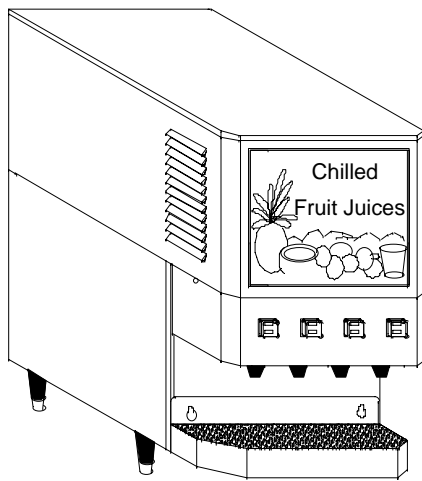


# CONCEPT JUNIOR

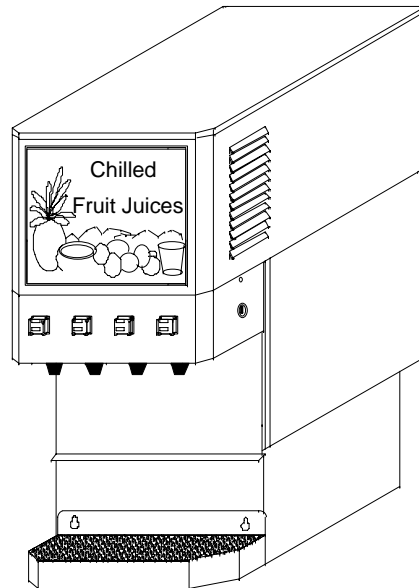
CONCEPT JUNIOR PERISTALTIC PUMP UNIT

CONCEPT JUNIOR UNIT

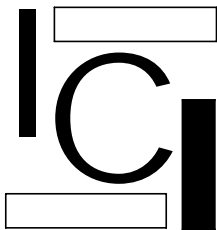
## INSTALLATION AND SERVICE MANUAL



C-JR



C-JR-PP



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.

# TABLE OF CONTENTS

	PAGE
PREFACE .....	1
CHAPTER 1	
GENERAL DESCRIPTION .....	2
SYSTEM DESCRIPTION .....	2
DESIGN DATA .....	3
THEORY OF OPERATION .....	3
EXPLODED VIEW C-JR-PP.....	5
EXPLODED VIEW DESCRIPTION C-JR-PP .....	6
EXPLODED VIEW C-JR .....	8
EXPLODED VIEW DESCRIPTION C-JR.....	9
PFC-II-PP EXPLODED VIEW .....	11
PFC-II EXPLODED VIEW.....	12
PFC-II EXPLODED VIEW DESCRIPTION.....	13
ELECTRIC SCHEMATIC PPM .....	14
ELECTRIC SCHEMATIC .....	15
S-1737 ASSEMBLY EXPLODED VIEW.....	16
S-1743 REPLACEMENT ASSEMBLY EXPLODED VIEW .....	17
CHAPTER II	
UNPACKING AND INSPECTION.....	18
SELECTING LOCATION.....	18
LOCATION RECOMMENDATIONS.....	18
SAMPLE OF POSSIBLE INSTALLATION .....	19
INSTALL WATER FILTER ASSY.....	19
INSTALL WATER PRESSURE REGULATOR.....	20
INSTALL DRAIN LINE .....	20
INSTALL B.I.B. ....	20
CONNECTING WATER INLET.....	21
ELECTRICAL REQUIREMENTS .....	21
CHAPTER III	
PREPARING SYSTEM FOR OPERATION.....	22
PREPARING AND STARTING REFRIGERATION UNIT.....	22
PURGE DISPENSING VALVE.....	22
ADJUST WATER FLOW RATE .....	22
ADJUST WATER TO SYRUP RATIO .....	22
CHAPTER IV	
OPERATORS INSTRUCTIONS.....	23
DAILY PRE-OPERATION CHECK.....	23
COOLING UNIT MAINTENANCE .....	23
CHECKING WATER BATH.....	23
CHANGING WATER BATH.....	23
CLEANING NOZZLES .....	23
CHAPTER V	
SERVICE AND MAINTENANCE .....	24
PERIODIC INSPECTION AND CLEANING .....	24
PERIODIC CLEANING.....	24
CLEANING CONDENSER COIL.....	24
CHANGING WATER BATH.....	25
CHANGING PERISTALTIC PUMP TUBING.....	26
CLEANING AND SANITIZING.....	27
BRIX INSTRUCTIONS PFC-II-PP .....	29
BRIX INSTRUCTIONS PFC-II.....	30
BRIX PROCEDURES .....	31
TROUBLE SHOOTING .....	32
NOTES .....	33

## 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.

GENERAL DESCRIPTION

This chapter gives the description, theory of operation, and design data for the CONCEPT JR JUICE PERISTALTIC PUMP unit, (C-JR-PP) or CONCEPT JR less peristaltic pumps, (C-JR), and related components.

SYSTEM DESCRIPTION

The C-JR-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 C-JR-PP or C-JR consists of a water bath, refrigeration system and valves. The C-JR-PP will be equipped with a modular peristaltic pump compartment. The cabinet and peristaltic pump module are housed in a rugged stainless steel housing. The C-JR-PP has been designed to eliminate the use of bag in the box pumps and associated components. The C-JR-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 C-JR-PP or C-JR can brix from one to one up to twenty to one by using a state of the art controller/potentiometer adjustment. The C-JR will require external BIB Pumps.

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

WARNING: Before shipping or relocating a C-JR-PP or C-JR 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

C-JR-PP or C-JR

Overall Cabinet/P.P. Base dimensions:

	C-JR-PP	C-JR
Height.....	29 1/8	20 7/8
Width .....	12	12
Depth.....	24	24

Weights:

Shipping pounds.....	128	108
Dry weight pounds .....	106	86
Operational Weight pounds .....	146	126

Capacities:

Unit water bath gallons 5  
Refrigerant requirement (R-134a) ounces 6.3  
Grams 180

Ambient operating temperature 40 F to 100 F

Electrical Requirements:

The cooling unit requires a 115 VAC, single phase, 60 Hertz power circuit.

Circuit Ampacity Amps .....	C-JR-PP 3.8	C-JR 2.8
Condensing Unit Amps .....	2.1	
Agitator Amps .....	.8	
Peristaltic Pump Assembly @ 4 valves Amp .....	1	
Illumination (Optional) .....	.5	

REFRIGERATION 1/5 H.P. capillary air-cooled.

### THEORY OF OPERATION

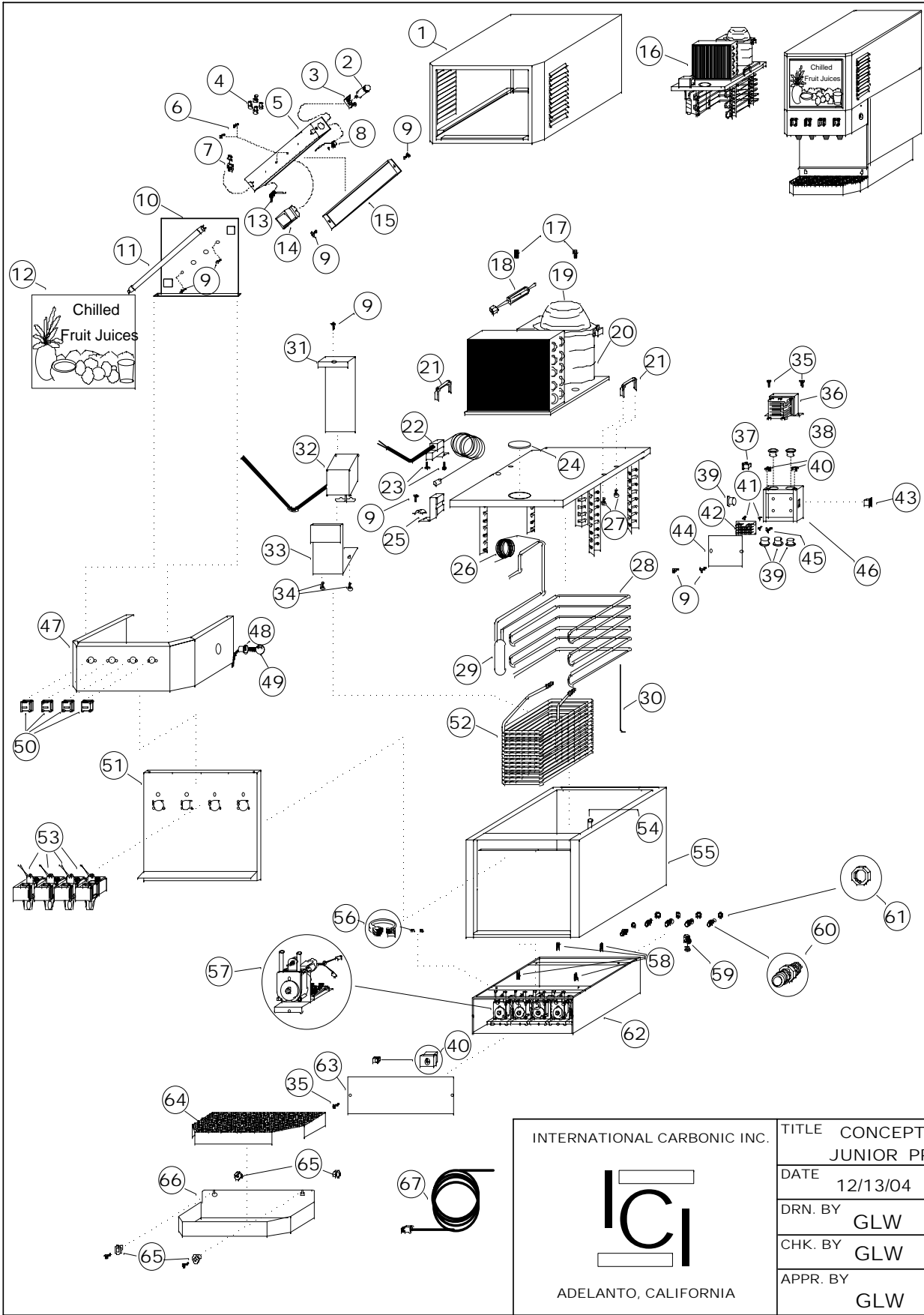
The C-JR-PP or C-JR was designed to manufacture and dispense non-carbonated beverages much like your local bottling plant that cans or bottles your favorite non-carbonated drink.


The water bath must be filled with approximately 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 17 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 C-JR-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 and the water pressure can vary. This variance of water pressure can affect our dispensed product.



INTERNATIONAL CARBONIC INC.  ADELANTO, CALIFORNIA	TITLE	CONCEPT
		JUNIOR PP
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	CHK. BY	GLW
	APPR. BY	GLW

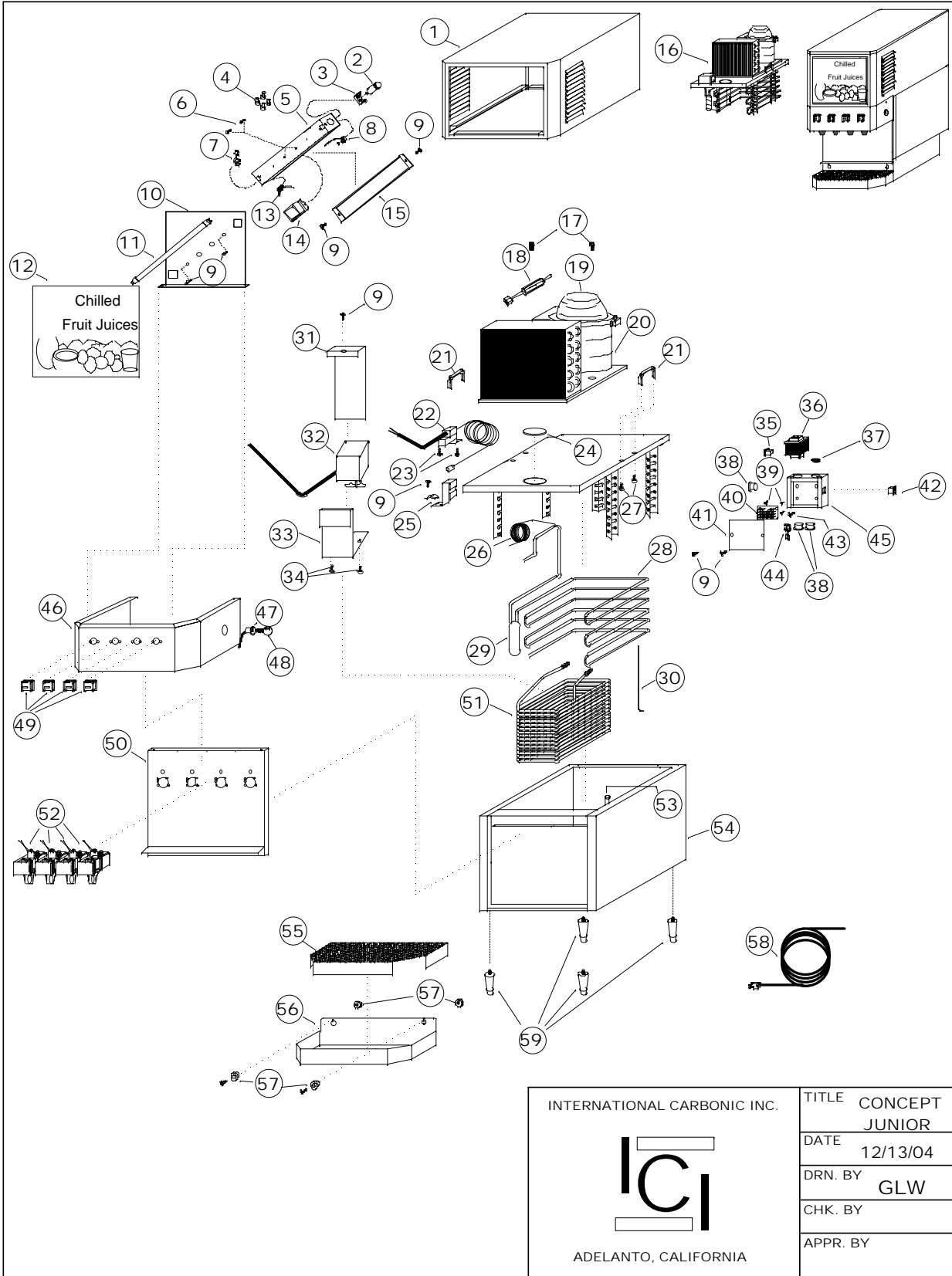


# CONCEPT JR PP

SYM	QTY	PART NO.	DESCRIPTION
1	1	S1201	COVER ONLY
2	1	S0955	STARTER
3	1	S0958	STARTER HOLDER
4	4	G0010	END BELL
5	1	S1228	LAMP HOLDER BOX W/COVER
6	2	A0009	SCREW, 8 X 3/8" PHIL P.H.
7	1	E0665	STRAIN RELIEF, (ZIP CORD)
8	2	S0973	LAMP HOLDER
9	7	A0020	SCREW, 8-32 X 3/8 T.H., S.S.
10	1	S1227	LAMP MOUNTING PLATE
11	1	S0956	LAMP
12	1	S0985-J-M	PANEL, JUICE, MODIFIED
13	2	A0060	SCREW, 6-32 X 1/4, FLAT HEAD
14	1	S0952	BALLAST
15	1	S1229	LAMP HOLDER BOX COVER ONLY
16	1	S1203	REFRIGERATION DECK, COMPLETE, INCLUDES #'S 17 - 30
17	2	A0046	5-16 X- 18 X 3/4 FLANGE WHIZ LOCK SCREW
18	1	S0192Y	REFRIGERATION DRIER, R-134A ONLY
19	1	AEA1360YXA	COMPRESSOR ONLY, 1/5 H.P.
20	1	AEA1360YXAXA	CONDENSING UNIT, 1/5 H.P.
21	2	S1470	HANDLE
22	1	S0513A	ICE BANK CONTROL
23	2	A0052	SCREW, 6-32 X 3/8 PHIL PH
24	1	H0019	1 1/2" HOLE PLUG
25	1	S1304-U	ICE BANK CONTROL BRACKET
26	1	-----	12 - .042 CAP TUBE
27	4	A0024	10-24 X 3/8 TH, SCREW
28	1	S1333	EVAPORATOR ASSY.
29	1	S0509	ACCUMULATOR
30	5	S1204	EVAPORATOR RETAINER PINS
31	1	S1206	WATER COIL RETAINER BRACKET
32	1	S0835	AGITATOR PUMP
33	1	S1306-LG	AGITATOR PUMP BRACKET
34	2	F0004	SCREW, #8 X 1/2 PH HD SELF TAPPING

# CONCEPT JR PP continued

SYM	QTY	PART NO.	DESCRIPTION
35	8	A0014	SCREW, #10 X 1/2" PHILLIPS TH SS
36	1	S1700	TRANSFORMER, 100 VA, 120 VOLT/24 VOLT
37	1	S1244	SNAP IN RECEPTACLE
38	2	E0674	BUSHING, SNAP
39	4	S0046	BUSHING
40	8	S1325	SQUARE GROMMET NUT
41	4	S1335	TERMINAL BOARD SPACER
42	1	S1309	TERMINAL BOARD
43	1	S0766	UNIT ON/OFF SWITCH
44	1	S1210	CONTROL BOX COVER
45	1	A0017	GROUND SCREW, #8 X 1/2 INDENTED HEX SLOT
46	1	S1209	CONTROL BOX
47	1	S1207-4	VALVE HOUSING
48	1	S0768	SWITCH LOCK
49	2	S0768-K	KEY ONLY, SWITCH LOCK
50	4	S1313	VALVE SWITCH, PUSH HERE
51	1	S1208-4	VALVE MOUNTING PLATE
52	1	S1334	WATER COIL
53	4	PFC-II-PP	VALVE, PERISTALTIC PUMP
54	1	S1211	STANDPIPE, 8 3/16"
55	1	S1205	WRAPPER & BUCKET ASSY W/INSULATION
56	8	S1698	PLASTIC CLAMP
57	4	S1737	PERISTALTIC PUMP ASSEMBLY, COMPLETE
58	4	A0045	5/16 - 18 FLANGE WIZ LOCK SCREW 1/2"
59	1	E0664	STRAIN RELIEF
60	5	S0162	BULK HD FITTING SS 1/4 H X 3/8 H W/HEX BODY
61	5	S0286A	NUT, SS LOCKING HEX HD 1/2-20
62	1	S1212	PP BASE ASSY
63	1	S1213	PP BASE ASSY COVER
64	1	S1215	CUP REST
65	1 SET	S0743	DRAIN PAN HARDWARE, SET
66	1	S1214	DRAIN PAN W/CUP REST
67	1	E0141-12	ELECTRICAL POWER CORD

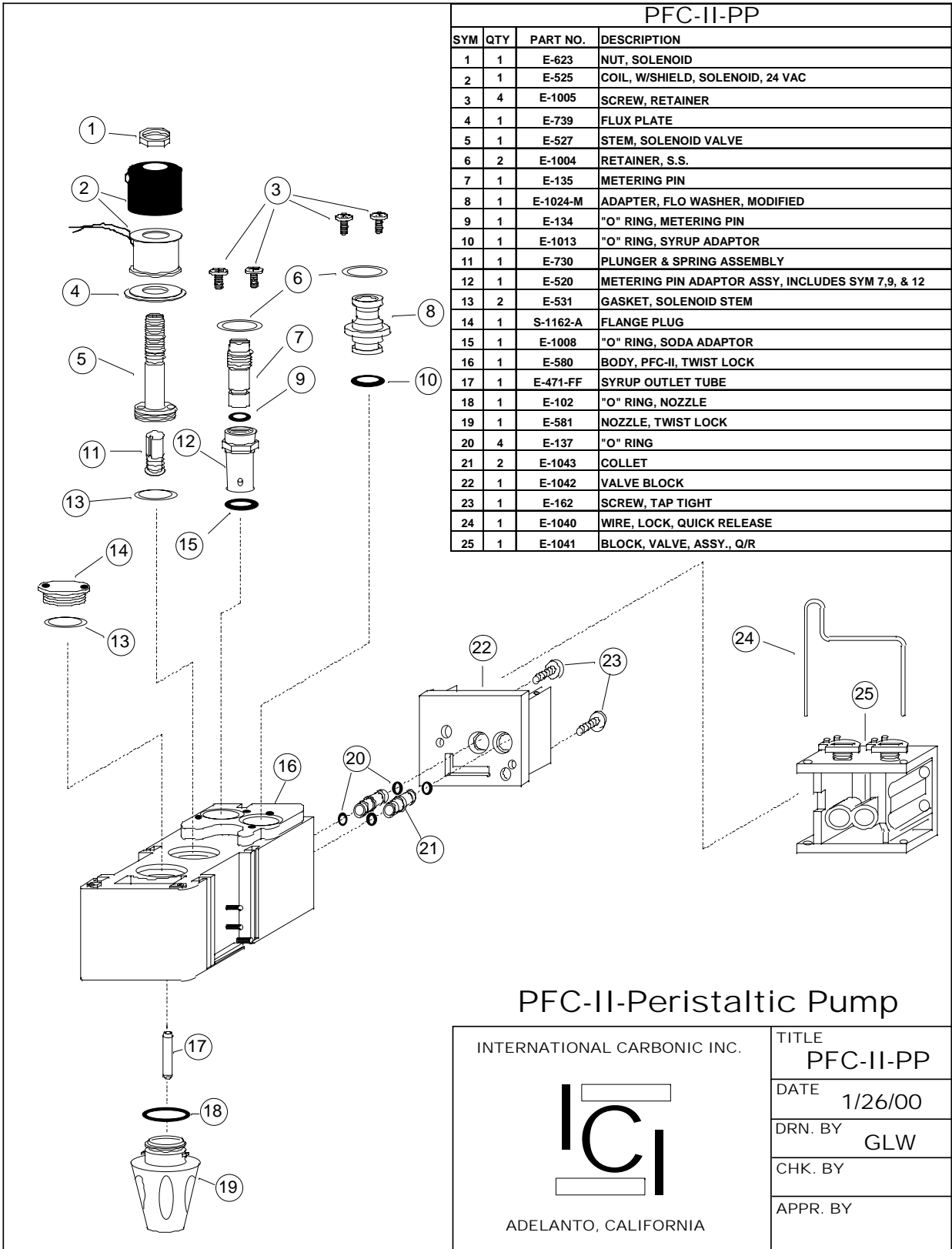


# CONCEPT JR

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18	1	S0192Y	REFRIGERATION DRIER, R-134A ONLY
19	1	AEA1360YXA	COMPRESSOR ONLY, 1/5 H.P.
20	1	AEA1360YXAXA	CONDENSING UNIT, 1/5 H.P.
21	2	S1470	HANDLE
22	1	S0513-A	ICE BANK CONTROL
23	2	A0052	SCREW, 6-32 X 3/8 PHIL PH
24	1	H0019	1 1/2" HOLE PLUG
25	1	S1304-U	ICE BANK CONTROL BRACKET
26	1	-----	12 - .042 CAP TUBE
27	4	A0024	10-24 X 3/8 TH, SCREW
28	1	S1333	EVAPORATOR ASSY.
29	1	S0509	ACCUMULATOR
30	5	S1204	EVAPRATOR RETAINER PINS

# CONCEPT JR, continued

SYM	QTY	PART NO.	DESCRIPTION
31	1	S1206	WATER COIL RETAINER BRACKET
32	1	S0835	AGITATOR PUMP
33	1	S1306-LG	AGITATOR PUMP BRACKET
34	2	F0004	SCREW, #8 X 1/2 PH HD SELF TAPPING
35	1	S1244	SNAP IN RECEPTACLE
36	1	S0276	TRANSFORMER, 40 VA, 120 VOLT/24 VOLT
37	2	H0021	HOLE PLUG
38	3	S0046	BUSHING
39	4	S1335	TERMINAL BOARD SPACER
40	1	S1309	TERMINAL BOARD
41	1	S1210	CONTROL BOX COVER
42	1	S0766	UNIT ON/OFF SWITCH
43	1	A0017	GROUND SCREW, #8 X 1/2 INDENTED HEX SLOT
44	1	E0664	STRAIN RELIEF
45	1	S1209	CONTROL BOX
46	1	S1207-4	VALVE HOUSING
47	1	S0768	SWITCH LOCK
48	2	S0768-K	KEY ONLY, SWITCH LOCK
49	4	S1313	VALVE SWITCH, PUSH HERE
50	1	S1208-4	VALVE MOUNTING PLATE
51	1	S1334	WATER COIL
52	4	PFC-II	VALVE
53	1	S1211	STANDPIPE, 8 3/16"
54	1	S1205	WRAPPER & BUCKET ASSY W/INSULATION
55	1	S1215	CUP REST
56	1	S1214	DRAIN PAN W/CUP REST
57	1 SET	S0743	DRAIN PAN HARDWARE, SET
58	1	E0141-12	ELECTRICAL POWER CORD
59	1 SET	S0765	LEGS



## PFC-II-Peristaltic Pump

INTERNATIONAL CARBONIC INC.



ADELANTO, CALIFORNIA

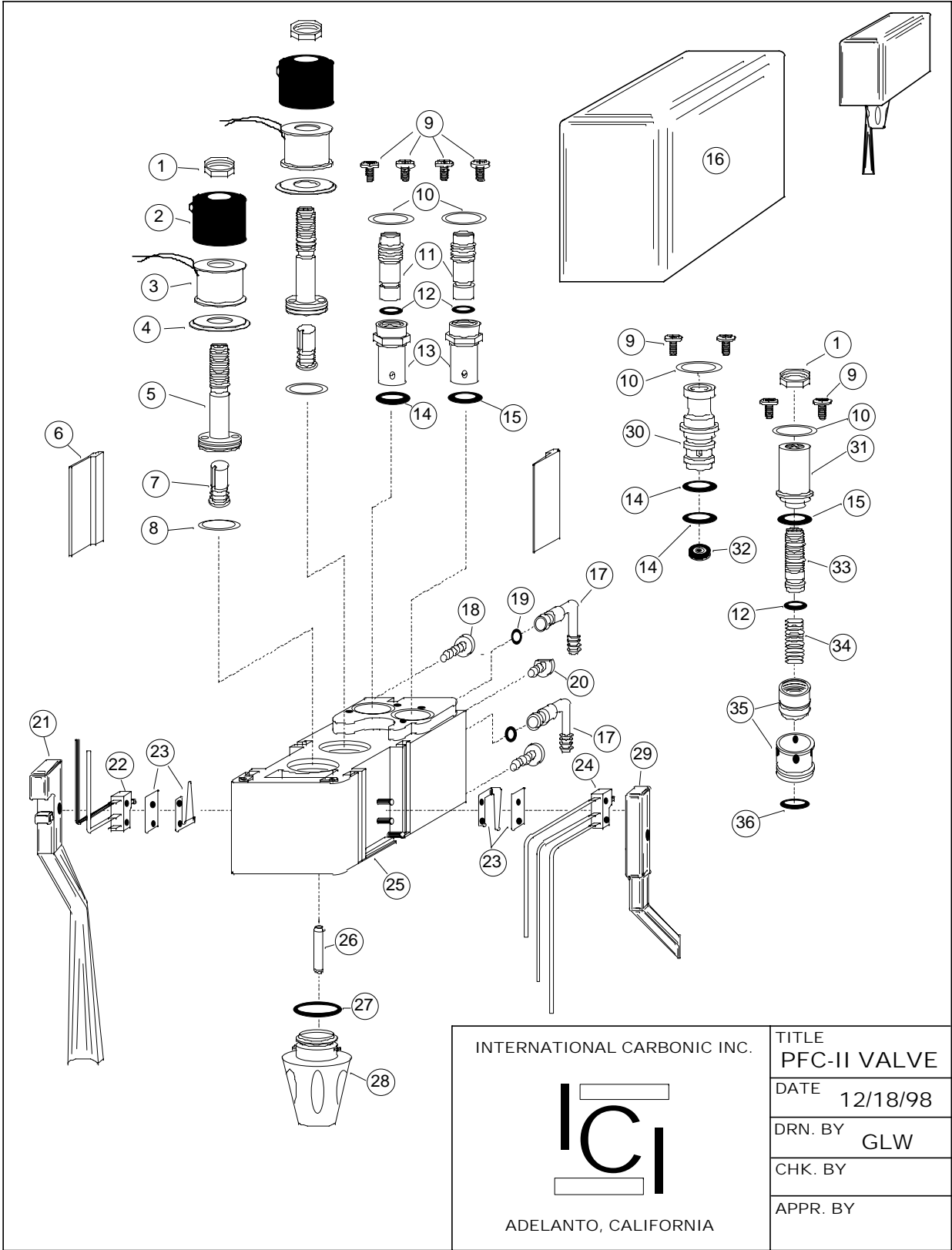
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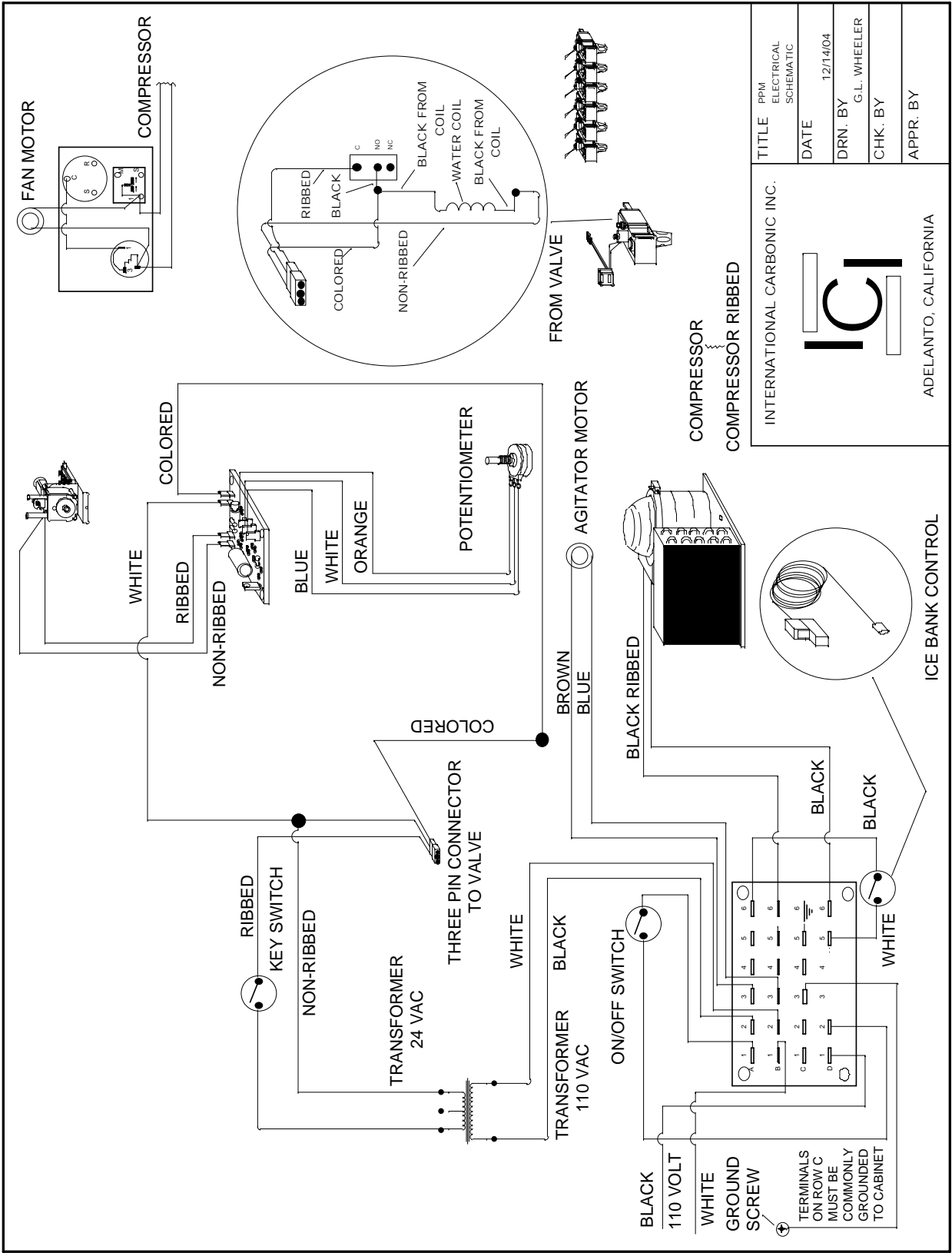
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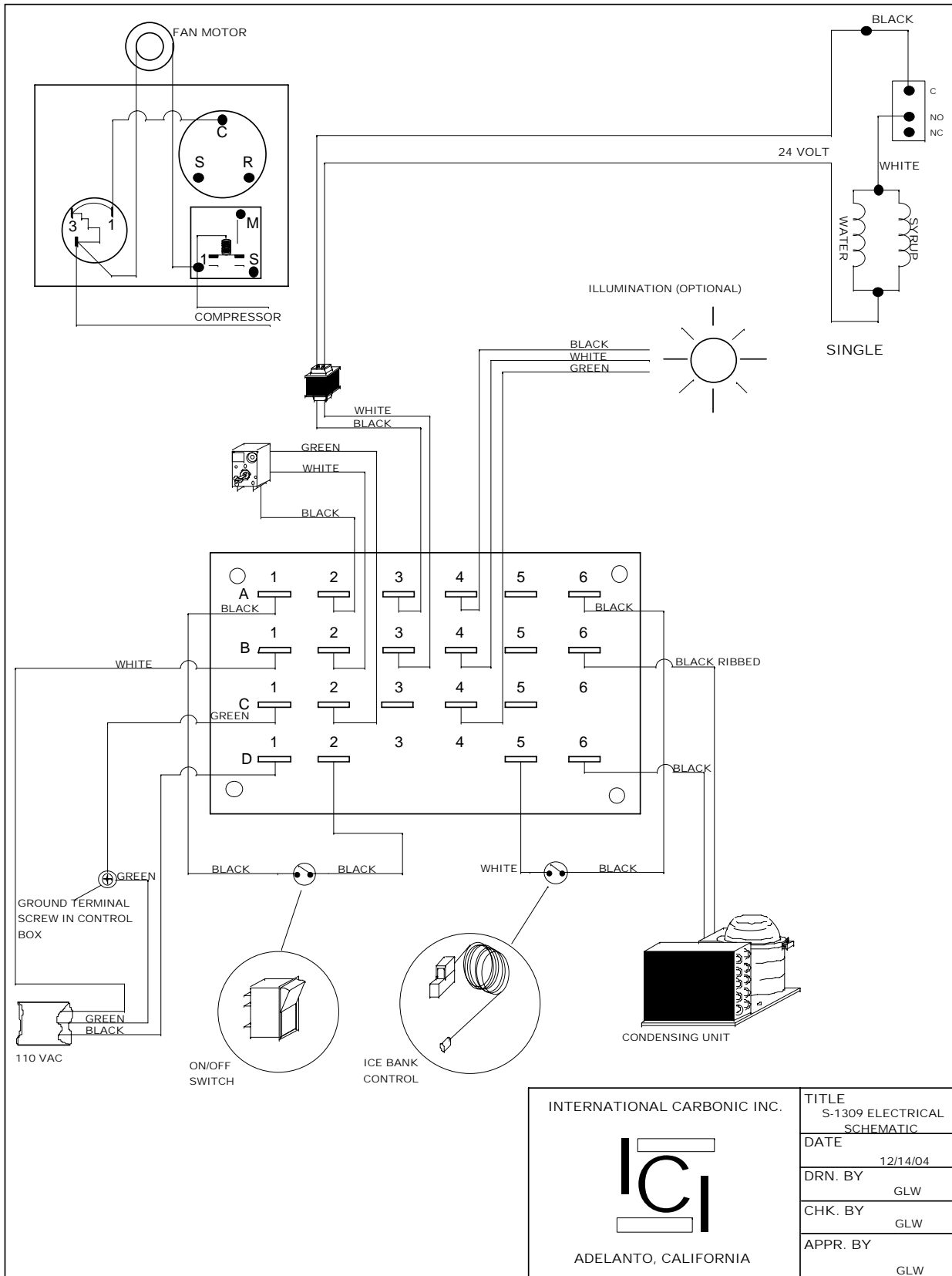



# PFC-II

SYM	QTY	PART NO.	DESCRIPTION
1	2	E-623	NUT, SOLENOID
2	2	E-525	COIL, W/SHIELD, SOLENOID, 24 VAC
3	2		
4	2	E-739	FLUX PLATE
5	2	E-527	STEM, SOLENOID VALVE
6	1	E-456	ESCUTCHEON PLATE (1/2 PLATE)
7	2	E-730	PLUNGER & SPRING ASSEMBLY
8	2	E-531	GASKET, SOLENOID STEM
9	4	E-1005	SCREW, RETAINER
10	2	E-1004	RETAINER, S.S.
11	2	E-135	METERING PIN
12	2	E-134	"O" RING, METERING PIN
13	2	E-520	METERING PIN ADAPTOR ASSY, INCLUDES SYM 11, 12, & 13
14	1	E-1008	"O" RING, SODA ADAPTOR
15	1	E-1013	"O" RING, SYRUP ADAPTOR
16	1	E-554-A	CAP, COVERALL, SHORT
17	2	E-385	TUBING, INLET ASSY., 1/4" HOSE, S.S. 90 DEGREE
18	2	E-162	SCREW, TAP TIGHT
19	2	E-137	"O" RING, TUBE INLET
20	1	E-240	1/2 SCREW
21	1	E-358	ARM, ACTUATING
22	1	E-157	SWITCH, SUB MINIATURE
23	1	E-188	SPRING, W/INSULATOR PAD
24	***	E-157-A	SWITCH, SUB MINIATURE, DUAL (OPTIONAL)
25	1	E-580-P	VALVE BODY, WITH DRIVE PINS
26	1	E-471-FF	SYRUP OUTLET TUBE
27	1	E-102	"O" RING, NOZZLE
28	1	E-581	NOZZLE, TWIST LOCK
	***	E-581-FF	NOZZLE, TWIST LOCK, FAST FLOW
29	***	E-258	ARM, ACTUATING, DUAL, LONG (OPTIONAL)
30	***	E-1024	FLOW WASHER ADAPTER
31	***	E-1003	HOUSING, W/SODA DECAL
	***	E-1010	HOUSING, W/SYRUP DECAL
32	***	E-1022	FLOW WASHER, STANDARD FLOW
	***	E-1023	FLOW WASHER, FAST FLOW
33	***	E-1002	ADJUSTING SCREW, W/"O" RING
34	***	E-1006	SPRING, SODA
	***	E-1011	SPRING, SYRUP
35	***	E-1007	PISTON & CYLINDER, SODA, (MATCHED SET)
	***	E-1012	PISTON & CYLINDER, SYRUP, (MATCHED SET)
36	***	E-1016	"O" RING, BOTTOM SEALING
***	OPTIONAL, SPECIFY		

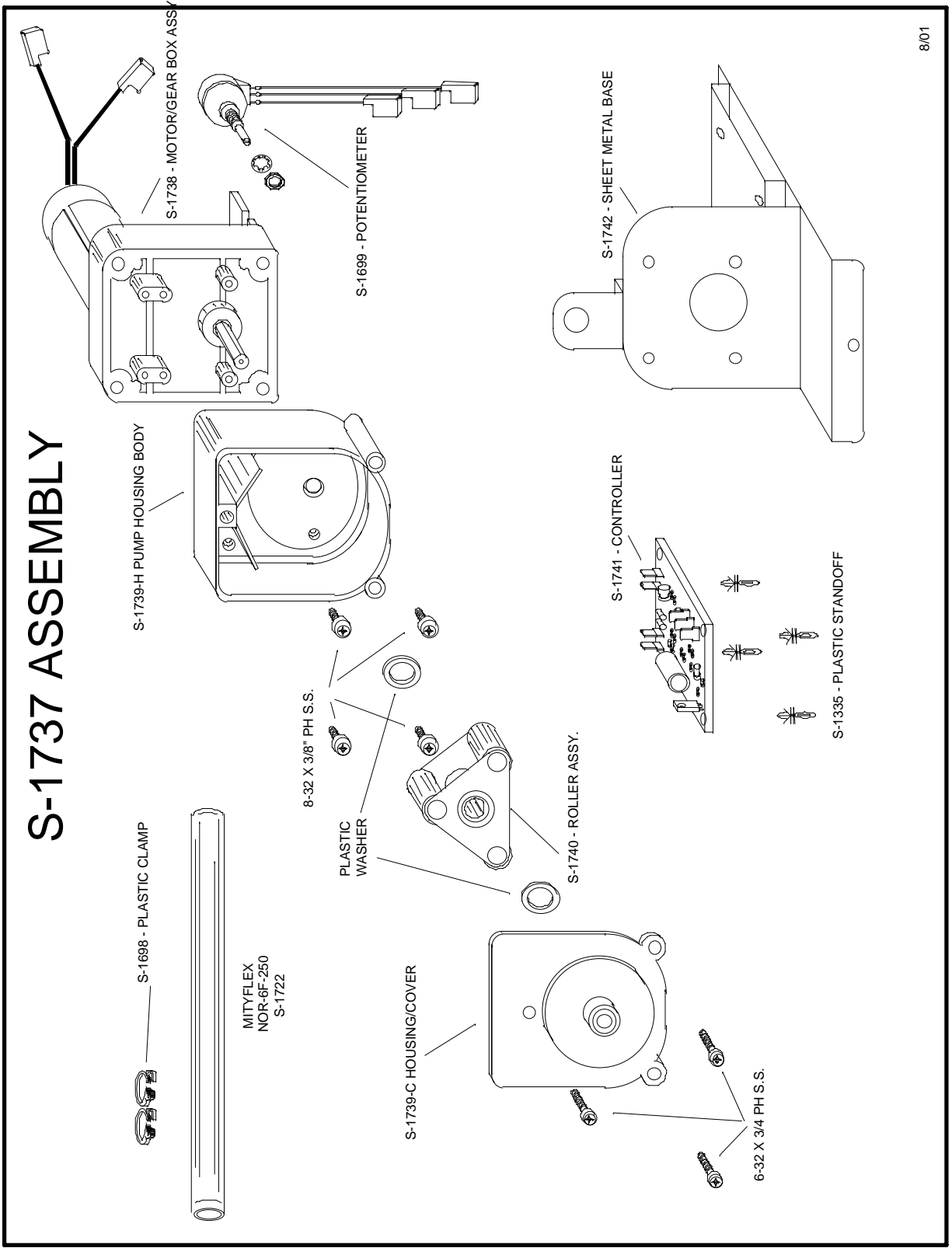




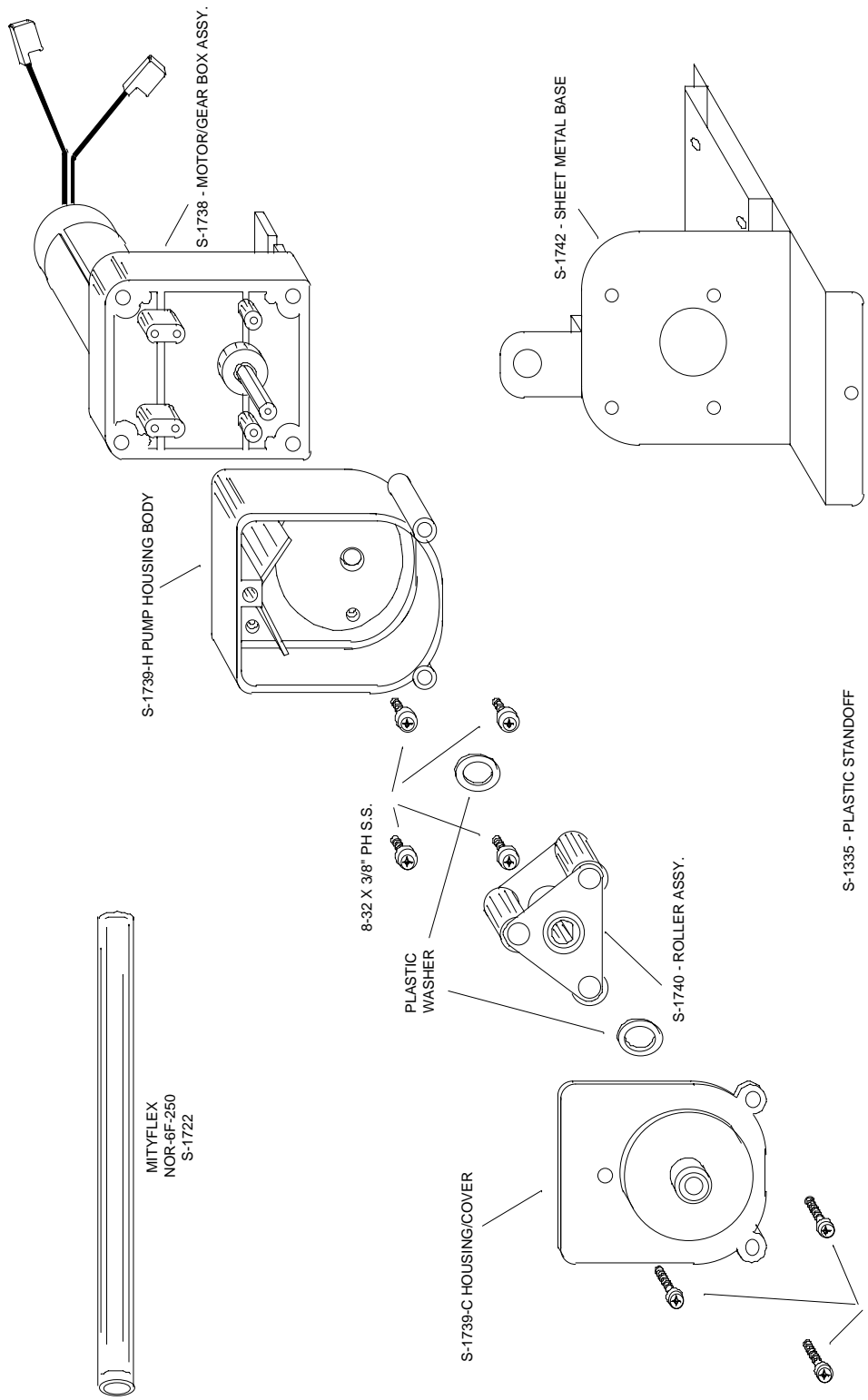


<p>INTERNATIONAL CARBONIC INC.</p>  <p>ADELANTO, CALIFORNIA</p>	TITLE
	S-1309 ELECTRICAL SCHEMATIC
	DATE
	12/14/04
	DRN. BY
	GLW
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# S-1737 ASSEMBLY



# S-1743 REPLACEMENT ASSEMBLY



17  
CHAPTER II  
INSTALLATION  
C-JR-PP or C-JR

This chapter covers unpacking and inspection, selecting location, installing C-JR-PP or C-JR unit and related components.

UNPACKING AND INSPECTION

Upon receiving unit, immediately remove C-JR-PP or C-JR from shipping carton and inspect for shipping damage.

NOTE: Before leaving the factory the C-JR-PP or C-JR 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 CONCEPT JR JUICE PERISTALTIC PUMP UNIT OR CONCEPT JR

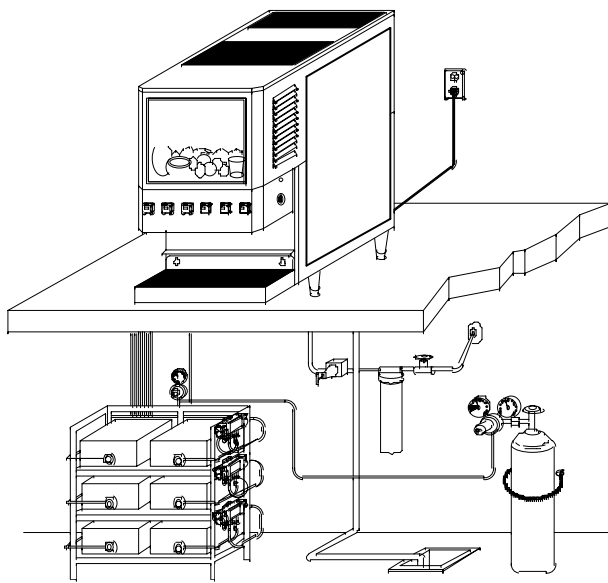
1. Position unit as close as possible to proper electrical source, 115V 60Hz.
2. Position unit with a minimum of 2" space between bulkhead and cabinet for sufficient space for ventilation. Allow enough space between ceiling and unit for lid removal.
3. Position unit as close as possible to floor drain.
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.

LOOSE - SHIPPED PARTS

Item No.	Part No.	Name	Qty
1		Installation/Service Manual	1
2	S-1214	Drain pan	1
3	----	Product Decals	1 per flavor
4*		Water filter	1

\* Optional

Non-Carbonated



Non-Carbonated Peristaltic Pump

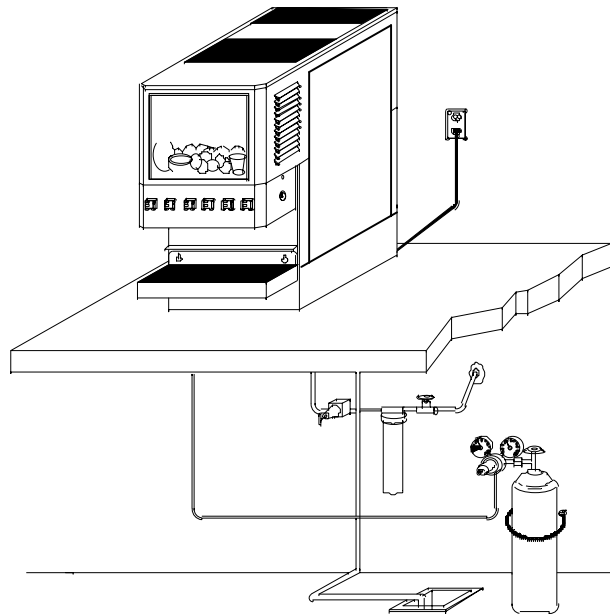


FIGURE 2 SAMPLE OF POSSIBLE INSTALLATION.

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 C-JR-PP or C-JR plain 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 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.

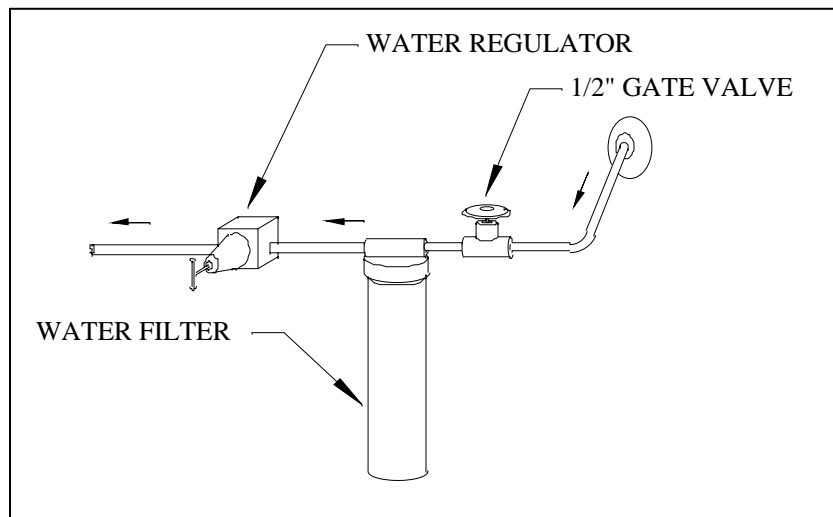


FIGURE 2-4. SUGGESTED WATER FLOW INSTALLATION

### INSTALL DRAIN LINE

1. Connect drain line on C-JR-PP or C-JR 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.

1. Place B.I.B. rack as close as possible to C-JR-PP or C-JR unit, preferably no farther than 15 feet. The C-JR-PP or C-JR 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.**
2. Lay out syrup lines from unit to B.I.B.
3. Connect lines from B.I.B. to inlet on C-JR-PP or C-JR.

4. Activate Q.C.D.
5. Check all connections for leaks, (see Chapter IV).

20

#### 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 C-JR-PP or C-JR 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 have not less than 3/8" I.D. passageway for any distance greater than ten feet from the C-JR-PP or C-JR. It can be reduced to 3/8" O.D. copper tubing and connected to the water inlet connection with-in ten feet of the C-JR-PP or C-JR. All water inlet connections are clearly tagged.

#### ELECTRICAL REQUIREMENTS:

The C-JR-PP or C-JR 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.



21  
CHAPTER III  
C-JR-PP or C-JR  
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, and valve on water supply line is closed.

PREPARING AND STARTING REFRIGERATION UNIT

1. C-JR-PP or C-JR 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-1211), (approximately ½" from top of water bath). DO NOT USE DISTILLED WATER.
4. Open water inlet supply line.
5. Plug C-JR-PP or C-JR 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 4.5 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.

22  
CHAPTER IV  
C-JR-PP or C-JR  
OPERATORS INSTRUCTIONS

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

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 therefore it is paramount that the condensate drain be installed.

CHANGING WATER BATH

Drain water bath a minimum of twice a year. This can be accomplished by locating the standpipe 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-1211).

CLEAN NOZZLES

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

23  
CHAPTER V

SERVICE AND MAINTENANCE

This chapter describes service and maintenance procedures to be performed on C-JR-PP or C-JR units and related components.

PERIODIC INSPECTION AND CLEANING

Daily:

1. Clean any 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.
5. Check CO2 settings and amount.

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 air-flow.
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, then 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 refrigeration unit power cord from electrical socket.
2. Remove lid in preparation for service.
3. Vacuum or use a soft brush to clean fins of condenser coil. Use low-pressure compressed air or CO<sub>2</sub> gas to blow through condenser fins. This should only be performed after normal business hours to prevent dust contamination. A damp cloth on back-side of condenser coil will prevent some dust contamination.
4. Plug refrigeration unit power cord in electrical socket.

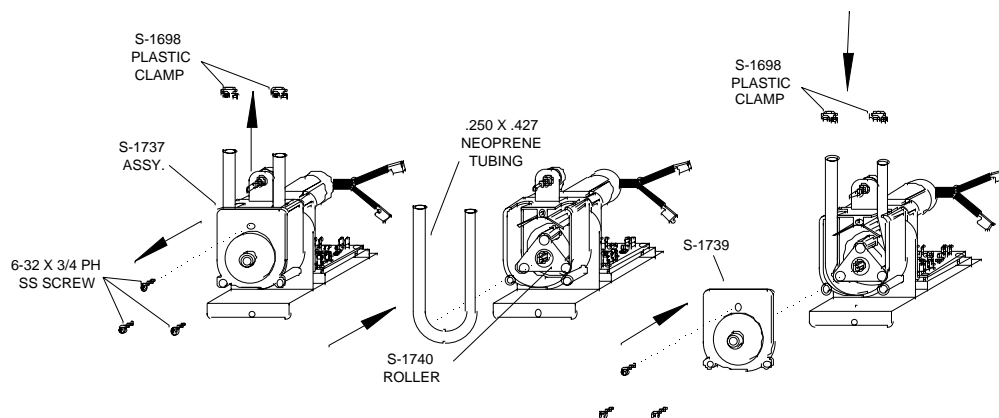
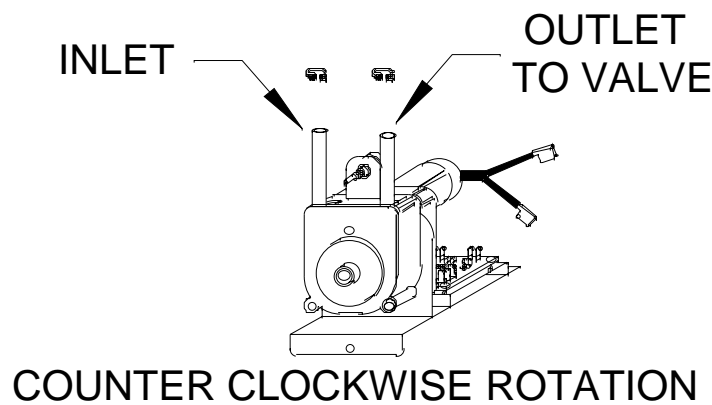
#### CHANGING WATER BATH

NOTE: 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 refrigeration unit power cord from electrical socket.
2. Remove cover from water unit.
3. Remove refrigeration deck power cord from receptacle.
4. Remove refrigeration power pack from cabinet. If still frozen, give enough time to thaw for refrigeration deck removal.
5. 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.
6. Pull out standpipe and allow water to drain.
7. Use fiber brush and carefully clean mineral deposit from all components.
8. Wash evaporator coil with a mild soap. Copper cleans well with mild solution of citric acid (1 cup of citric acid for 2 gallons of water). Stainless steel cleans well with carbonated water. Then rinse with clean water.
9. Rinse out water bath with clean water until water running out of drain hose is clean.
10. Install stand-pipe in drain hose.
11. Fill water bath to top of stand pipe, (condensate drain), with water.
12. Install lid.
13. Plug C-JR-PP or C-JR unit power cord in electrical socket.

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.



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.
  - 1) 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.

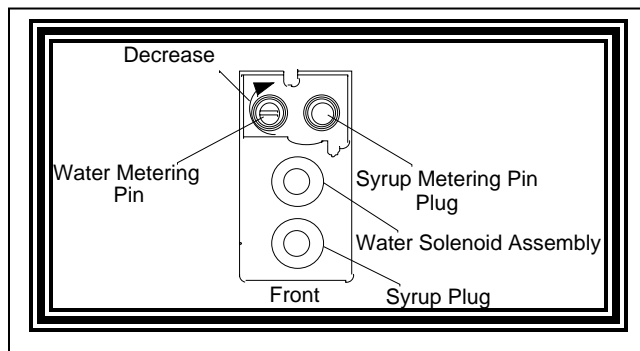
5. Fill the syrup lines with a low PH (7.0) chloride solution containing maximum 200-PPM chlorine. Make sure that lines are completely filled and allow standing for 30 minutes.

27

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 SIMUTAINEOUSLY, BOTH SYRUPS SHOULD BE CLEANED, (DETERGENT SOLUTION), SIMUTAINEOUSLY, BOTH SYRUPS SHOULD BE FLUSHED UNTIL FREE OF DETERGENT SIMUTAINEOUSLY AND BOTH SYRUPS SHOULD BE SANITIZED SIMUTAINEOUSLY.

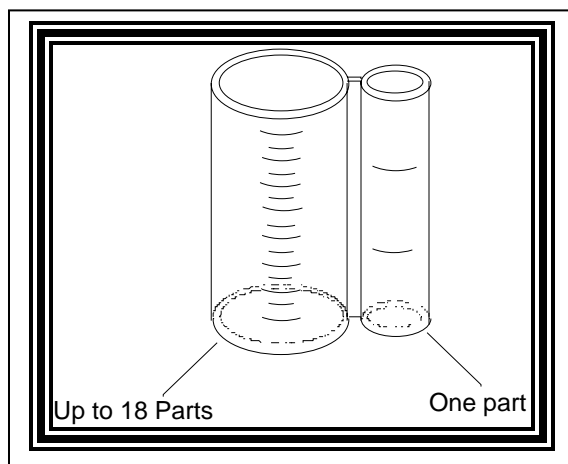
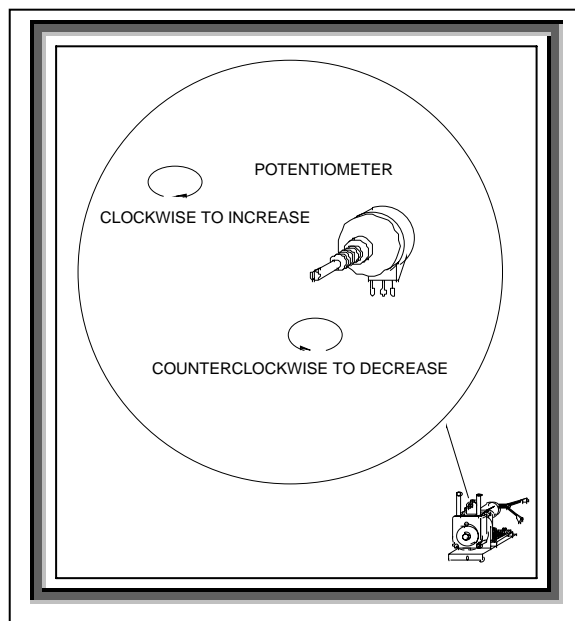
## BRIXING PFC-II-PP VALVE



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.



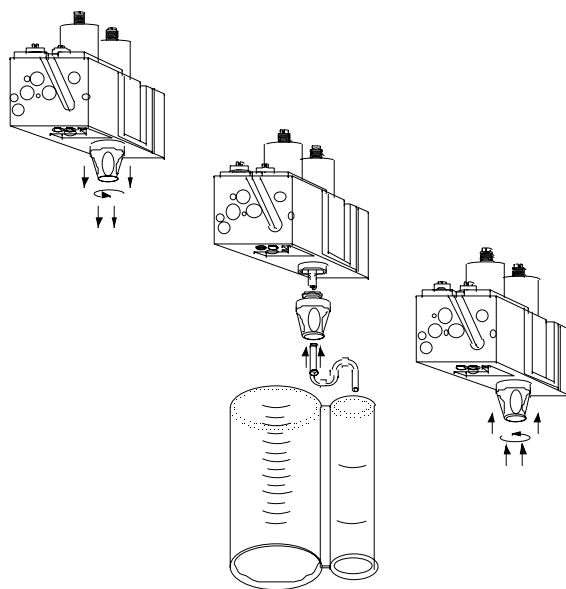
The ultimate goal is to achieve a proper ratio of water vs. syrup. This ratio can and will vary with differing products.

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  $\frac{1}{4}$ " 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.



## Brix Instructions Continued

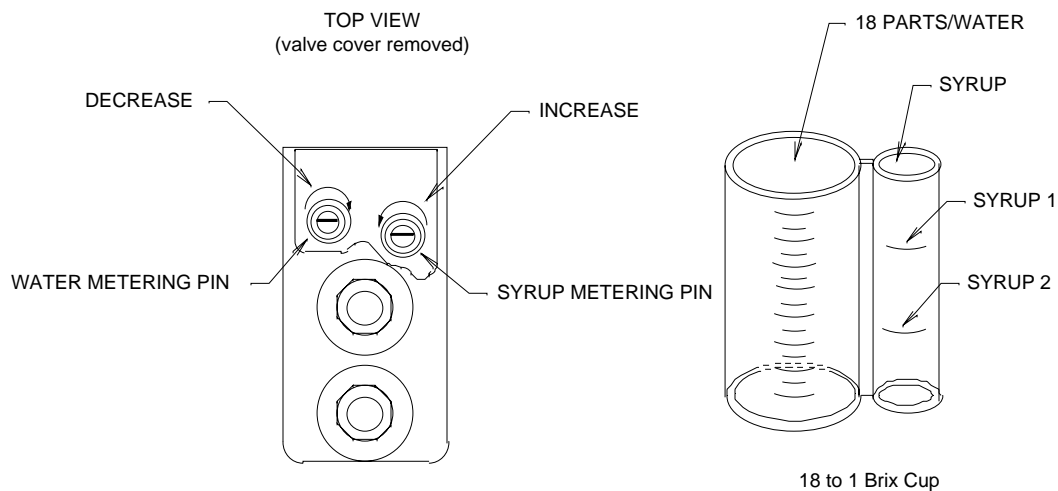
### BRIXING PFC-II VALVE

The water and syrup flows are individually adjusted by their respective metering pin or flow-controls. Located under the valve cover on the top rear of the valve, see illustration.

One recommended method utilizes the ratio brix cup. 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.



### Maintenance:

Cleaning your valve is recommended to insure a constant quality drink. If a valve is not sanitized on a regular basis (nightly recommended), the possibility of foamy and off-tasting drinks is greatly increased.

1. Turn off key switch normally located on valve plate or side of cabinet. Or disconnect tower from electrical supply.
2. Clean all exposed areas of valve with mild soap or sanitizing solution and warm water.

3. Remove nozzle and place in warm water. Do not soak nozzle in bleach water, this will turn the nozzle yellow and cause deterioration. It is recommended to use a soft bristle brush, part No. S-1064, to clean any hard to get areas of valve or nozzle. Do not soak nozzle in extremely hot water, nozzle will warp.

TROUBLE SHOOTING

**IMPORTANT:** Only qualified personnel should service C-JR-PP or C-JR 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, remove QCD from BIB, then bleed system pressure before proceeding.

COOLING UNIT

Trouble		Probable Cause		Remedy
Frozen water bath	1. 2. 3.	Bad ice bank control. Agitator pump defective Under charge on refrigerant.	1. 2. 3.	Replace bad ice bank control. Replace Agitator pump. Find refrigerant leak, repair and recharge.
Cooling or condensing unit non-operational	1. 2. 3. 4. 5. 6. 7. 8.	No electrical power. No water in water bath Defective ice bank control. Dirty water bath. Dirty condenser unit. Improper voltage/amperage Loss of refrigerant. Bad overload and relay. Compressor bad. Restriction (pinched or crimped line).	1. 2. 3. 4. 5. 6. 7. 8.	Plug power cord into electrical box. Check on/off switch. Fill water bath with water. Replace ice bank control. Change water bath. Clean condenser unit w/vacuum cleaner. Check for proper voltage/amperage. Repair leak and replenish refrigerant. Replace overload and relay Replace compressor. Repair, straighten or replace defective line.

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

DISPENSING VALVES			
Water leaking from nozzle after actuation	1.	Foreign debris under plunger seat or bent, creased stem water only.	1. a. Disconnect water from affected valve. b. Relieve pressure by activating valve. c. Remove E-623 nut from water solenoid. d. Remove E-525 coil assembly from E-527 stem. e. Remove E-527 stem from valve body. Note: care should be taken not to dent smooth E-527 wall. 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. g. Inspect E-730 plunger seat for damage, replace if damaged. h. Reassemble by reversing above procedure.
No water, no syrup being dispensed from valve	1. 2. 3. 4. 5. 6. 7. 8.	No electrical power. Frozen water bath. Pinched or crimped lines. Broken sub-miniature switch. Bad transformer. Disconnected wire. Defective S-1737 assy. Worn or defective neoprene tubing in S-1737 assy.	1. Plug power cord into electrical box. Check line voltage. 2. See "Frozen water bath". 3. Repair defective line. 4. Replace defective switch. 5. Replace defective transformer. 6. Attach disconnected wire. 7. Replace S-1737 assy. 8. Replace defective tubing.

No syrup being dispensed	<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. Syrup container empty.</li> <li>2. Syrup lines crimped.</li> <li>3. QCD of syrup installed incorrectly.</li> <li>4. S-1737 Assy defective.</li> <li>5. Defective neoprene tubing.</li> <li>6. Defective S-1700 transformer.</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. Replenish syrup supply.</li> <li>2. Straighten syrup lines.</li> <li>3. Re-install QCD correctly.</li> <li>4. Replace S-1737 Assy.</li> <li>5. Replace neoprene tubing.</li> <li>6. Replace S-1700 transformer.</li> </ol>
No water being dispensed	<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. Plain water inlet supply shutoff closed.</li> <li>2. Water filter fouled/clogged.</li> <li>3. Pinched or crimped line.</li> <li>4. Loose electrical connection, 24 volt.</li> <li>5. Defective E-276 transformer.</li> <li>6. Frozen water bath.</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. Open plain water inlet supply line shut off valve.</li> <li>2. Replace filter or cartridge.</li> <li>3. Repair defective line.</li> <li>4. Tighten connection and or repair open circuit.</li> <li>5. Replace defective E-276 transformer. See "Frozen water bath".</li> </ol>
Water-to-syrup ratio to low or too high	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li>1. Syrup adjusted to low.</li> <li>2. Syrup B.I.B. placement too far away for P.P. Pumps.</li> <li>3. S-1737 Pump Assy defective.</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. Adjust water-to-syrup ratio (see mixing instructions).</li> <li>2. Move B.I.B. closer to unit.</li> <li>3. Remove and repair S-1737 pump Assy.</li> </ol>



