse rotation respectively.

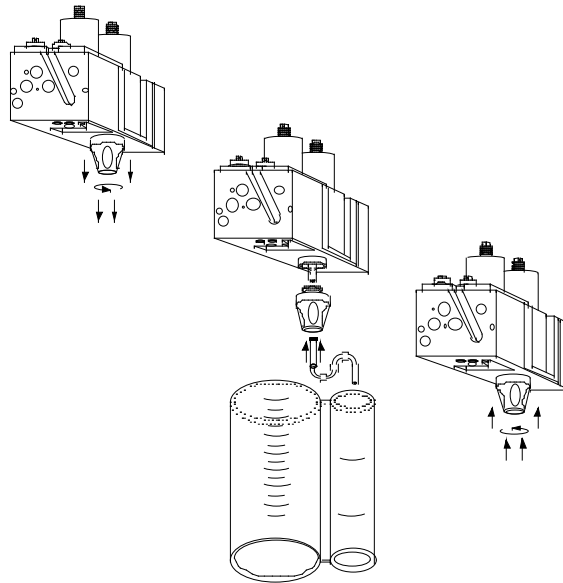


The ultimate goal is to achieve a proper ratio of water vs. syrup. This ratio can and will vary with differing products.

Note: Contact product supplier for proper ratio adjustments.

## BRIX INSTRUCTIONS

1. **Make sure carbonator/water flow is in an operating condition, i.e., high-pressure regulators set, water and power on and refrigeration in a ready to go mode. In the case of juice systems make sure water flow is un-restricted. It is also recommended that a water pressure regulator be utilized on all systems. Water bath systems must have an ice bank formed.**
2. **Adjust water flow to 6 ounces in 5 seconds.**
3. **Remove nozzle (twist and pull down), then insert syrup separator through nozzle, be it "S" type or plastic tube, and on 1/4" plastic syrup outlet located inside hidden nozzle area. Then press nozzle back in position.**
4. **Actuate valve until syrup separator is full of syrup. Hold brix cup close enough to valve outlet to form "S" on the flexible plastic tube so as to prevent any water following the flexible tube into syrup section. This formed "S" will also hold syrup in tube for a more reliable brix reading.**
5. **Actuate valve allowing the soda water to flow into large section of cup and syrup into smaller section. Adjust the syrup metering pin/flow-control as necessary to secure a proper brix. When proper brix syrup adjustments have been made, the two sections of the cup should fill to the desired ration.**



## TROUBLE SHOOTING

**IMPORTANT: Only qualified personnel should service P2000-PP unit and components.**

**WARNING: To avoid personal injury and or property damage, always disconnect electrical power and shut off plain water before starting any repairs. If repairs are to be made to the water system, bleed water system pressure before proceeding. If repairs are to be made to syrup system, remove quick-disconnects from FIGAL or remove QCD from BIB, then bleed system pressure before proceeding.**

### COOLING UNIT

Trouble		Probable Cause		Remedy
<b>Frozen water bath</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li><b>Bad ice bank control.</b></li> <li><b>Agitator pump defective</b></li> <li><b>Under charge on refrigerant.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li><b>Replace bad ice bank control.</b></li> <li><b>Replace Agitator pump.</b></li> <li><b>Find refrigerant leak, repair and recharge.</b></li> </ol>
<b>Cooling or condensing unit non-operational</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> </ol>	<ol style="list-style-type: none"> <li><b>No electrical power.</b></li> <li><b>No water in water bath</b></li> <li><b>Defective ice bank control.</b></li> <li><b>Dirty water bath.</b></li> <li><b>Dirty condenser unit.</b></li> <li><b>Improper voltage/amperage</b></li> <li><b>Loss of refrigerant.</b></li> <li><b>Bad overload and relay. Compressor bad. Restriction (pinched or crimped line).</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> </ol>	<ol style="list-style-type: none"> <li><b>Plug power cord into electrical box. Check on/off switch.</b></li> <li><b>Fill water bath with water.</b></li> <li><b>Replace ice bank control.</b></li> <li><b>Change water bath.</b></li> <li><b>Clean condenser unit w/vacuum cleaner.</b></li> <li><b>Check for proper voltage/amperage.</b></li> <li><b>Repair leak and replenish refrigerant.</b></li> <li><b>Replace overload and relay. Replace compressor. Repair, straighten or replace defective line.</b></li> </ol>

<b>Compressor does not operate</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>No power source.</b></li> <li>2. <b>Electrical power to cooling unit turned off.</b></li> <li>3. <b>Low voltage.</b></li> <li>4. <b>Loose, disconnected, or broken wire.</b></li> <li>5. <b>Inoperative ice bank control.</b></li> <li>6. <b>Inoperative overload protector or start relay.</b></li> <li>7. <b>Inoperative compressor.</b></li> <li>8. <b>Full ice bank.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Plug power cord to electrical box. Check line voltage.</b></li> <li>2. <b>Turn on power switch to unit.</b></li> <li>3. <b>Voltage must be at least 110 V at compressor terminals at start.</b></li> <li>4. <b>Tighten connection or replace broken wiring.</b></li> <li>5. <b>Replace ice bank control.</b></li> <li>6. <b>Replace defective part.</b></li> <li>7. <b>Replace compressor.</b></li> <li>8. <b>Refrigeration not called for.</b></li> </ol>
<b>Compressor works continuously but does not form ice bank.</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Cooling capacity is exceeded by over drawing.</b></li> <li>2. <b>Cooling unit located in excessively hot area.</b></li> <li>3. <b>Air circulation through condenser coil is restricted</b></li> <li>4. <b>Loss of refrigerant or insufficient charge.</b></li> <li>5. <b>Dirty water bath.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Reduce amount of drinks taken per given time of install higher volume unit.</b></li> <li>2. <b>Relocate cooling unit.</b></li> <li>3. <b>Check and if necessary, clean condenser coil.</b></li> <li>4. <b>Repair leak and/or recharge with sufficient refrigerant.</b></li> <li>5. <b>Clean water bath.</b></li> </ol>
<b>Compressor will not stop after forming ice bank</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Ice bank control capillary tube kinked or broken.</b></li> <li>2. <b>Ice bank control stuck in closed position.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Replace ice bank control.</b></li> <li>2. <b>Replace ice bank control.</b></li> </ol>
<p><b>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.</b></p>				
<b>Condenser fan motor not operating</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Electrical cord loose or disconnected from condenser fan motor or compressor terminals.</b></li> <li>2. <b>Fan blade obstructed.</b></li> <li>3. <b>Inoperative condenser fan motor.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Tighten connections or replace cord.</b></li> <li>2. <b>Remove obstruction.</b></li> <li>3. <b>Replace condenser fan motor.</b></li> </ol>

<b>DISPENSING VALVES</b>			
<b>Water leaking from nozzle after actuation</b>	<b>1.</b>	<b>Foreign debris under plunger seat or bent, creased stem water only.</b>	<b>1.</b> <ol style="list-style-type: none"> <li><b>a. Disconnect water from affected valve.</b></li> <li><b>b. Relieve pressure by activating valve.</b></li> <li><b>c. Remove E-623 nut from water solenoid.</b></li> <li><b>d. Remove E-525 coil assembly from E-527 stem.</b></li> <li><b>e. Remove E-527 stem from valve body.</b> <b>Note: care should be taken not to dent smooth E-527 wall.</b></li> <li><b>f. Valve stem seat should be inspected for any foreign debris. If debris is found remove at this time, also check E-730 stem. Movement should be unrestricted and free.</b></li> <li><b>g. Inspect E-730 plunger seat for damage, replace if damaged.</b></li> <li><b>h. Reassemble by reversing above procedure.</b></li> </ol>
<b>No water, no syrup being dispensed from valve</b>	<b>1.</b>          <b>2.</b>          <b>3.</b>          <b>4.</b>          <b>5.</b>          <b>6.</b>          <b>7.</b>          <b>8.</b>	<b>No electrical power.</b>          <b>Frozen water bath.</b>          <b>Pinched or crimped lines.</b>          <b>Broken sub-miniature switch.</b>          <b>Bad transformer.</b>          <b>Disconnected wire.</b>          <b>Defective S-1737 assy.</b>          <b>Worn or defective neoprene tubing in S-1737 assy.</b>	<b>1.</b> <b>Plug power cord into electrical box. Check line voltage.</b>          <b>2.</b> <b>See “Frozen water bath”.</b>          <b>3.</b> <b>Repair defective line.</b>          <b>4.</b> <b>Replace defective switch.</b>          <b>5.</b> <b>Replace defective transformer.</b>          <b>6.</b> <b>Attach disconnected wire.</b>          <b>7.</b> <b>Replace S-1737 assy.</b>          <b>8.</b> <b>Replace defective tubing.</b>

<b>No syrup being dispensed</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Syrup container empty.</b></li> <li>2. <b>Syrup lines crimped.</b></li> <li>3. <b>QCD of syrup installed incorrectly.</b></li> <li>4. <b>S-1737 Assy defective.</b></li> <li>5. <b>Defective neoprene tubing.</b></li> <li>6. <b>Defective transformer.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Replenish syrup supply.</b></li> <li>2. <b>Straighten syrup lines.</b></li> <li>3. <b>Re-install QCD correctly.</b></li> <li>4. <b>Replace S-1737 Assy.</b></li> <li>5. <b>Replace neoprene tubing.</b></li> <li>6. <b>Replace transformer.</b></li> </ol>
<b>No water being dispensed</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Plain water inlet supply shutoff closed.</b></li> <li>2. <b>Water filter fouled/clogged.</b></li> <li>3. <b>Pinched or crimped line.</b></li> <li>4. <b>Loose electrical connection, 24 volt.</b></li> <li>5. <b>Defective transformer.</b></li> <li>6. <b>Frozen water bath.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Open plain water inlet supply line shut off valve.</b></li> <li>2. <b>Replace filter or cartridge.</b></li> <li>3. <b>Repair defective line.</b></li> <li>4. <b>Tighten connection and or repair open circuit.</b></li> <li>5. <b>Replace defective transformer.</b></li> <li>6. <b>See "Frozen water bath".</b></li> </ol>
<b>Water-to-syrup ratio to low or too high</b>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Syrup adjusted to low.</b></li> <li>2. <b>Syrup B.I.B. placement to far away for P.P. Pumps.</b></li> <li>3. <b>S-1737 Pump assy defective.</b></li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Adjust water-to-syrup ratio (see brixing instructions).</b></li> <li>2. <b>Move B.I.B. closer to unit.</b></li> <li>3. <b>Remove and repair S-1737 pump assy.</b></li> </ol>



