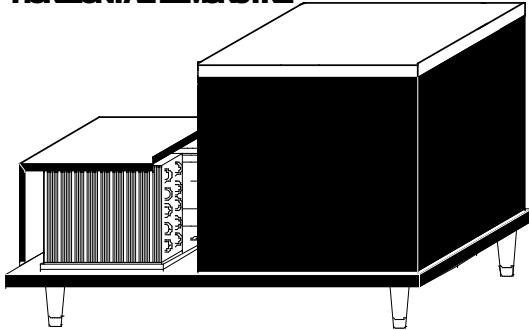


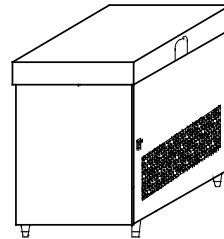
# "PRE-COOL"

## INSTALLATION AND SERVICE MANUAL

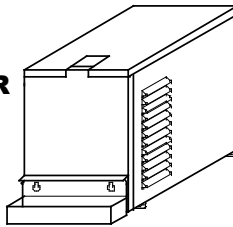
**HORIZONTAL LEVONSTRE**



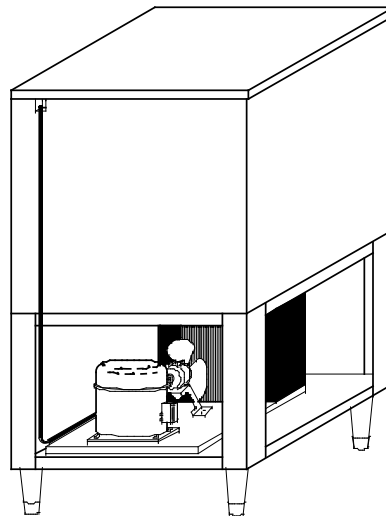
**LIL FELLA**



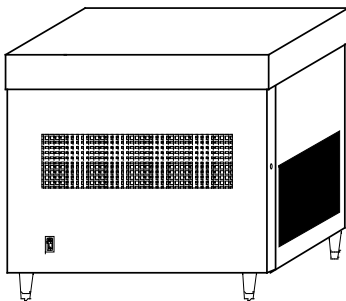
**PREMIER**



**VERTICAL ARCTIC CHILL**



**SCR**



**"SODA-FAST SYSTEMS FOR EVERY APPLICATION AND USE"**

**INTERNATIONAL CARBONIC INC.**

**16630 KOALA RD., ADELANTO, CA 92301**

**(800) 854-1177 \* FAX (760) 246-4044**

**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.**

## 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 had 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 postmix package, i.e., carbonation, refrigeration, and the ability to dispense from one self contained unit. We have pioneered many such firsts and will continue to develop advanced systems for the future, such as electronic interrogatable portion controls to electronic liquid level controls.

We hope you enjoy this piece of equipment 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.

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## CHAPTER I

### GENERAL DESCRIPTION

This chapter gives the description, theory of operation, and some design data for PRE-COOL UNITS, and related components.

### SYSTEM DESCRIPTION

The Pre-cool unit was designed to give additional refrigeration capacity to existing carbonated or non-carbonated units. The pre-cool unit will be hooked to the water supply prior to the unit to be pre-cooled. The pre-cool unit will initially cool the water prior to entering the unit that requires additional help cooling the end product. The pre-cool unit can be made in any configuration and with 1/9<sup>th</sup> horsepower-condensing unit up to 1 horsepower condensing units. This manual will touch on the basics of a pre-cool unit but in know way will cover all configurations and types of pre-cool units we manufacture.

The Pre-cool unit consists of a condensing unit, a water reservoir, water-cooling coil, and an agitator pump. These components could be housed in counter models, floor models, be configured as vertical or horizontal or any combination of the before mentioned. We will list the different condensing units that can be used and list some details concerning these condensing units in this manual.

For proper function the Pre-cool unit must have a water supply, and electrical supply and drainage.

**WARNING:** Before shipping or relocating a Pre-cool unit into a freezing ambient environment empty plain. Water coil 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, water bath, etc.

The following table will present some basic pre-cool units listed by condensing unit, water bath gallons, and ice bank size:

	Premier Pre-cool	LF-MS- H Pre cool	SCR Pre-cool	LM Precool	LM-3/4 Pre-cool	Arctic Chill Pre-cool
<b>H.P.</b>	1/9	1/5	1/3	1/2	3/4	1
<b>Ice Bank LBS.</b>	6	17	35	50	50	100
<b>Draw Rate DPM</b>	1 1/2 -12	1 1/2 -12	3-12	4-12	4-12	6-12
<b>Total Drinks</b>	60	130	243	590	590	1000
<b>Recovery in Hours</b>	2.5	3	3	3.5	2.5	5
<b>Water Bath (GAL.)</b>	2.5	6	9	22.5	22.5	41
<b>Refrigerant (R-134a), OZ.</b>	3.2	6	8.8	10	11.3	20
<b>Circuit Ampacity</b>	2.3	2.9	7.6	10.2	11.2	7.5

## THEORY OF OPERATION

The pre-cool unit was designed to cool water prior to entering another carbonated or non-carbonated unit or any other primary device requiring cooling.

To chill the incoming water it is routed through a water coil that is submerged in an ice-cold water bath. The temperature of the incoming water is at ambient temperature as it enters the 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. The water is now routed to any unit or station requiring this chilled water.

The water baths holds varying amounts of water measured in gallons. Refer to the before mentioned table for some water bath sizes. A certain amount of this water will be transformed into ice. 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.

It should be recognized that without refrigeration a carbonation system would not produce a drink that will hold carbonation. There is a direct relationship between dispensed temperature and the volumes of CO<sub>2</sub> that can be held in liquid form.

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 is equal or greater than the incoming CO<sub>2</sub> the act of carbonation will be greatly inhibited or completely eliminated.

## REMOTE PRE-COOL UNIT

When a pre-cool unit is remoted any major distance from the unit to be pre-cooled it is recommended to always install an insulated cooling line. This cooling line will run from pre-cool unit to unit to be pre-cooled, primary unit, and back to pre-cool unit. These cooling lines and feed line must be properly insulated. When this procedure is required the pre-cool unit's agitator will require an impeller and propeller. The impeller will be used to propel the water bath water through tubing to the unit to be cooled and back to the pre-cool unit. The cooling is accomplished by circulating the water from the ice cold water bath of the pre-cool unit through tubing to the remote station and then returning this partially warmed water to the water bath.

When installing stations remote from the dispenser cabinet, the following operations are very important:

Location of the Cabinet: - Locating the dispenser cabinet properly depends upon two factors: convenience to the user and convenience of installation and service.

If pre-cool unit cannot be placed next to the primary unit it is permissible to place it in a basement, back room, or any other out of the way place. However, it is important to locate the pre-cool unit as close as possible to the pre-cooled unit in order to keep the heat loss through the insulated extended lines at a minimum.

Water shut off valves and the power source should be located as near the cabinet as possible in order to facilitate service. Where an air-cooled condenser is used, there should be enough space surrounding the cabinet to insure adequate air circulating through the refrigeration condenser. Space should also be provided if possible, for doing service work on the cabinet. Note: when units are located in isolated rooms outside ventilation is necessary and air conditioning is recommended.

**CAUTION:** In order to have even distribution of cold water, the cold-water circulating lines must always be run in series even on multiple station installations.

**IMPORTANT:** Be sure to leave all connections and fittings exposed until after the entire system has been pressure tested.

**In order to insure maximum heat transfer between the braided plastic line, (through which the water is carried), and the circulating tubing, it is necessary to tape these lines firmly together.** The lines should be taped at one-foot intervals.

**It is of utmost importance that the extended lines of the remote installation be properly and adequately insulated. Failure to do this will cause overloading of the refrigeration unit and ice bank, condensation on the outside of the remote lines and reduced cold drink dispensing capacity.**

**CAUTION:** All open ends, joints and connections of the insulation must be sealed air tight to prevent outside air from entering the insulated duct. Outside air, which contains moisture, would condense this moisture within the insulation duct resulting in the insulation becoming wet, which would reduce its insulating qualities. Water dripping from duct would also result.

When lines are run more than 50 feet in any one direction a minimum of 3/8" tubing is recommended.

## CHAPTER II

### INSTALLATION

This chapter covers unpacking and inspection, selecting location, installing PRE-COOL UNIT and related components, connecting water inlet and electrical requirements.

#### UNPACKING AND INSPECTION

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

NOTE: Before leaving the factory all PRE-COOL units were carefully inspected and the carrier has accepted and signed for them. 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.!

TABLE 2-1

#### LOOSE - SHIPPED PARTS

Item No.	Part No.	Name	Qty
1		Installation/Service Manual	1

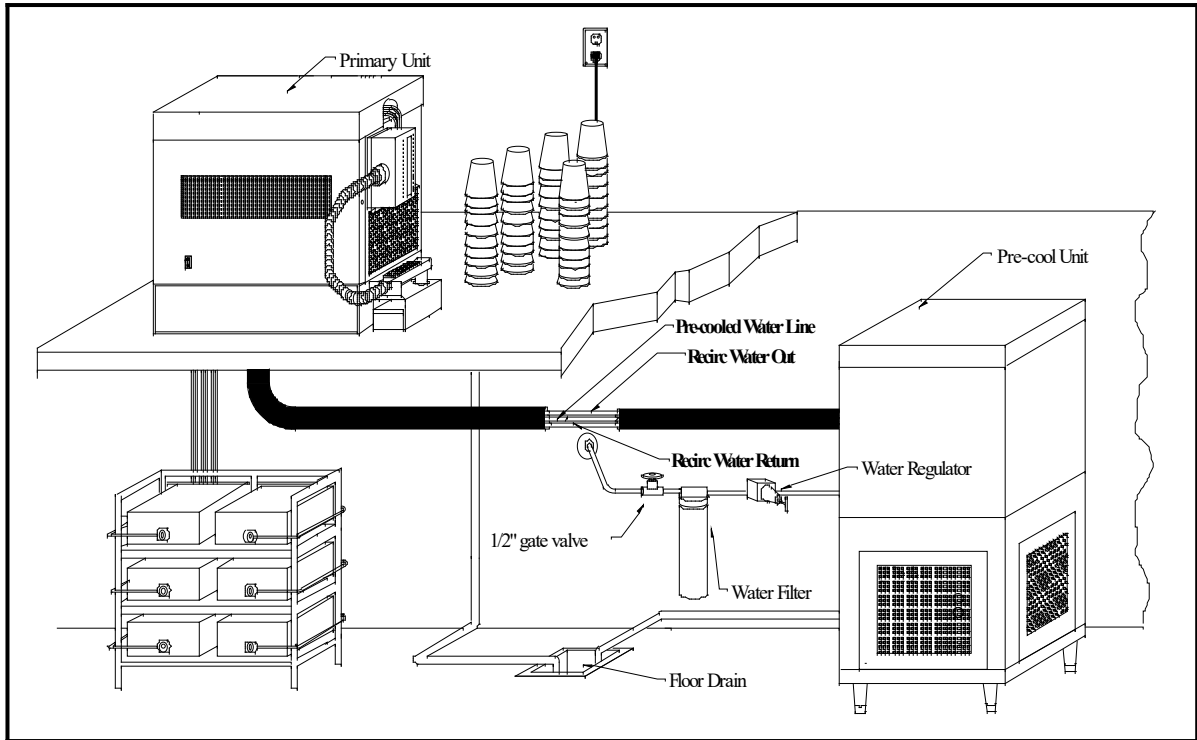
#### SELECTING LOCATION

IMPORTANT: Ambient temperature for PRE-COOL 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 PRE-COOL UNIT

1. Position unit as close as possible to proper electrical source, 120V/240V 60HZ.
2. Position unit with a minimum of 2" space between bulkhead and cabinet for sufficient ventilation. Allow enough space between ceiling and unit for lid removal.
3. Position unit as close as possible to water source. Half-inch gate valve recommended for water connection.
4. Position unit as close as possible to floor drain.





SAMPLE OF POSSIBLE INSTALLATION.

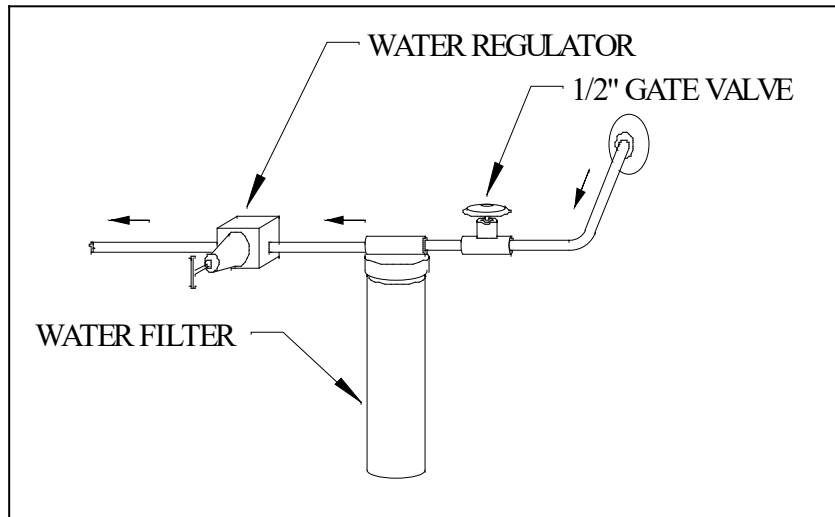
INSTALLATION

1. Make all connections: Water and Drain.
2. Place PRE-COOL UNIT in position. Make sure sufficient space between bulkheads, walls, and overhangs is available for proper air circulation around cooling unit.
3. INSTALL WATER FILTER ASSY. (OPTIONAL)
  - a. Install water filter assembly on wall or other supporting structure.
  - b. Connect water filter assembly to inlet of valve on water supply line using minimum 3/8" I.D. water line.
  - c. Connect water filter assembly outlet to PRE-COOL UNIT 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 that it has a minimum 100 gallons per hour capacity and should be thoroughly flushed before it is connected to the water inlet connection.

4. INSTALL WATER PRESSURE REGULATOR (OPTIONAL)

If water pressure exceeds 40 psi, a water pressure regulator or water pressure-reducing valve should be installed in the water supply line and adjusted to maintain a pressure of 25 to 40 psi. (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.)



SUGGESTED WATER FLOW INSTALLATION

INSTALL DRAIN LINE

1. Connect drain line on PRE-COOL UNIT with drain using 1/2" I.D. clear plastic pipe or 1/2" copper PVC to nearest outlet.
2. Do not reduce drain connection from cabinet outlet.
3. Be sure all connections are watertight.

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 PRE-COOL UNIT is made to a flexible water line by means of a 3/8", male flare.

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.

ELECTRICAL REQUIREMENTS:

The PRE-COOL UNIT requires a 120 VAC/240VAC, 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

### 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, and drain is connected.

#### PREPARING AND STARTING REFRIGERATION UNIT

1. PRE-COOL UNIT 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 drain standpipe.
4. Open water inlet supply line.
5. Plug PRE-COOL UNIT power cord into electrical receptacle box or engage circuit breaker. Make sure compressor, condenser fan motor, agitator motor start. The process of cooling the water bath will now commence. With ambient and water temperature of 75 degree "F" initial pull down or formation of complete ice bank will take varying amounts of time, see table in chapter one. When full ice bank has been formed, compressor and condenser fan motor will stop. Agitator will continue to operate, circulating water in water bath.

#### COOLING UNIT MAINTENANCE

NOTE: Air circulation through the condenser coil, required to cool the condenser coil/compressor, is drawn in through vents/grills on the cooling unit, through condenser coil and is exhausted out vents/grills on 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 it is low more 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 a condensate drain is installed. Any extra water in the water bath will exit the unit via the drain outlet. When unit is building it's first ice bank it is normal to have water overflow the into the drain hose.

#### CHANGING WATER BATH

Drain water bath a minimum of twice a year. This can be accomplished by siphoning water with short hose into bucket or removing over flow standpipe. Once water is drained and ice bank is melted, water bath, water coils, bath walls, tank, etc. should be cleaned. Fill water bath to the top of the standpipe

## CHAPTER IV

### SERVICE AND MAINTENANCE

This chapter describes service and maintenance procedures to be performed on PRE-COOL UNIT and related components.

#### PERIODIC INSPECTION AND CLEANING

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.

#### CLEANING CONDENSER COIL

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

**NOTE:** Cleaning condenser coil should be done during non-use periods.

1. Unplug refrigeration unit power cord from electrical socket.
2. Remove service panels if required.
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 backside of condenser coil will prevent some dust contamination
4. Replace service panels if required.
5. Plug PRE-COOL UNIT power cord in electrical socket.

#### CHECKING / CHANGING WATER BATH

Periodically check water level in water bath. If it is low, more water should be added for maximum product cooling. Before adding more water, water bath and ice bank should be checked for excessive mineral deposit build up.

**NOTE:** The water in 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 lid from unit.
3. Look down into water bath (if necessary, use flashlight) and inspect water bath, ice bank and all components for cleanliness. Water, ice bank and all components should be clear and free of foreign particles. If ice bank is clear of foreign particles, it does not have to be melted down. Proceed to step 10 if foreign particles are present in the ice bank, proceed to step 4.

4. Siphon out water with short hose or pull out over flow standpipe to drain water bath.
5. Allow ice bank to melt. Hot water may be used to speed melting.

**CAUTION:** Never use an ice pick or other sharp instruments to remove ice from evaporator coil. Such practice can result in puncture to the refrigeration circuit.

6. Use fiber brush and carefully clean mineral deposit from all components.
7. Wash evaporator coil with a mild soap solution. 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.
6. Rinse out water bath with clean water until water running out of siphon hose is clean.
9. Replace standpipe in drain hole
10. Fill water bath to top of standpipe.
11. Replace lid.
12. Plug refrigeration unit power cord in electrical socket.

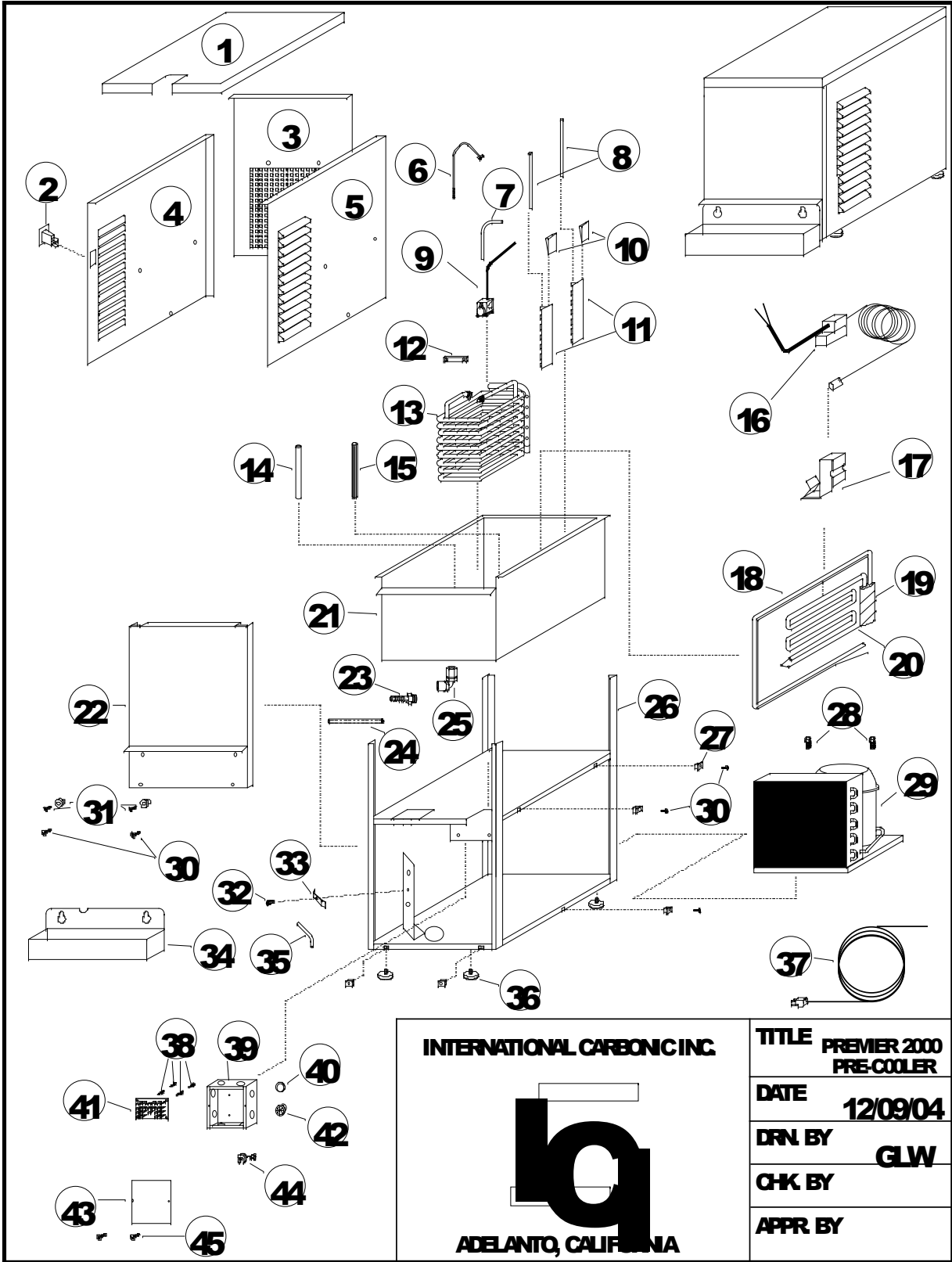
**TROUBLE SHOOTING**


**IMPORTANT:** Only qualified personnel should service the PRE-COOL 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.

Frozen water bath	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	<ol style="list-style-type: none"> <li>Bad ice bank control.</li> <li>Refrigerant leak causing undercharge.</li> <li>Defective agitator motor.</li> <li>Dirty water bath.</li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	<ol style="list-style-type: none"> <li>Replace bad ice bank control.</li> <li>Repair leak, evacuate and re-charge.</li> <li>Replace defective agitator.</li> <li>Melt ice, empty &amp; clean bath. Replenish w/fresh water.</li> </ol>
Cooling or condensing unit non-operational	<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>No electrical power.</li> <li>Defective ice bank control.</li> <li>Dirty condenser unit.</li> <li>Improper voltage/amperage</li> <li>Loss of refrigerant.</li> <li>Bad overload and relay.</li> <li>Compressor bad.</li> <li>Restriction (pinched or crimped line).</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>Plug power cord into electrical box. Check on/off switch.</li> <li>Replace ice bank control.</li> <li>Clean condenser unit w/vacuum cleaner.</li> <li>Check for proper voltage/amperage.</li> <li>Repair leak and replenish refrigerant.</li> <li>Replace overload and relay</li> <li>Replace compressor.</li> <li>Repair, straighten or replace defective line.</li> </ol>
Agitator motor not operating	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	<ol style="list-style-type: none"> <li>Agitator propeller obstructed or lost.</li> <li>Low voltage.</li> <li>Loose, unplugged, or broken wiring.</li> <li>Bad agitator motor.</li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	<ol style="list-style-type: none"> <li>Remove obstruction or re-Attach propeller.</li> <li>Voltage must be at least 110 volt at terminals.</li> <li>Tighten connection or replace broken wiring.</li> <li>Replace agitator motor.</li> </ol>
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>	<ol style="list-style-type: none"> <li>No power source.</li> <li>Electrical power to cooling unit turned off.</li> <li>Low voltage.</li> <li>Loose, disconnected, or broken wire.</li> <li>Inoperative ice bank control.</li> <li>Inoperative overload protector or start relay.</li> <li>Inoperative compressor.</li> <li>Full ice bank.</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>Plug power cord to electrical box. Check line voltage.</li> <li>Turn on power switch to unit.</li> <li>Voltage must be at least 110 V at compressor terminals at start.</li> <li>Tighten connection or replace broken wiring.</li> <li>Replace ice bank control.</li> <li>Replace defective part.</li> <li>Replace compressor.</li> <li>Refrigeration not called for.</li> </ol>

Compressor works continuously but does not form sufficient ice bank	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	<ol style="list-style-type: none"> <li>1. Cooling capacity is exceeded by over drawing.</li> <li>2. Cooling unit located in excessively hot area.</li> <li>3. Air circulation through condenser coil is restricted</li> <li>4. Loss of refrigerant or in-sufficient charge.</li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce amount of drinks taken per given time of install higher volume unit.</li> <li>2. Relocate cooling unit.</li> <li>3. Check and if necessary, clean condenser coil.</li> <li>4. Repair leak and/or recharge with sufficient refrigerant.</li> </ol>
Note: Ice bank freezes from bottom of evaporator upward. A refrigerant leak or insufficient charge might show ice at bottom and not at top of evaporator.				
Compressor will not stop after sufficient ice bank is produced	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ice bank control capillary tube kinked or broken.</li> <li>2. Ice bank control stuck in closed position.</li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace ice bank control.</li> <li>2. Replace ice bank control.</li> </ol>
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	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<ol style="list-style-type: none"> <li>1. Electrical cord loose or disconnected from condenser fan motor or compressor terminals.</li> <li>2. Fan blade obstructed.</li> <li>3. Inoperative condenser fan motor.</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. Tighten connections or replace cord.</li> <li>2. Remove obstruction.</li> <li>3. Replace condenser fan motor.</li> </ol>
No water being dispensed	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</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. Frozen water bath.</li> </ol>	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</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. See "Frozen water bath".</li> </ol>



<b>INTERNATIONAL CARBONIC INC.</b>  <b>ADELANTO, CALIFORNIA</b>	<b>TITLE</b> PREMIER 2000 PRE-COOLER
	<b>DATE</b> 12/09/04
	<b>DRN BY</b> GLW
	<b>CHK BY</b>
	<b>APPR BY</b>

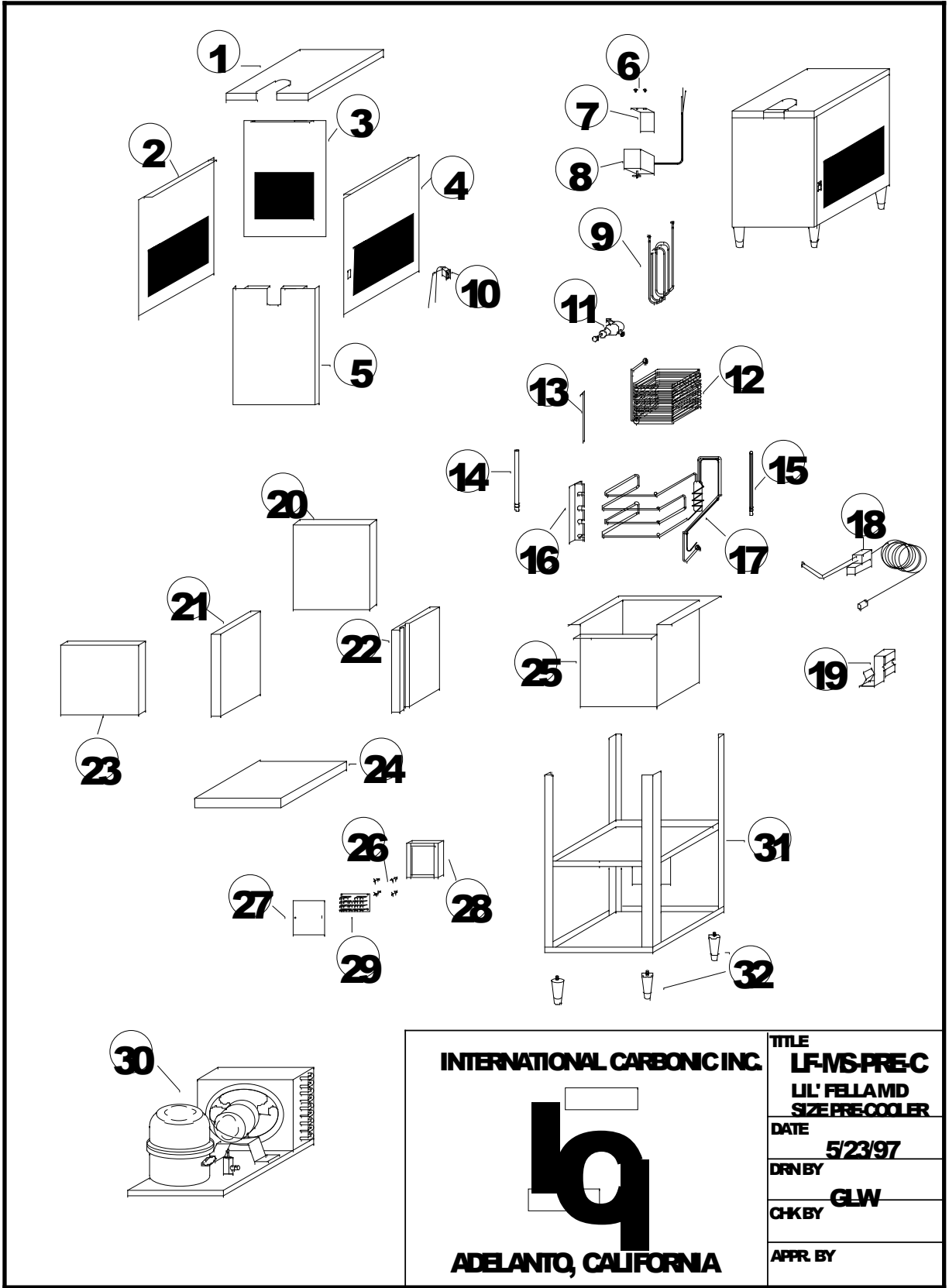


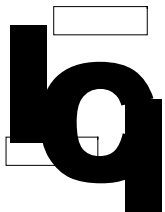
# PREMIER 2000 PRECOOL

<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	1	S-1544-R	LID, REMOTE, 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	1	S-833	AGITATOR
10	2	S-1323	EVAPORATOR GUIDE WEDGE
11	2	S-1540	EVAPORATOR COIL SUPPORT BRKT.
12	3	S-1324	POSITIONING BAR
13	1	S-1533-R	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	S-1532	EVAPORATOR COIL ASSEMBLY
20	1	S-509	ACCUMULATOR, 4" VERTICAL
21	1	....	CAP TUBE, 12' - .031
22	1	S-1531	BUCKET ASSY., WITH INSULATION
23	1	S-1539-R	VALVE MOUNTING PLATE BLANK
24	1	S-1535	CONDENSATE DRAIN NIPPLE

# PREMIER 2000 PRECOOL

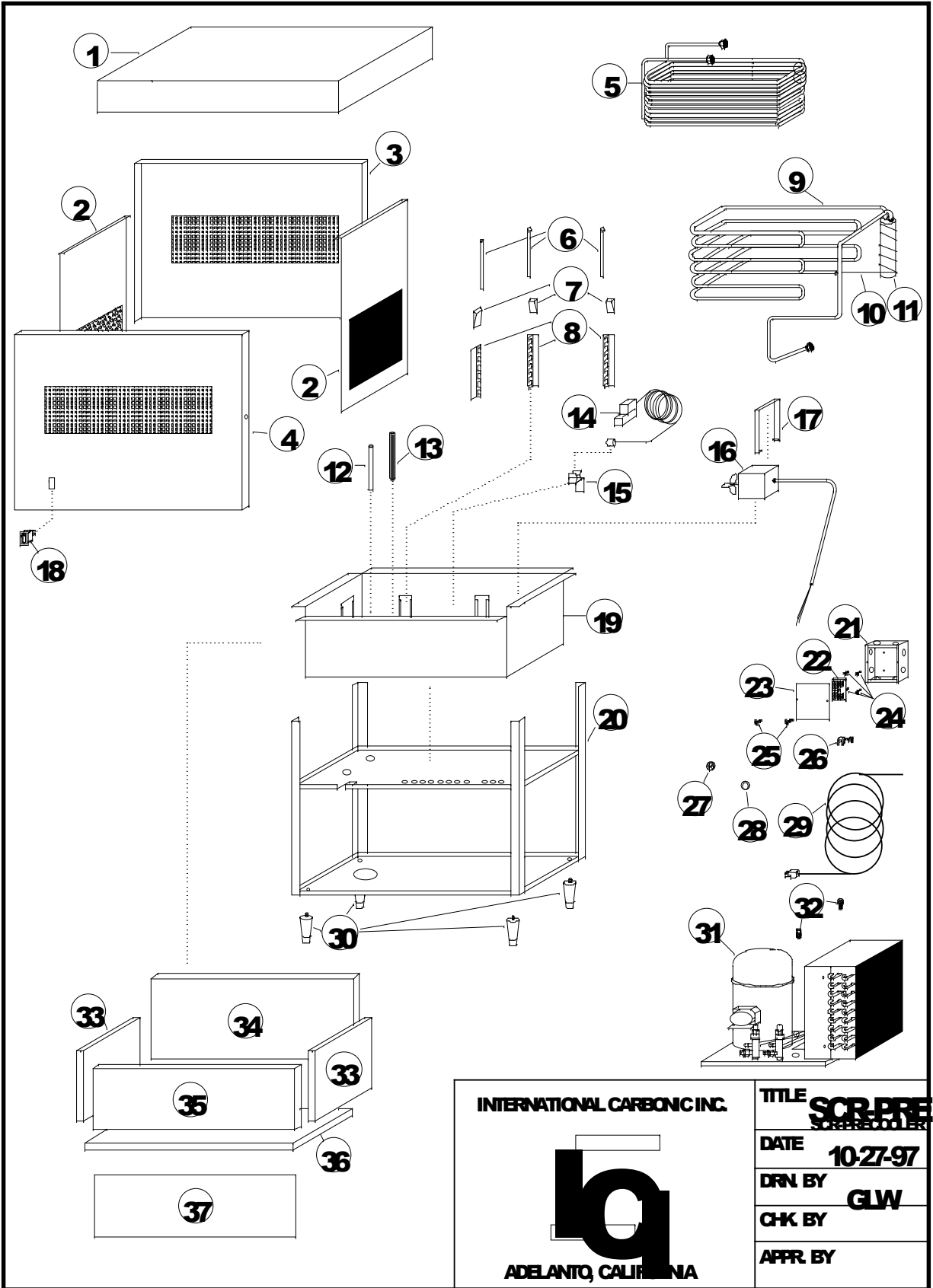
<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
25	1	....	6" CLEAR TUBING, 1/4 I.D. X 3/8 O.D.
26	1	S-1534	CONENSATE DRAIN ELBOW
27	1	S-1530	FRAME COMPLETE
28	11	S-1325	SQUARE GROMMET NUT
29	2	A0046	5/16 X 18 FLANGE WHIZ LOCK SCREW, 3/4"
30	1	AZA0370YXAXA	CONDENSING UNIT, 1/9 H.P.
		AZA0370YXA	COMPRESSOR ONLY
31	11	A0014	SCREW, #10, X 1/2" PHILLIPS T.H. S.S., COMBO
32	1	S-743	DRAIN PAN HARDWARE, SET
33	1	A0025	10-24 X 1/2" TH SCREW
34	1	S-1551	DRAIN TUBE HOLD DOWN BRACKET
35	1	S-1519	REMOTE DRIP PAN
36	1	S-1552	DRAIN TUBE, 5/16 X 4" S.S. TUBING
37	1	S-1318	CUSHIONED FEET, SET OF 4
		S-765	LEGS, 4", SET OF 4, (OPTIONAL)
38	1	E-141-12	CORD
39	7	S-1335	TERMINAL BOARD SPACER, NYLON
40	1	S-1537	TERMINAL BOX WITH COVER
41	1	S-7/8	HOLE PLUG
42	1	S-1309	TERMINAL BOARD
43	1	S-513-C	ELECTRONIC ICE BANK CONTROL
44	5	S-46	BUSHING, UNIVERSAL
45	1	S-1538	TERMINAL BOX COVER ONLY
46	1	E-664	STRAIN RELIEF BUSHING
47	2	A0020	8-32 X 3/8 TH SCREW, S.S.



<b>INTERNATIONAL CARBONIC INC.</b>  <b>ADELANTO, CALIFORNIA</b>	<b>TITLE</b> <b>LF-MS-PRE-C</b>
	<b>LIL' FELLAND</b>
	<b>SIZE RECOOLER</b>
	<b>DATE</b> <b>5/23/97</b>
	<b>DRN BY</b> <b>GLW</b>
<b>CHK BY</b>	
<b>APPR. BY</b>	

# LF-MS-PRE-C

SYM	QTY	PART NO.	DESCRIPTION
1	1	S-1340-P	LID
2	1	S-1338	SERVICE PANEL, LEFT SIDE
3	1	S-1337	SERVICE PANEL, FRONT AND REAR
4	1	S-1339	SERVICE PANEL, RIGHT SIDE
5	1	S-1346	FRONT SERVICE PANEL
6	2	F-4	SCREW, #8 X 1/2, SELF TAPPING
7	1	S-1341-LG	AGITATOR PUMP BRACKET
8	1	S-835	AGITATOR PUMP
9		S-1347	SYRUP COIL, (OPTIONAL)
10	1	S-783	UNIT ON/OFF SWITCH
11	1	S-208-A	WATER PRESSURE REGULATOR, (OPTIONAL)
12	1	S-1334	WATER COIL, COPPER
13	5	S-661	EVAPORATOR COIL RETAINER
14	1	S-657	STANDPIPE, 7 3/4", WHITE
15	1	S-658	OVERFLOW, 8", GRAY
16	5	S-662	EVAPORATOR SUPPORT BRACKET
17	1	S-1333	EVAPORATOR COIL ASSEMBLY
18	1	S-513-A	ICE BANK CONTROL
19	1	S-1304-A	ICE BANK CONTROL BULB BRACKET
20	1	''''	INSULATION, REAR
21	1	''''	INSULATION, LEFT SIDE
22	1	''''	INSULATION, RIGHT SIDE
23	1	''''	INSULATION, FRONT
24	1	''''	INSULATION, BOTTOM
25	1	S-1332	BUCKET ASSY., WITH INSULATION
26	4	S-1335	TERMINAL BOARD SPACER, NYLON
27	1	S-1310	TERMINAL BOX LID
28	1	S-1308	TERMINAL BOX WITH COVER
29	1	S-1309	TERMINAL BOARD
30	1	AEA1360YXAXA	CONDENSING UNIT, 1/5 H.P.
	1	AEA1360YXA	COMPRESSOR ONLY, 1/5 H.P.
31	1	S-1331	FRAME COMPLETE
32	4	S-765	LEGS



INTERNATIONAL CARBONIC INC.

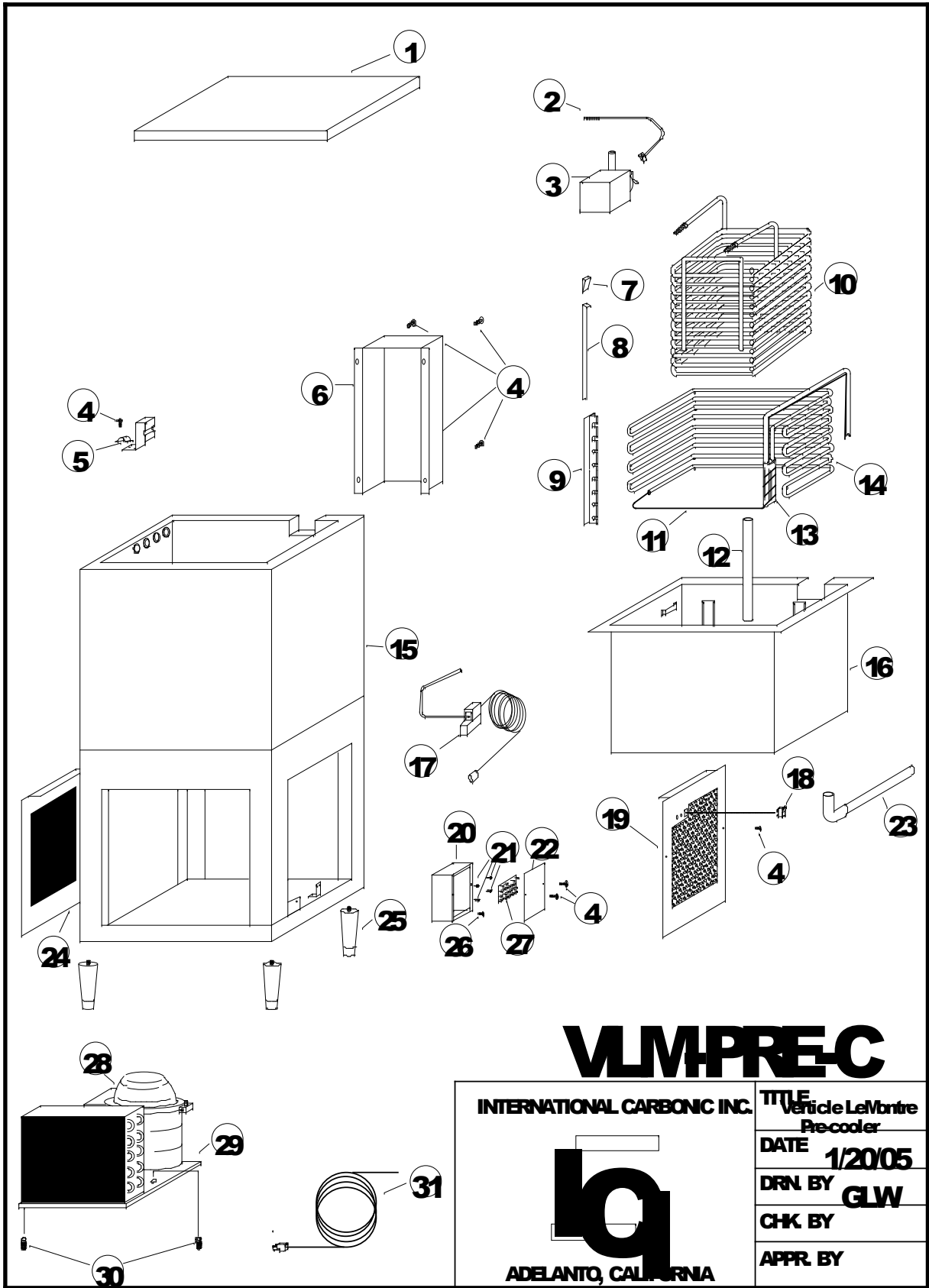


ADELANTO, CALIFORNIA

TITLE	SCRUBBER SCRUBBER COOLER
DATE	10-27-97
DRN BY	GLW
CHK BY	
APPR. BY	

# SCR PRECOOL

SYM	QTY	PART NO.	DESCRIPTION
1	1	S-653	LID
2	2	S-660	SERVICE PANEL, SIDE
3	1	S-678	SERVICE PANEL, REAR
4	1	S-678	SERVICE PANEL, FRONT
5	1	S-684	WATER COIL
6	5	S-661	EVAPORATOR COIL RETAINER
7	5	S-1323	EVAPORATOR GUIDE WEDGE
8	5	S-662	EVAPORATOR SUPPORT BRACKET
9	1	S-663	EVAPORATOR COIL ASSEMBLY
10	1	.....	CAP TUBE, 9' - .050
11	1	S-509	ACCUMULATOR
12	1	S-657	STAND PIPE, 7 3/4", WHITE
13	1	S-658	OVERFLOW, 8", GRAY
14	1	S-513-A	ICE BANK CONTROL
15	1	S-664	ICE BANK BULB CLIP
16	1	S-835	AGITATOR PUMP
		S-840	AGITATOR PUMP , <b>OPTIONAL</b>
17	1	S-742	AGITATOR PUMP BRACKET CLIP
18	1	S-783	UNIT ON OFF SWITCH
19	1	S-656	BUCKET COMPLETE W/INSULATION
20	1	S-655	FRAME, COMPLETE
21	1	S-1308	CONTROL BOX W/COVER
22	1	S-1309	TERMINAL BOARD
23	1	S-1310	CONTROL BOX COVER
24	4	S-1335	TERMINAL BOARD SPACER, NYLON, 3/8"
25	8	A-20	SCREW, 8-32 X 3/8 T.H., S.S.
26	1	E-664	STRAIN RELIEF
27	5	S-46	BUSHING
28	1	S-7/8	HOLE PLUG
29	1	E-141-12	CORD
30	1 SET	S-765	LEGS
31	1	AEA3440YXAXL	CONDENSING UNIT, 1/3 H.P.
		AEA3440YXA	COMPRESSOR ONLY
32	2	A-46	5/16 X 18 FLANGE WHIZ LOCK SCREW, 3/4"
33	2	.....	INSULATION, LEFT & RIGHT SIDE
34	1	.....	INSULATION, REAR
35	1	.....	INSULATION, FRONT
36	1	.....	INSULATION, BOTTOM
37	1	.....	MOISTURE BARRIER



# VLM-Pre-C

INTERNATIONAL CARBONIC INC.



ADELANTO, CALIFORNIA

TITLE: **Vertice LeMontre  
Pre-cooler**

DATE: **1/20/05**

DRN BY: **GLW**

CHK BY:

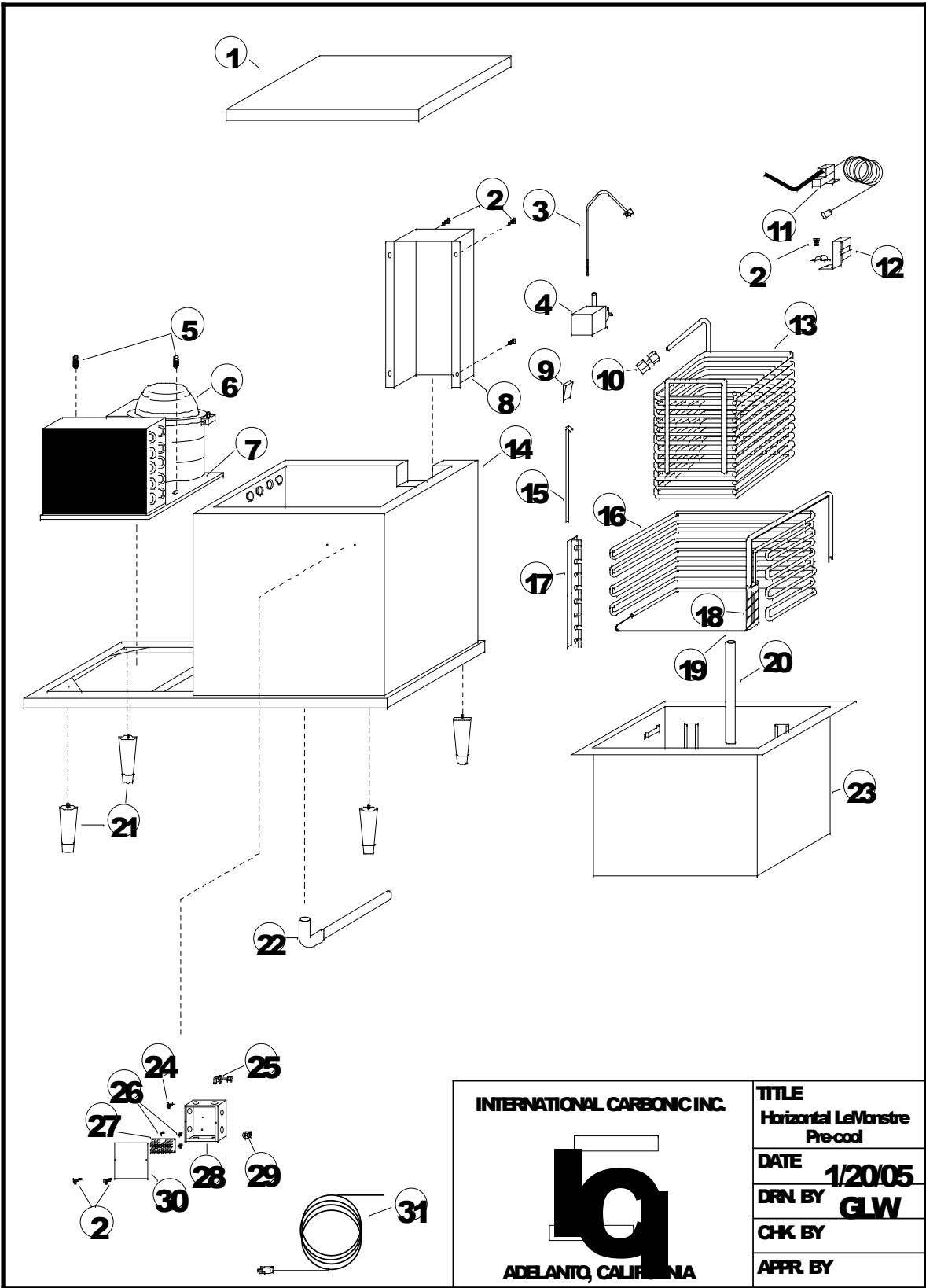
APPR BY:


# VLM PRE-COOLER

<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	1	S0469	LID, WITH INSULATION
2	1	G0016	TY-RAP, LARGE
3	1	S0850	AGITATOR/CIRCULATOR PUMP
4	14	A0020	SCREW, 8-32 X 3/8 T.H., S.S.
5	1	S1304-U	ICE BANK BULB BRACKET
6	1	S0491	REAR LINE COVER
7	4	S1323	EVAPORATOR GUIDE WEDGE
8	4	S0499	EVAPORATOR COIL RETAINER
9	4	S0498	EVAPORATOR SUPPORT BRACKET
10	1	S0495	WATER COIL
11	1	.....	1/8" CAP TUPE, 10.5'
**	1	.....	1/8" CAP TUPE, 14'
12	1	S0487	STAND PIPE, 15"
13	1	S0409	9" ACCUMULATOR
14	1	S0497	EVAPORATOR ASSEMBLY
**	1	S0497-3/4	EVAPORATOR ASSEMBLY, 3/4 HP
15	1	S0493	CABINET SHELL ONLY, VLM
**	1	S0493-3/4	CABINET SHELL ONLY, 3/4 HP, VLM
16	1	S0496	BUCKET COMPLETE
17	1	S0513-A	ICE BANK CONTROL
18	1	S0783	ROCKER SWITCH
19	1	S0468	SERVICE PANEL, RIGHT
**	1	S0468-3/4	SERVICE PANEL, RIGHT
20	1	S1308	CONTROL BOX W/COVER
21	4	S1335	TERMINAL BOARD SPACER, NYLON, 3/8"
22	1	S1310	CONTROL BOX COVER
23	1	S0489	WATER BATH DRAIN
24	2	S0492	SERVICE PANEL, LEFT AND FRONT
**	2	S0492-3/4	SERVICE PANEL, LEFT AND FRONT
25	1 SET	S0854	LEGS
26	1	A0067	8-32 X 3/8 HEX HD, PH GREEN GROUND SCREW
27	1	S1309	TERMINAL BOARD
28	1	AKA4476YXA	COMPRESSOR ONLY, 1/2 H.P.
**	1	AJA7461YXA	COMPRESSOR ONLY, 3/4 HP
29	1	AKA7437YXAXA	1/2 H.P. CONDENSING UNIT
**	1	AJA7465YXAXG	3/4 H.P. CONDENSING UNIT
30	2	A0046	5/16 X 18 FLANGE WHIZ LOCK SCREW, 3/4"
31	1	E0131-12	POWER CORD

\*\* - DENOTES 3/4 HORSE POWER COMPONENTS



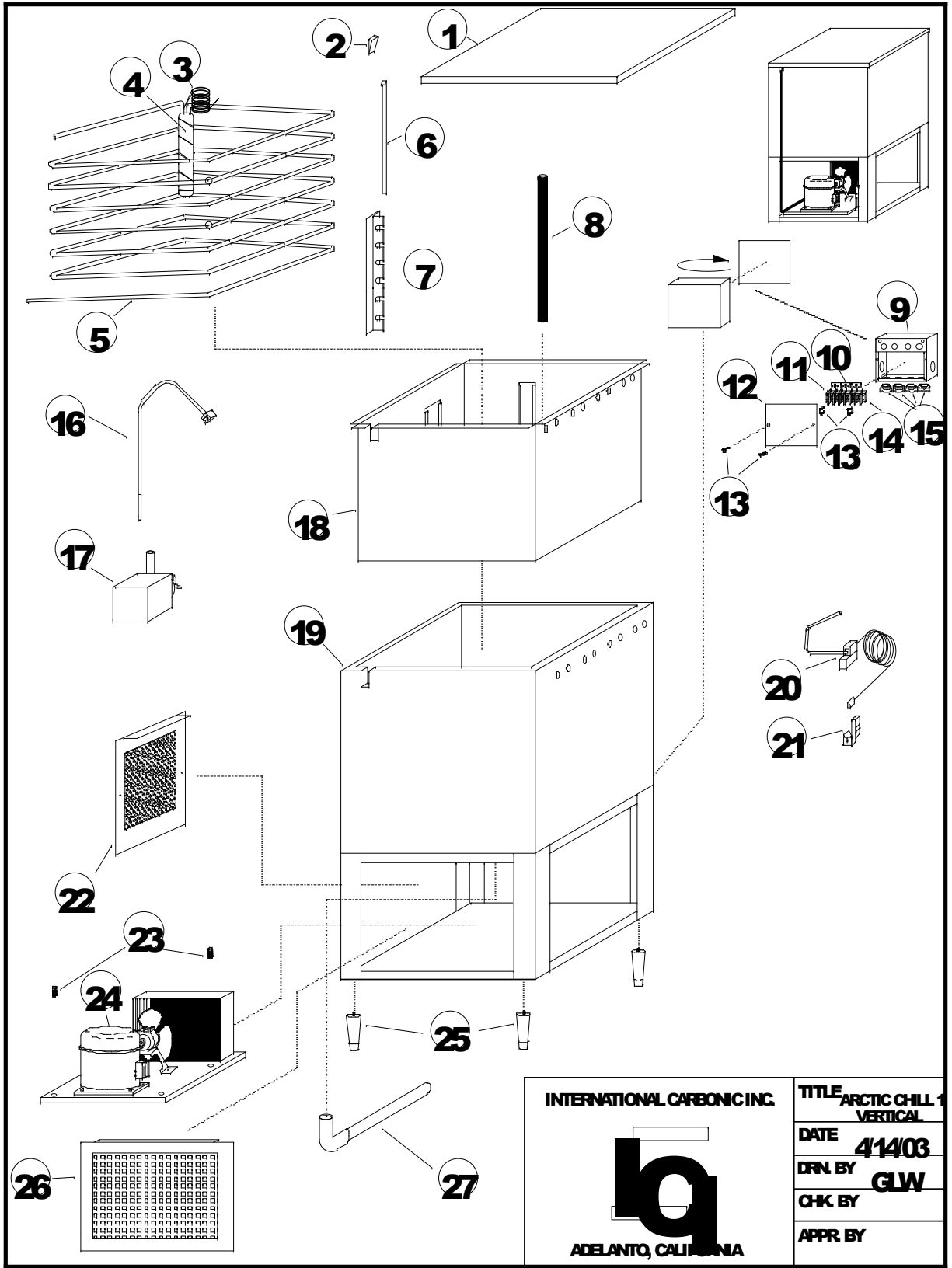



<b>INTERNATIONAL CARBONIC INC.</b>    <b>ADELANTO, CALIFORNIA</b>	<b>TITLE</b> Horizontal LeMonstre Precool
	<b>DATE</b> 1/20/05
	<b>DRN BY</b> GLW
	<b>CHK BY</b>
	<b>APPR BY</b>

# HLM PRE-COOL

<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	1	S0469	LID WITH INSULATION
2	6	A0020	SCREW, 8-32 X 3/8 T.H., S.S.
3	1	G0016	TY-WRAP LARGE
4	1	S0850	AGITATOR/CIRCULATOR PUMP
5	2	A0046	5/16 X 18 FLANGE WHIZ LOCK SCREW, 3/4"
6	1	AKA4476YXA	COMPRESSOR ONLY, 1/2 HP
**	1	AJA7461YXA	COMPRESSOR ONLY, 3/4 HP
7	1	AKA7437YXAXA	1/2 H.P. CONDENSING UNIT
**	1	AJA7465YXAXG	3/4 H.P. CONDENSING UNIT
8	1	S0491	REAR LINE COVER
9	4	S1323	EVAPORATOR GUIDE WEDGE
10	1	S0203	UNION CONNECTOR
11	1	S0513-A	EIBC
12	1	S1304-U	ICE BANK BULB BRACKET, UNIVERSAL
13	1	S0495	WATER COIL
14	1	S0465	CABINET SHELL ONLY, HLM
15	4	S0499	EVAPORATOR COIL RETAINER
**	1	S0497-H	EVAPORATOR ASSEMBLY, HORIZONTAL
16	1	S0497-H-3/4	EVAPORATOR ASSEMBLY, HORIZONTAL, 3/4 HP
17	4	S0498	EVAPORATOR SUPPORT BRACKET
18	1	S0409	9" ACCUMULATOR
19	1	Z0008	1/8 CAP TUBE, 10.5'
**	1	Z0008	1/8 CAP TUBE, 14'
20	1	S0487	STANDPIPE, 15"
21	1 SET	S0854	LEGS, 6 SS
22	1	S0489	WATER BATH DRAIN
23	1	S0496	BUCKET ASSEMBLY
24	1	A0067	8-32 X 3/8 HEX HD, PH GREEN GROUND SCREW
25	1	E0664	STRAIN RELIEF
26	4	S1335	TERMINAL BOARD SPACER, NYLON, 3/8"
27	1	S1309	TERMINAL BOARD
28	1	S1310	CONTROL BOX COVER
29	4	S0046	BUSHING
30	1	S1308	CONTROL BOX W/COVER
31	1	E0141-12	POWER CORD

\*\* - Denotes 3/4 horse power components.



INTERNATIONAL CARBONIC INC.	TITLE ARCTIC CHILL 1 VERTICAL
	DATE 4/14/03
ADELANTO, CALIFORNIA	DRN BY GLW
	CHK BY
	APPR BY

# VAC PRE-COOL

<b>SYM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	1	S-1805	LID WITH INSULATION
2	4	S-1323	EVAPORATOR GUIDE WEDGE
3	1	.....	14' - 1/8 CAP TUBE
4	1	S-409	ACCUMULATOR, 9" VERTICAL
5	1	S-1801	EVAPORATOR ASSEMBLY
6	4	S-1802	EVAPORATOR COIL RETAINER
7	4	S-1803	EVAPORATOR COIL SUPPORT BRKT.
8	1	S-1804	STAND PIPE, 20 1/2"
9	1	S-1812	CONTROL BOX W/COVER
10	3	S-1814	TERMINAL BLOCK JUMPER
11	1	S-1815	TERMINAL BLOCK, DIRECT WIRE
12	1	S-1813	CONTROL BOX COVER
13	12	A-20	SCREW, 8-32 X 3/8 T.H., S.S.
14	1	S-1815	TERMINAL BLOCK, DIRECT WIRE
15	4	S-46	BUSHING
16	1	G0016	TY-WRAP LARGE
17	1	S-850	AGITATOR
18	1	S-1816	BUCKET COMPLETE
19	1	S-1817	CABINET SHELL ONLY
20	1	S-513-B	ICE BANK CONTROL
21	1	S-1304-U	ICE BANK CONTROL BULB BRACKET
22	1	S-1819	SERVICE PANEL, RIGHT
23	2	A-46	5/16 X 18 FLANGE WHIZ LOCK SCREW, 3/4"
24	1	AJA4512YDXD	1 HP CONDENSING UNIT
	1	AJA4512YXD	COMPRESSOR ONLY, 1 HP
25	1 SET	S-854	LEGS
26	2	S-1820	SERVICE PANEL, FRONT AND BACK
27	1	S-489	WATER BATH DRAIN

**NOTE SECTION**

**Frequently Called Numbers:**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**CO2 SETTINGS:**

<b>High Pressure</b>	_____	<b>PSI</b>
<b>Low Pressure</b>	_____	<b>PSI</b>

**Product Setup:**

#1	#2
_____	_____
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