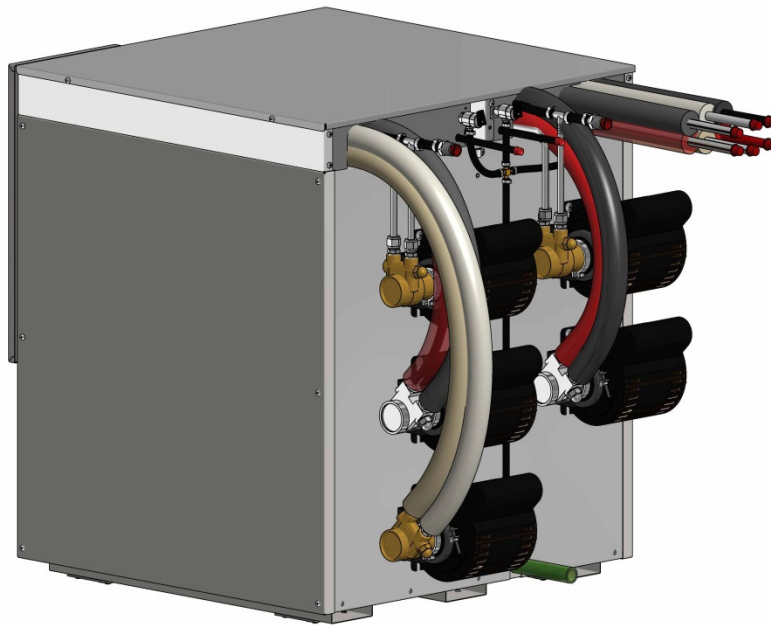


# R8E V2 Superchiller Remote

230V / 50Hz

## Installation, Operation & Service Manual



**This page is intentionally left blank**

# Table of contents

<b>1.</b>	<b>Introduction .....</b>	<b>4</b>
<b>2.</b>	<b>The Company .....</b>	<b>4</b>
<b>3.</b>	<b>Our Products .....</b>	<b>4</b>
<b>4.</b>	<b>Product Details.....</b>	<b>4</b>
4.1	Product Features .....	4
4.2	Specifications .....	5
4.3	Models .....	5
4.4	Options.....	5
<b>5.</b>	<b>Superchiller Safety Information .....</b>	<b>6</b>
5.1	Safety Instructions .....	6
5.2	Recognise Safety Alert Symbols .....	6
5.3	Operating .....	6
5.4	Service & Maintenance.....	7
5.5	Carbon Dioxide (CO <sub>2</sub> ).....	7
<b>6.</b>	<b>Installation .....</b>	<b>8</b>
6.1	Receiving .....	8
6.2	Unpacking.....	8
6.3	Selecting a Location .....	8
6.4	Mounting Superchiller .....	9
6.5	Connecting Superchiller to Remote Condensing Unit.....	9
6.6	Electrical Connection .....	9
6.7	Connecting Python .....	10
6.8	Plumbing the drain and CO <sub>2</sub> exhaust .....	10
6.9	Connecting to water supply .....	11
6.10	Connecting to CO <sub>2</sub> supply.....	11
6.11	Filling unit with water.....	11
6.12	Commissioning .....	11
6.13	Purge System .....	12
6.14	Sanitise System .....	12
<b>7.</b>	<b>Scheduled Maintenance.....</b>	<b>13</b>
<b>8.</b>	<b>Postmix Circuit Diagram.....</b>	<b>15</b>
8.1.	Single Carbonator Superchiller (3 pumps) .....	15
8.2.	Twin Carbonator Superchiller (5 pumps).....	16
<b>9.</b>	<b>Electrical Circuit Diagram .....</b>	<b>17</b>
<b>10.</b>	<b>Trouble Shooting .....</b>	<b>18</b>
<b>11.</b>	<b>Hydra Icebank Control Go/No Go Test.....</b>	<b>20</b>
<b>12.</b>	<b>Hydra Carbonator Level Control Test .....</b>	<b>21</b>
<b>13.</b>	<b>Assembly Diagrams &amp; Parts List .....</b>	<b>22</b>
13.1.	Postmix Spare Parts List .....	22
13.2.	Postmix Assembly Diagram.....	23
13.3.	Refrigeration Spare Parts List.....	24
13.4.	Refrigeration Assembly Diagram.....	25
<b>14.</b>	<b>Certificate of Warranty .....</b>	<b>26</b>
<b>15.</b>	<b>Manufacturer's Checklist .....</b>	<b>27</b>

# 1. Introduction

Thank you for purchasing this quality Lancer product. All Lancer products are constructed using the highest quality materials and components. They are designed to the highest possible standards, therefore offering our customers endless hours of optimum performance.

# 2. The Company

Hoshizaki Lancer is a wholly owned subsidiary of Lancer Corporation, a world leader in the supply of Beverage Dispensing Equipment based in San Antonio, Texas. Lancer has manufacturing bases and distribution networks in 97 countries. Lancer is in turn ultimately owned by Hoshizaki Electric Co Ltd of Nagoya, Japan. Hoshizaki is a global leader in food service equipment.

Hoshizaki Lancer's head office and manufacturing base is located in Adelaide (SA), with branch offices and warehousing facilities in Sydney (NSW), Melbourne (VIC), Brisbane (QLD), Perth (WA) and Auckland (New Zealand).

# 3. Our Products

Lancer specialises in the design, engineering, manufacture, and marketing of beverage dispensing in two core categories:

## **Soft Drink Equipment**

Mechanically cooled and ice cooled soft drink dispensers, frozen beverage dispensers, dispensing valves, carbonators and an extensive line of beverage dispensing parts and accessories.

## **Beer Equipment**

Lancer manufactures and markets beer dispensing and chilling equipment, and related accessories. Products include founts, chillers, Chillerplates, drip trays, taps, handles, beer line cleaning equipment and an extensive line of beverage dispensing parts and accessories.

# 4. Product Details

## **4.1 Product Features**

The Lancer Remote Superchiller is an Australian designed and manufactured unit designed to refrigerate and distribute post-mix (soft drinks) as well as maintaining the product temperature through the python and dispenser.

## 4.2 Specifications

<b>Voltage</b>	230 Volts	
<b>Frequency</b>	50 Hz	
<b>Max Current Draw</b>	10 Amps	
<b>Ambient Temperature</b>	2 - 40°C	
<b>Dimensions</b>		
Width	1000 mm	
Depth	685 mm	
Height	815 mm	
<b>Weight</b>	<b>3 pump</b>	<b>5 pump</b>
Shipping	136 kg	158kg
Empty	123 kg	145kg
Operating	305 kg	327kg
<b>Ice bank Weight</b>	75 kg	
<b>Water Bath Capacity</b>	180 litres	
<b>Construction</b>	Stainless Steel	
<b>Agitator Motor</b>	25W, 230 VAC 1 Phase	
<b>Ice bank Control</b>	Electronic	
<b>Carbonation Level Control</b>	Electronic	
<b>Drink Capacity</b>	Continuous 473ml (16 oz) drinks below 4.4°C at 4 drinks per minute with 40°C ambient, syrup inlet temperature and 32°C water inlet temperature.	

## 4.3 Models

R8E23LA V2	Lancer Superchiller Remote with 3 pumps, single Carbonator.
R8E95LA V2	Lancer Superchiller Remote with 5 pumps, dual Carbonator.

## 4.4 Options

- Adjustable Legs (79232218) – height with legs approx 960mm.
- Casters (79602411) – height with casters approx. 921mm.

## 5. Superchiller Safety Information

### 5.1 Safety Instructions

For your personal safety, and that of others working around you please read, understand, and follow thoroughly all safety instructions included in this manual and on the Superchiller.

- Review all applicable OSH (Occupational Safety & Health) regulations.
- Review all applicable Beverage Dispensing Gas Standards
- Learn how to operate the Superchiller and use the controls properly.
- Do not allow untrained personnel to operate the machine.
- Ensure that the Superchiller is maintained according to service manual instructions.
- Do not allow any unauthorised modifications to the machine.

### 5.2 Recognise Safety Alert Symbols

The safety alert symbol precedes **Warning** and **Caution** notes throughout this manual. To prevent personal injury or damage to the machine these alerts must be strictly adhered too.



#### Warning

Alerts to a potentially hazardous situation that if not avoided **CAN** result in death, serious injury.



#### Caution

Alerts to a potentially hazardous situation that if not avoided **MAY** result in injury or equipment damage.

### 5.3 Operating



#### Warning

Superchillers are intended for indoor operation only; do not operate outside unless suitably protected by a weatherproof enclosure. This appliance is not suitable for installation in an area where a water jet could be used.



#### Caution

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

## 5.4 Service & Maintenance

**Caution**

Installation of Superchiller and service work should only be performed by fully trained & certified Electrical, Plumbing, & Refrigeration Technicians.

**Warning**

Carbonator contains CO<sub>2</sub> gas and water under pressure. Depressurise before performing any work on the system.

**Warning**

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

**Warning**

**SUPERCHILLER MUST BE ISOLATED FROM ELECTRICAL SUPPLY BEFORE COMMENCING ANY SERVICE OR MAINTENANCE WORK.**

## 5.5 Carbon Dioxide (CO<sub>2</sub>)

**Warning**

The Superchiller uses a CO<sub>2</sub> (Carbon Dioxide) supply. CO<sub>2</sub> is a heavier than air, colourless, non-combustible gas with a faintly pungent odour.

Personnel exposed to high concentrations of CO<sub>2</sub> gas will experience tremors, which are followed rapidly by loss of consciousness and suffocation.

If a CO<sub>2</sub> gas leak is suspected, **immediately** ventilate the contaminated area before attempting to repair the leak.

## 6. Installation



### Warning

To avoid personal injury or damage, do not attempt to lift a Superchiller without help.  
Use of a mechanical lift is recommended.  
(NOTE: Empty R8E Superchiller weight: 145kg)

### 6.1 Receiving

Each unit is completely tested under operating conditions and thoroughly inspected before shipment. At time of shipment, the carrier accepts the unit and any claim for damage(s) must be made with the carrier. Upon receiving units from the delivering carrier, carefully inspect shipping crate for visible indication(s) of damage. If damage exists, have carrier note damage on bill of landing and file a claim with the carrier.

### 6.2 Unpacking



### Caution

The use of gloves is recommended to protect hands from potential injury from sharp edges. The Superchiller must always be handled in a vertical position.

Carefully unpack the Lancer R8E Superchiller from the shipping carton, remove the wooden base. If appropriate, assemble legs to unit by carefully tilting (tilt should not be more than 45°). Inspect unit for concealed damage and if evident, notify delivering carrier and file a claim against the carrier.

### 6.3 Selecting a Location



### Warning

Superchillers are intended for indoor operation only; do not operate outside unless suitably protected by a weatherproof enclosure.  
This appliance is not suitable for installation in an area where a water jet could be used.



### Caution

The Superchiller is not suitable for use in subfreezing temperatures.  
To prevent damage to the water supply line, turn off and drain unit when air temperature is below zero.

- The R8E Superchiller should be located in a well-ventilated, firm, level location close to dispenser, water and electrical supplies, with easy access for servicing
- Installation should only be performed by a qualified and competent technician.



## 6.4 Mounting Superchiller

- Install on a flat, level surface using adjustable legs or casters (Optional).
- Fix to supporting structure using 4 x  $\frac{3}{4}$ " BSW bolts screwed into base supports.



### Caution

Superchiller operational weight is 327kg; ensure that all supporting structures are certified for this loading by a registered Mechanical Engineer. Supporting structure must be securely fixed to floors or walls.

## 6.5 Connecting Superchiller to Remote Condensing Unit

The R8E Superchiller is supplied with a nitrogen holding charge only. It requires a connection to a remote condensing unit with a minimum capacity of 3.2kW @ -5°C SST, 43°C ambient temperature.

**Note:** the serial plaque on the R8E Superchiller must be checked to confirm correct refrigerant type before connection to the condensing unit.

Suction and liquid line should be sized correctly to provide a minimum return vapour velocity of 7.5m/s (vertical risers) and 3.5m/s horizontal sections.

Suction line pressure drop should comply with industry standard guidelines of 1.1°K and must not exceed 2°K.

**Note:** An oil separator must be used on the remote condensing unit and P traps must be installed every 3m vertical lift of suction line.

Standard refrigeration practice of deep evacuation (150 micron) before charging the system is necessary. The electronic icebank control closes 2 x liquid line solenoid valves to start the pump down cycle on condensing unit before turning off via the low pressure switch on the condensing unit.

## 6.6 Electrical Connection

- This unit requires a 10 amp power supply.
- Check the name plate on the machine for electrical supply requirements. Use only the power supply specified on the name plate.



### Warning

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



### Warning

To avoid possible fatal electric shock or serious injury the Superchiller must be electrically grounded. Electrical Connection Must Be Made In Accordance With The Appropriate Local Codes And Regulations. Use of an RCD is recommended.

## 6.7 Connecting Python

Connect Python to Chiller and Dispenser.



### Caution

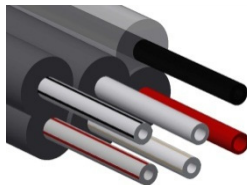
**NOTE:** The R8E Superchiller is rated to operate with a maximum of 90m of python connected at 32°C. Exceeding manufacturer's ratings may cause damage to the Superchiller and void warranty.

Connect the Python to Chiller and Dispenser.

Refer to Python and Dispenser specifications for connection data.

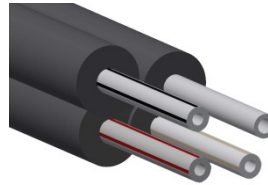
Superchiller can be supplied with 5 pumps, dual carbonator, or 3 pumps single carbonator; python should be connected to Chiller as follows:

5 Pump



SODA RETURN A	WATER RETURN	SODA RETURN B
SODA SUPPLY A	WATER SUPPLY	SODA SUPPLY B

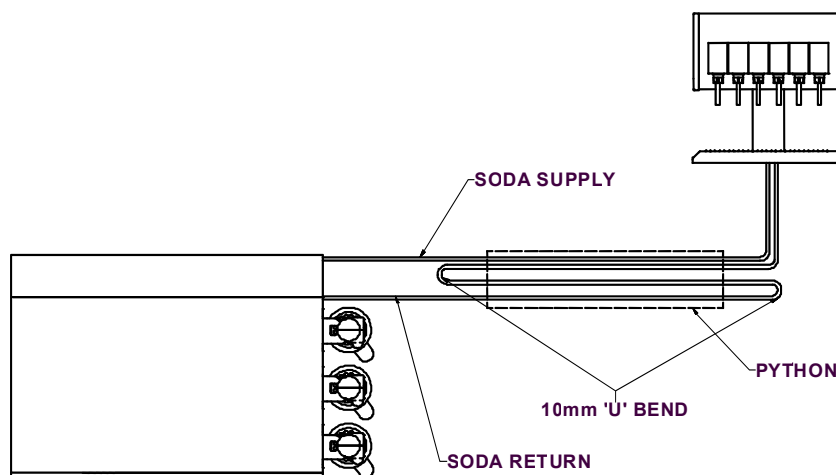
3 Pump



SODA RETURN A	WATER RETURN
SODA SUPPLY A	WATER SUPPLY

**Important:** Ensure lines from python to Superchiller connections are insulated to prevent condensation.

**Note:** For additional Soda reserve on short python lengths used in high volume accounts, it may be necessary to extend the soda circuit by connecting the 2 spare lines in the python onto the soda return line (i.e. double pass of soda circuit out and back from dispense point to soda return).



## 6.8 Plumbing the drain and CO<sub>2</sub> exhaust

The 19mm overflow drain tube exiting from the base of the tank should be plumbed to a suitable drain, installation in accordance with AS/NZS 3500.1 and AS/NZS 3500.2.

The 6mm barb labelled as CO<sub>2</sub> EXHAUST should be plumbed to an outside safe area.

## 6.9 Connecting to water supply

- Using appropriate tubing and fittings connect a 10mm water supply line from Superchiller carbonator pump inlet to a filtered, regulated water supply. (See Postmix circuit diagram page 13-15). Installation in accordance with AS/NZS 3500.1 and AS/NZS 3500.2.
- Turn on water supply, check for leaks, adjust water regulator to 172-275kpa.
- Open the bypass ball valve on the carbonator relief and bypass assembly until water flows from CO<sub>2</sub> exhaust tube; then close the bypass ball valve. For dual carbonators, repeat this operation for each carbonator.



### Caution

Maximum water supply pressure to be 275 kpa.  
Normal operating water temperature should be within 7°C to 32°C.

## 6.10 Connecting to CO<sub>2</sub> supply



### Warning

As carbon dioxide (CO<sub>2</sub>) displaces oxygen; prevention of CO<sub>2</sub> leaks is paramount. If a leak is suspected, immediately ventilate the contaminated area, before attempting repairs.

- Connect CO<sub>2</sub> supply line from regulator to gas inlet on carbonator. (See Postmix circuit diagram page 13 – 15 for details)
- Adjust CO<sub>2</sub> Regulator supplying Carbonator to 550 kpa.
- Turn on CO<sub>2</sub> supply.

## 6.11 Filling unit with water

Remove Superchiller lid and fill water bath until water flows out overflow tube.

**NOTE:** Do not use water supplied from newly installed carbon filter as ice bank control operation will be adversely affected.

## 6.12 Commissioning

- Unplug carbonator and recirculation pumps power supply leads from electrical box located under lid.
- Connect Superchiller power supply lead to an appropriate 3 pin socket outlet and switch on.
- When Superchiller ice bank is fully formed (approx. 4 hours) the remote compressor and condenser fan will cycle off, but superchiller agitator will run continuously.
- After Superchiller has cycled off, reconnect carbonator and recirculation pumps.

## 6.13 Purge System

Progressively activate each dispensing valve or Bargun connected to the Superchiller systems until an uninterrupted flow of soda, water (where applicable), and syrup pours from each dispenser.

## 6.14 Sanitise System

### **Prepare sanitising solution:**

Prepare sanitising solution in accordance with the manufacturer's written recommendations and safety guidelines.

### **Sanitising BIB System**

- Remove all disconnects from BIB containers.
- Immerse all disconnects in warm water and clean using a nylon bristle brush. Rinse with clean water.
- Prepare sanitising solution according to manufacturer's instructions.
- Attach sanitising fittings to BIB disconnects, if sanitising fittings are not available cut fittings from empty BIB bags.
- Immerse all sanitising fittings with attached BIB disconnects in bucket of sanitising solution. Operate all dispensing valves until the sanitising solution flows from the valve. Allow sanitiser to remain in lines for fifteen (15) minutes.
- Immerse all sanitising fittings with attached BIB disconnects in bucket of clean water. Operate all dispensing valves until all sanitiser has been flushed from the system.
- Remove sanitising fittings from BIB disconnects and re-connect disconnects to appropriate BIB's. Operate dispensing valves until syrup flows freely.

## 7. Scheduled Maintenance

The following Superchiller routine maintenance should be performed at the intervals listed.

### Daily

#### Cleaning/Sanitising

The Superchiller supplies soda water to the dispensing valves/barguns. To ensure optimum drink quality and system performance at all times please follow cleaning and sanitising procedures for the dispensing valves/barguns recommended by the valve/bargun manufacturer.

#### Checking CO<sub>2</sub> Supply

Ensure that the contents gauge on the CO<sub>2</sub> Regulator reads higher than 1400kpa on the dial. If it does not, then the CO<sub>2</sub> cylinder is empty and must be changed using safe working practices.



#### Warning

**To avoid personal injury and/or property damage, always secure the CO<sub>2</sub> cylinder with a safety chain to prevent it from falling over; and use appropriate protective equipment (as defined in Clause 3.3.2 of AS 5034) to handle cylinders. Should the valve become accidentally damaged or broken off, a CO<sub>2</sub> cylinder can cause serious personnel injury.**

### Quarterly

The Superchiller should be connected to a filtered water supply. To ensure optimum drink quality and system performance, supply water filters should be replaced every 3 months.

### Half Yearly

- Check that the water is level with the top of the overflow tube. Add water if necessary.
- Open carbonator relief valve to purge CO<sub>2</sub> and check leakage, close relief valve after checking.

### Yearly

#### Water bath and recirculation pump inspection.

- Isolate Superchiller from power supply by switching off at socket.
- Thaw the bank of ice formed in the tank. Empty the water from the tank with a suction pump or drainage pipe.
- Inspect coils and agitator in water bath for algae or slime accumulation. Clean as necessary using a soft brush, rinse with clean water.
- Check recirculation pump strainers for accumulation, replace if necessary.
- Fill tank with clean water until water flows out the overflow tube.
- Switch on power supply and check ball position in flow indicator section of strainer. If ball indicates flow is less than 5 litres per minute, replace pump.
- Commission and purge system as per clause 6.11 and 6.12.

## Sanitisation of Beverage System

To maintain optimum quality of dispensed product each Superchiller and its associated beverage system components must be thoroughly cleaned and sanitised annually.

### Prepare sanitising solution

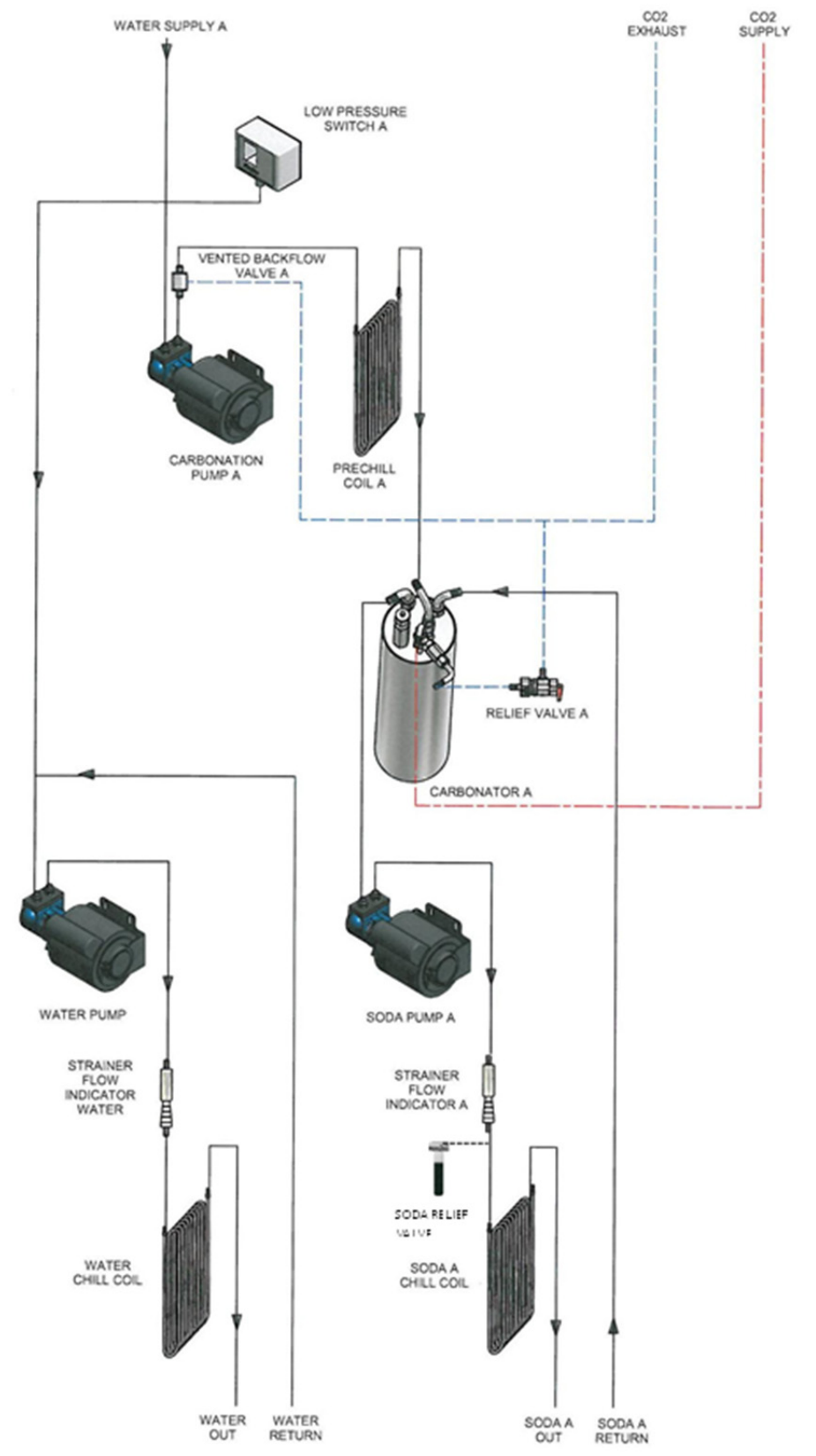
Prepare sanitising solution in accordance with the manufacturer's written recommendations and safety guidelines.

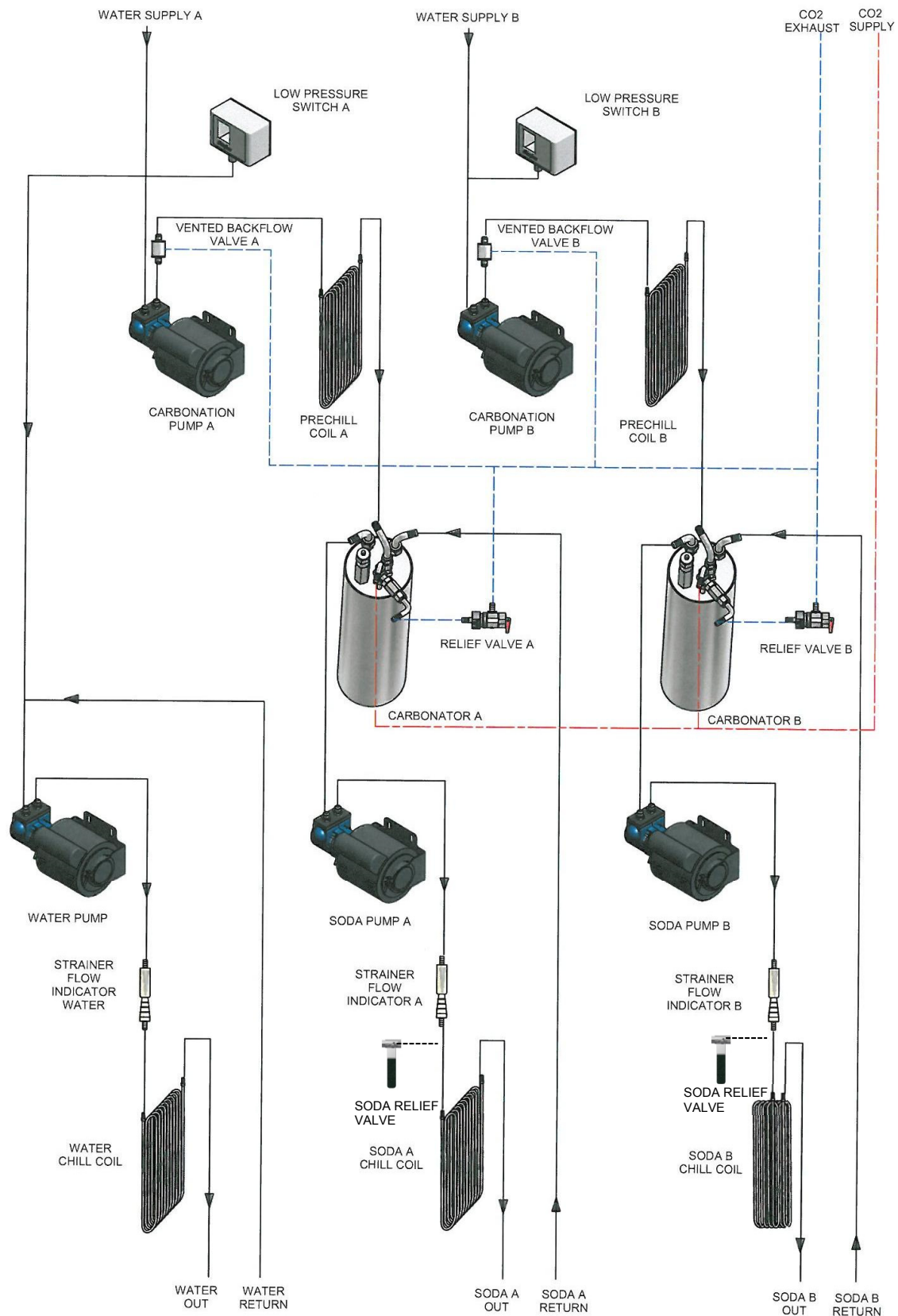
### Sanitising BIB System

- Remove all disconnects from BIB containers.
- Immerse all disconnects in warm water and clean using a nylon bristle brush. Rinse with clean water.
- Prepare sanitising solution according to manufacturer's instructions.
- Attach sanitising fittings to BIB disconnects, if sanitising fittings are not available cut fittings from empty BIB bags.
- Immerse all sanitising fittings with attached BIB disconnects in bucket of sanitising solution. Operate all dispensing valves until the sanitising solution flows from the valve. Allow sanitiser to remain in lines for fifteen (15) minutes.
- Immerse all sanitising fittings with attached BIB disconnects in bucket of clean water. Operate all dispensing valves until all sanitiser has been flushed from the system.
- Remove sanitising fittings from BIB disconnects and re-connect disconnects to appropriate BIB's. Operate dispensing valves until syrup flows freely.

## 8. Postmix Circuit Diagram

### 8.1. Single Carbonator Superchiller (3 pumps)

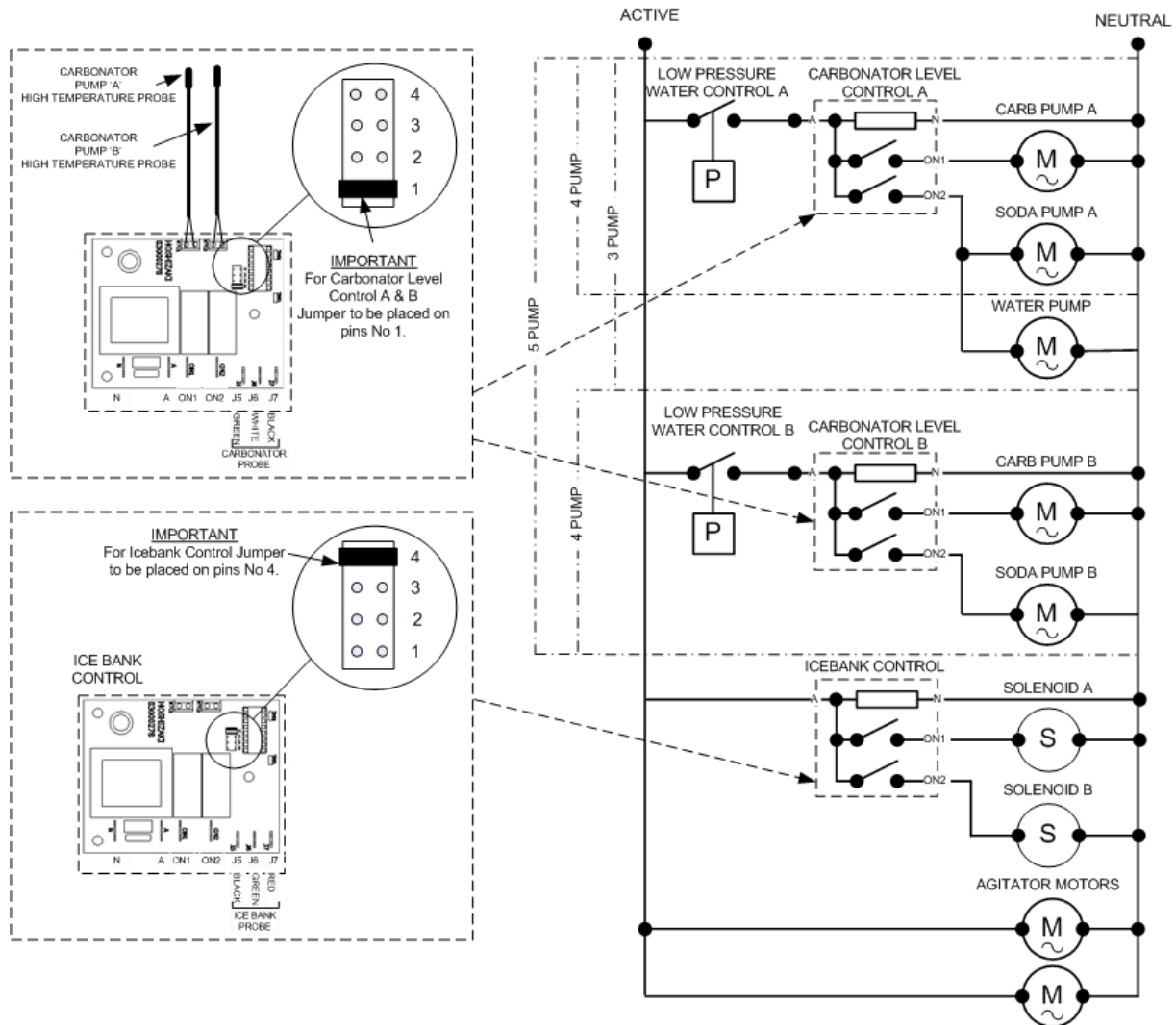


**8.2. Twin Carbonator Superchiller (5 pumps)**



## 9. Electrical Circuit Diagram

### R8E ELECTRICAL CIRCUIT DIAGRAM



## 10. Trouble Shooting

TROUBLE	CAUSE	REMEDY
<b>Product too warm</b>	Ice bank control defective (permanently open circuit).  Low refrigerant charge.  Check agitator motor, seized or fused.	Check Ice bank control using procedure on page 24. Replace control or probe if defective.  Leak check, repair leak, charge with correct amount of refrigerant.  Replace if not working.
<b>Rusty appearance and/or metallic taste to water.</b>	Poor water supply - contaminated.	Carbon filter required.
<b>CO<sub>2</sub> gas or water escapes from pressure relief valve.</b> (Observed from CO <sub>2</sub> exhaust)	CO <sub>2</sub> pressure too high.  Pump motor will not stop.  Inadequate water supply. Lines too small or restricted.	Check CO <sub>2</sub> pressure relief valve. Bleed gas by opening and closing the relief valve - set CO <sub>2</sub> to 550 kpa.  Check carbonator control using procedure on page 25. Replace control or probe if defective.  If strainer and filter are clear and line valves are fully open, noisy pump operation indicates insufficient water supply. Minimum water supply is 172 kpa flowing pressure.
<b>Poor carbonation (low CO<sub>2</sub> volume).</b>	Flooded carbonator.  Dirty water supply.  CO <sub>2</sub> pressure too low.  Poor quality paper cups.  Dirty or greasy glasses.  Improperly drawn drink.	Check carbonator control using procedure on page 25. Replace control or probe if defective.  Check filters.  Check CO <sub>2</sub> pressure at regulator. Should be set between 550 kpa. CO <sub>2</sub> inlet check valve stuck, shut or blocked, repair or replace.  Purchase better quality cups.  Wash all glasses.  Open faucet all the way and draw against side of glass or cup.
<b>Pump leaks from shaft seal.</b>	Worn pump seals.  Misaligned or damaged motor and pump facings.	Replace pump.  Realign or file flat.
<b>Pump will not run.</b>	Power failure or low voltage.  Carb pump hi temp LED on icebank control board illuminated.	Check fuses. Check power supply.  Check for icebank growth into product coils, defrost and turn off chiller at supply socket and turn on again to reset.

	<p>Faulty low pressure switch (if fitted).</p> <p>Defective motor.</p> <p>Locked up pump. Motor has cut out on overload.</p> <p>Carbonator flooded – filled completely with water.</p> <p>Carbonator empty - faulty Carbonator probe or control.</p> <p>Low water supply pressure.</p> <p>Excessive CO<sub>2</sub> Pressure.</p>	<p>Ensure of adequate water supply. Switch should close above 172 kpa. Replace if defective.</p> <p>Replace motor.</p> <p>Replace pump.</p> <p>Check mains water pressure - must be at least 135 kpa lower than CO<sub>2</sub> (install water pressure regulator if necessary) Check CO<sub>2</sub> regulator. Check carbonator control using procedure on page 25. Replace control or probe if defective.</p> <p>Check carbonator control Using procedure on page 25. Replace control or probe if defective.</p> <p>A minimum of 172 kpa water supply pressure is required</p> <p>Check function &amp; setting of CO<sub>2</sub> regulator.</p>
<b>Faucet delivers CO<sub>2</sub> gas continuously.</b>	<p>Carbonator pump will not run due to power failure or low voltage.</p> <p>Pump water supply restricted.</p> <p>Carbonator pump will not run due to excessive carbonator CO<sub>2</sub> pressure.</p> <p>Faulty low pressure switch.</p> <p>Defective Carbonator motor.</p> <p>Locked up pump. Motor has cut out on overload.</p> <p>Carbonator empty – faulty control board or level probe.</p> <p>Carb pump hi temp LED on icebank control board illuminated.</p>	<p>Check fuses. Check power supply.</p> <p>Ensure clean mains water supply tap is open, or replace filters.</p> <p>Check Carbonator CO<sub>2</sub> pressure regulator for creeping. It should be set at 550 kpa.</p> <p>Ensure adequate water supply (minimum pressure 172 kpa flowing pressure). Pressure switch is set to open below 35 kpa and reset at 172 kpa.</p> <p>Check operation by plugging into circulation pump socket momentarily. Replace motor if necessary.</p> <p>Replace pump.</p> <p>Check carbonator control using procedure on page 25. Replace control or probe if defective.</p> <p>Check for icebank growth into product coils, defrost and turn off chiller at supply socket and turn on again to reset.</p>

# 11. Hydra Icebank Control Go/No Go Test

This is a test to simulate the building and erosion of the icebank; to determine if the icebank control is operating correctly. The test assumes that all other components in the refrigeration system (e.g. high pressure cut-out reset) are in an operational condition.



## Warning

**230VAC is present on terminals N, A, ON 1, ON 2 terminals. Work should only be performed by fully trained & certified Electrical, Plumbing & Refrigeration Technicians.**

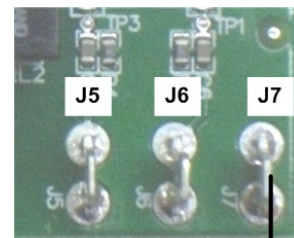
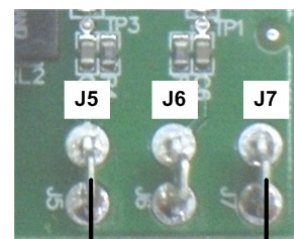
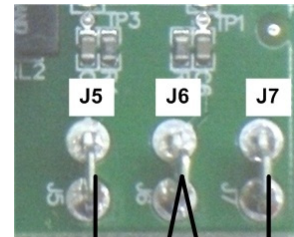
1. Remove the ice bank probe connections from terminals J5, J6, J7.
2. Connect alligator jumper to terminals J5, J6, J7. Ice bank control relay should close and refrigeration system start.

(Simulates water covering all probes)

3. With refrigeration system operating (ice bank control relay energised) remove alligator jumper from terminal J6. Refrigeration system should continue to operate.

(Simulates ice growth over green probe. Water still contacting red and black probes)

4. With refrigeration system operating, remove alligator lead from terminal J5. Refrigeration system should stop. (Simulates ice growth over black probe only)



## 12. Hydra Carbonator Level Control Test

This is a test to simulate water filling/emptying in the carbonator to determine if the carbonator control is operating correctly. The test assumes that all other components in the water/soda system (e.g. low water pressure control) are in an operational condition.

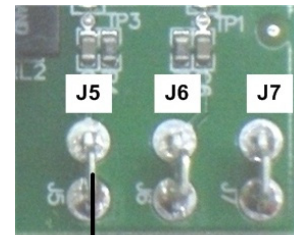


### Warning

**230VAC is present on terminals N, A, ON 1, ON 2.**  
**Work should only be performed by fully trained & certified**  
**Electrical, Plumbing, & Refrigeration Technicians.**

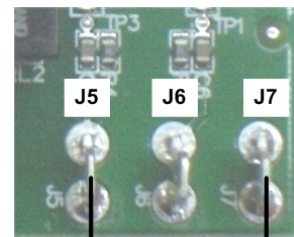
1. Remove the carbonator probe connections from terminals J5, J6 & J7. The carbonator pump should operate.

(Simulates no water between ground (carbonator tank) and low level probe)



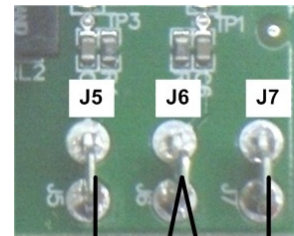
2. With carbonator pump operating connect alligator jumper from terminal J5 to terminal J7. Carbonator pump should continue to operate.

(Simulates water covering low level probe.)



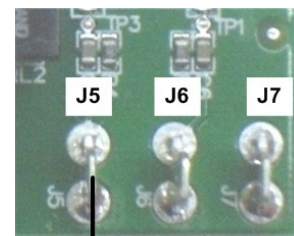
3. With carbonator pump operating, connect alligator lead to terminal J6. Carbonator pump should stop.

(Simulates water over low & high level probes)



4. Carbonator pump will not restart until alligator clips are removed from J6 & J7.

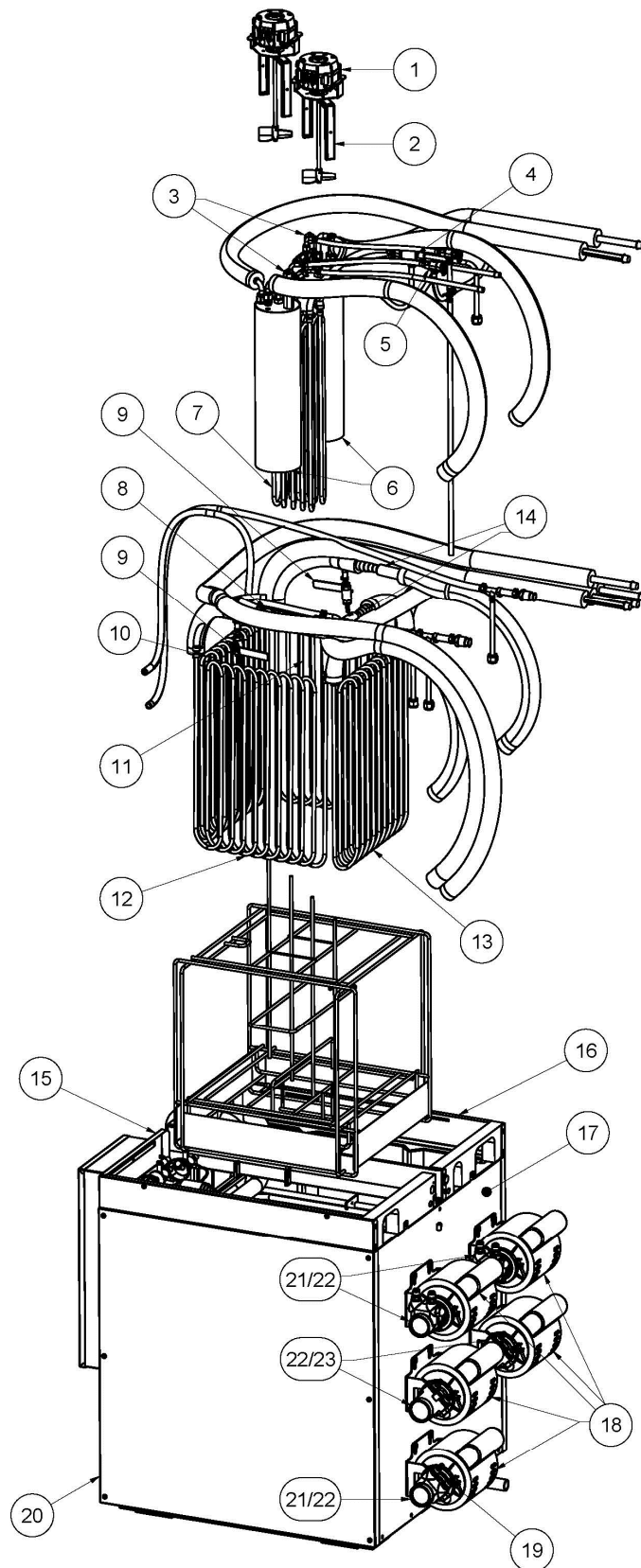
(i.e. Water level drops below low level)



## 13. Assembly Diagrams & Parts List

### 13.1. Postmix Spare Parts List

Ref	Part No	Description
1	80000092	AGI MOTOR 240V/50Hz
2	61000162	BRACKET AGITATOR S8000
3a	23521975	CARB PROBE
3b	23000022	PROBE WASHER
4	79000683	BACKFLOW PREV WATTS 9DB (AUS)
5	08000002	CARBONATOR RELIEF VAVLE
6	23822336	LANCER CARBONATOR ASSY
7	63000163	COIL ASSY PRECHILL B
8	79000332	CHECK VALVE S/S 10MM BARB
9	79000739	BALL VALVE S/S WATERMARKED
10	63000164	COIL ASSY SODA A
11	63000165	COIL ASSY SODA B
12	62000162	COIL ASSY PRECHILL A
13	63000170	WATER COIL ASSY
14	87000052	STRAINER FLOW INDICATOR
15	61000545	UPPER FRONT PANEL
16	61000546	PANEL UPPER REAR R8E V2
17	61000487	PANEL RH 5 PUMP
18	80000074	CIRCULATION PUMP MOTOR
19	78000018	'V' BAND CLAMP
20	61000468	PANEL FRONT / REAR R8E V2
21	78000021	PUMP BRASS BY PASS
22	78000020	BRASS PUMP DRIVE KEY
23	78000022	PUMP PROCON S/S CB1604X

**13.2. Postmix Assembly Diagram**

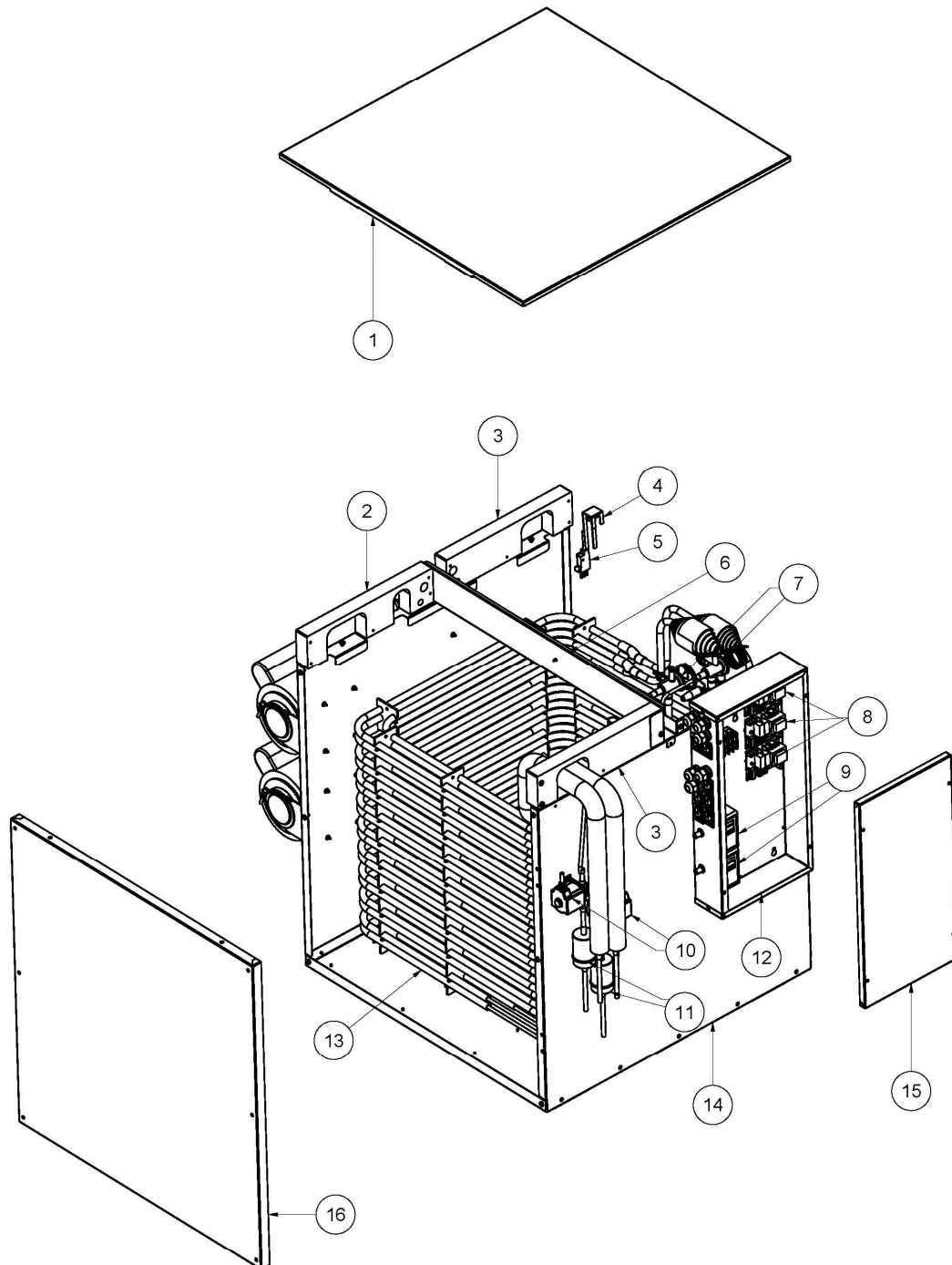


### 13.3. Refrigeration Spare Parts List

Ref	Part No	Description
1	61000547	MAIN LID R8E V2
2	79000556	CLAMP B TUBE R8E
3	79000555	CLAMP A TUBE R8E
4	61616653	ICE PROBE BRACKET ASSY R8
5	16522334	ICE BANK PROBE
6	61000544	CONDUIT CABLE R8E V2
7	83000114	TX VALVE DANFOSS TUBE 03
8	83000278	CONTROL LEVEL I/B HYDRA
9	83287311	LOW PRESSURE CONTROL KP1
10	83000101	SOLENOID COIL W LEAD
11	87000120	SOLENOID ASSY R8E
12	83000284	ELECTRICAL BOX ASSY R8E 5P
	83000280	ELECTRICAL BOX ASSY R8E 3P
13	62000106	EVAP ASSY R8E 2ROW
14	61000340	PANEL DIVIDER R8E
15	61000341	ELECTRIC BOX LID R8E
16	61000468	PANEL FRONT / REAR R8E



### 13.4. Refrigeration Assembly Diagram



## 14. Certificate of Warranty

It is the policy of Hoshizaki to provide to its current customers, warranty for all equipment supplied and installation work performed within a specified period.

### **Parts and Equipment**

Lancer provides a warranty period of twelve (12) months from the date of original invoice for all manufactured parts and the associated labour. Repair or replace of defective parts will be at the sole discretion of Lancer.

Changeover parts will be invoiced to the customer at the customers normal purchase cost and upon return of the warranty item and validation of the claim, the invoice will be credited.

### **Installations**

Lancer provides a warranty period of twelve (12) months from the date of final invoice for workmanship after the completion of any installation work, provided the parts and labour are completed by Lancer or its subcontractor.

### **Labour**

Lancer will not normally cover any labour costs associated with a warranty claim. Subject to the approval of the Divisional Sales Manager, Lancer may choose to reimburse the customer for some or all labour costs associated with a warranty claim. Any claim for labour costs must be authorized by Lancer prior to the work being undertaken.

### **Exclusions**

Lancer will not accept any liability or cost associated with any consequential losses (such as loss of syrup or beer), loss of profit or damage to property as a result of faulty product.

Warranty shall not apply:

- a) If in the opinion of Lancer, the equipment has been used in a situation the equipment has not been designed for;
- b) If in the opinion of Lancer, the equipment has been subject to abuse, negligence or accident;
- c) If connected to improper, inadequate or faulty power, water or drainage service or operated using incorrect, insufficient or contaminated lubricants, coolants, refrigerants or additives;
- d) Where the product is installed, maintained or operated otherwise than in accordance with the instructions supplied by Lancer;
- e) Where the product has been damaged by foreign objects;
- f) Where the product has been serviced, repaired, altered or moved otherwise than by Lancer or its nominees or using other than Lancer approved replacement parts.

## 15. Manufacturer's Checklist

Checked by ..... Date .....

Postmix Tested by .....

Gas Charge ..... Icebank Probe fitted .....

Electrically tested by (P/MIX) (REF) Refrigeration tested by .....

TAG No. (P/MIX) ..... (REF) .....

- ☐ Check all tube work for rubbing e.g. discharge line, liquid line, TX capillary.
- ☐ Agitator blades tight and not touching coils cradle.
- ☐ Overflow pipe correct height and positioned straight.
- ☐ All motors and pumps secured and mounted correctly in correct locations.
- ☐ All pumps run quietly and carbonator pump switched ON/OFF.
- ☐ Check icebank probe position and tightness and correct wiring of harness.
- ☐ Carbonator and plumbing pressure tested. Check for leaks on pumps, clamps, welds, strainers, carbonator fittings and all joints.
- ☐ Check check valve and strainer indicator correct flow direction
- ☐ Check correct flow direction
- ☐ Coils in cradle correctly and spaced.
- ☐ Postmix tubes not rubbing.
- ☐ Plumbing strapped correctly and not touching the agitator.
- ☐ Tube labels on correct tube.
- ☐ Electrical box labels correctly positioned and Superchiller sticker correctly positioned and straight.
- ☐ Attention sticker fitted and correctly positioned.
- ☐ Clean exterior of unit including power cords.
- ☐ Warning sticker applied
- ☐ Verify L.P. control operation
- ☐ Spreader pin pointing towards tank.
- ☐ Check body for sharp edges.
- ☐ Check lid for cleanliness and rough edges. Fit and secure.
- ☐ Carbonator relief valve fitted and correct.
- ☐ Copy checklist & file, put manual/checklist and pump insulator kit in plastic bag & place in the tank area.
- ☐ Customer asset No.

W/O .....

Affix label here