

# Turbo Carbonator

230V/50Hz

## Installation, Operation & Service Manual



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## 1. Specifications and Features

### 1.1 Model

23000003 Carbonator Turbo Insulated Backflow  
23000008 Carbonator Turbo Non-Insulated Backflow  
23000026 Carbonator Turbo Cased & Insulated  
64000229 Carbonator Turbo Insulated Backflow

### 1.2 Specifications

Voltage	230 Volts
Frequency	50 Hz
Max Current Draw	3.5 Amps
Tank Operating Capacity	6.4L
Motor	1/3 Horsepower (HP)

#### Dimensions

Width	311 mm
Depth	387 mm
Height	292 mm

#### Weight

Shipping	15.2 kg
Empty	14.1 kg
Operating	20.5 kg

Maximum Temperature	54°C
Maximum Pressure	13.5 Bar

#### Fittings

Water for Carb Inlet	3/8-inch Male Flare
CO <sub>2</sub> Inlet	1/4-inch Male Flare
Carbonated Water Outlet	3/8-inch Male Flare

### 1.3 Product Features

A Turbo Carbonator is a device designed to dissolve carbon dioxide gas (CO<sub>2</sub>) in water, producing carbonated (Soda) water. CO<sub>2</sub> gas is continuously delivered through a regulator to pressurize the carbonator tank. Simultaneously, plain water is pumped into the tank. The CO<sub>2</sub> gas under pressure dissolves into the water and the result is carbonated (soda) water. When the level of carbonated water reaches a pre-determined point, the liquid level sensing probe (inside the tank) signals the liquid level control module which, in turn, shuts off the pump motor. As carbonated water is drawn from the tank, the level of carbonated water will drop. At a certain point, the liquid level sensing probe recognizes the drop in the level and turns on the pump motor which replenishes the amount of carbonated water that has been taken out of the tank.

## 2. Safety Information

### 2.1 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 Turbo Carbonator.

- Review all applicable WHS (Work Health & Safety) regulations
- Review all applicable Beverage Dispensing Gas Standards
- Learn how to operate the Turbo Carbonator and use the controls properly.
- Do not allow untrained personnel to operate the machine.

- Ensure that the Turbo Carbonator is maintained according to service manual instructions.
- Do not allow any unauthorized modifications to the machine.

## 2.2 Recognize 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 to.



### 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.

## 2.3 Operating



### Warning

Turbo Carbonators 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.



### Caution

This appliance is intended to be used in commercial applications such as restaurants or similar.

## 2.4 Service & Maintenance



### Caution

Installation of Turbo Carbonator 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. De-pressurise before performing any work on the system.



### Warning

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

**Warning**

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

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

**Warning**

The Turbo Carbonator 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.

## 3. Installation

**Warning**

**To avoid personal injury, you may want to attempt to lift a Turbo Carbonator with another person's assistance.**

### 3.1 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 lading and file a claim with the carrier.

### 3.2 Unpacking

**Caution**

**The use of gloves is recommended to protect hands from potential injury from sharp edges.**

Carefully unpack the Lancer Turbo Carbonator from the shipping carton. Inspect unit for concealed damage and if evident, notify delivering carrier and file a claim against the carrier.

### 3.3 Selecting a Location

**Warning**

**Turbo Carbonators 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.  
Turbo Carbonators are not intended to be placed on a kitchen floor.**

**Warning**

**When positioning the appliance, ensure the supply cord is not trapped or damaged.  
Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance.**

**Caution**

The Turbo Carbonator 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 degrees Celsius.

**Caution**

The Turbo Carbonator is only to be installed in locations where its use and maintenance is restricted to trained personnel.

Select a level, well ventilated, accessible location convenient to water and electrical supply, which can support a weight of 20kg.

### 3.4 Connecting to Water Supply

1. Connect 3/8" flexible pressure tubing, or larger, from water supply to pump inlet. **Do not connect to a hot water or soft water source.**
2. A shutoff valve and screen (minimum 100 mesh), should be installed in the water supply line to the carbonator. A water filter may also be necessary in the water supply line to the carbonator, depending on local conditions. Water pressure entering the pump should be at a minimum of 172 kPa (25psig); recommended water pressure is 345 kPa (50 psig) and should never exceed CO<sub>2</sub> pressure. If necessary, install regulator.

### 3.5 Connecting to CO<sub>2</sub>

1. Connect CO<sub>2</sub> pressure to CO<sub>2</sub> inlet on carbonator tank, with normal operating pressure at 720 kPa (105 psig). Do not exceed 830 kPa (120 psig). If excessive foam in drink is present, reduce CO<sub>2</sub> EXHAUST should be plumbed to a well-ventilated safe outside area.
2. Connect carbonator water outlet to dispensing system. If only one tank outlet is used, cap remaining with stainless steel cap and flare washer. To avoid contamination of potable liquids, do not connect copper tubing or fitting between the discharge fitting of the carbonator tank and dispenser.

**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.

### 3.6 Electrical Connection

**Warning**

To prevent possible electrical shock or extensive damage to the unit, the appliance must be connected with the flexible cord supplied with the appliance to an appropriate electrical outlet socket installed in accordance with local codes and regulations i.e. AS/NZS 3000.

**Warning**

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons with a replacement cord available from Hoshizaki Parts/Service Centres.

### 3.7 Commissioning

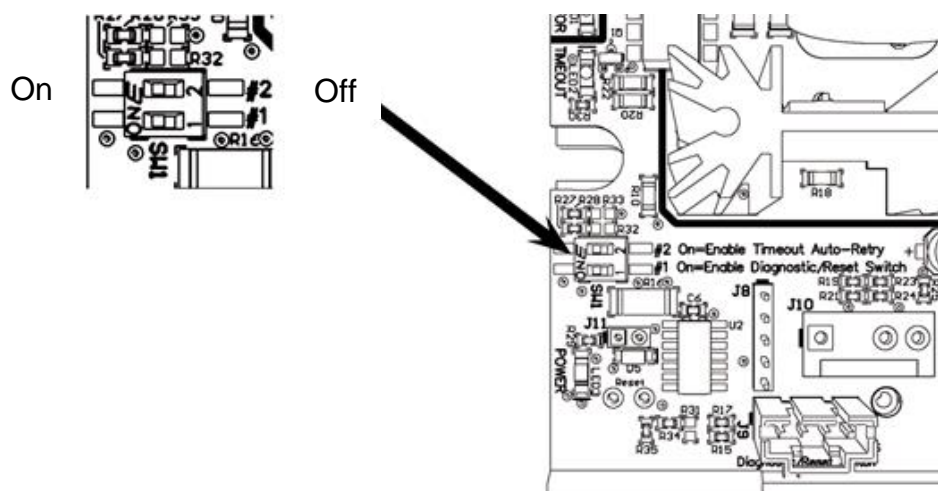
1. Open pressure relief valve by moving yellow lever to vertical position.
2. To remove air, turn water supply on and fill tank until water can be seen coming out of pressure relief valve.
3. Close pressure relief valve by moving yellow level to horizontal position.
4. Turn on CO<sub>2</sub> supply and adjust to correct pressure.
5. If electrical requirements have been met, plug in carbonator.
6. Check for CO<sub>2</sub> and water leaks.
7. Open a dispensing valve. Allow carbonator to cycle several times, turning motor OFF and ON to flush system.



**Warning** Do not connect Turbo Carbonator to a hot water or soft water source.

**NOTE:** The carbonator PCB assembly has two configuration switches, located between the Power and Timeout LEDs:

**NOTE:** These switches can be switched with a small screwdriver or a ballpoint pen. Toward the edge of the board is ON, toward the centre is OFF. The default setting is with both switches in the ON position. This allows for either a manual reset, by pressing the test/reset button on the outside of the carbonator, or automatic reset.



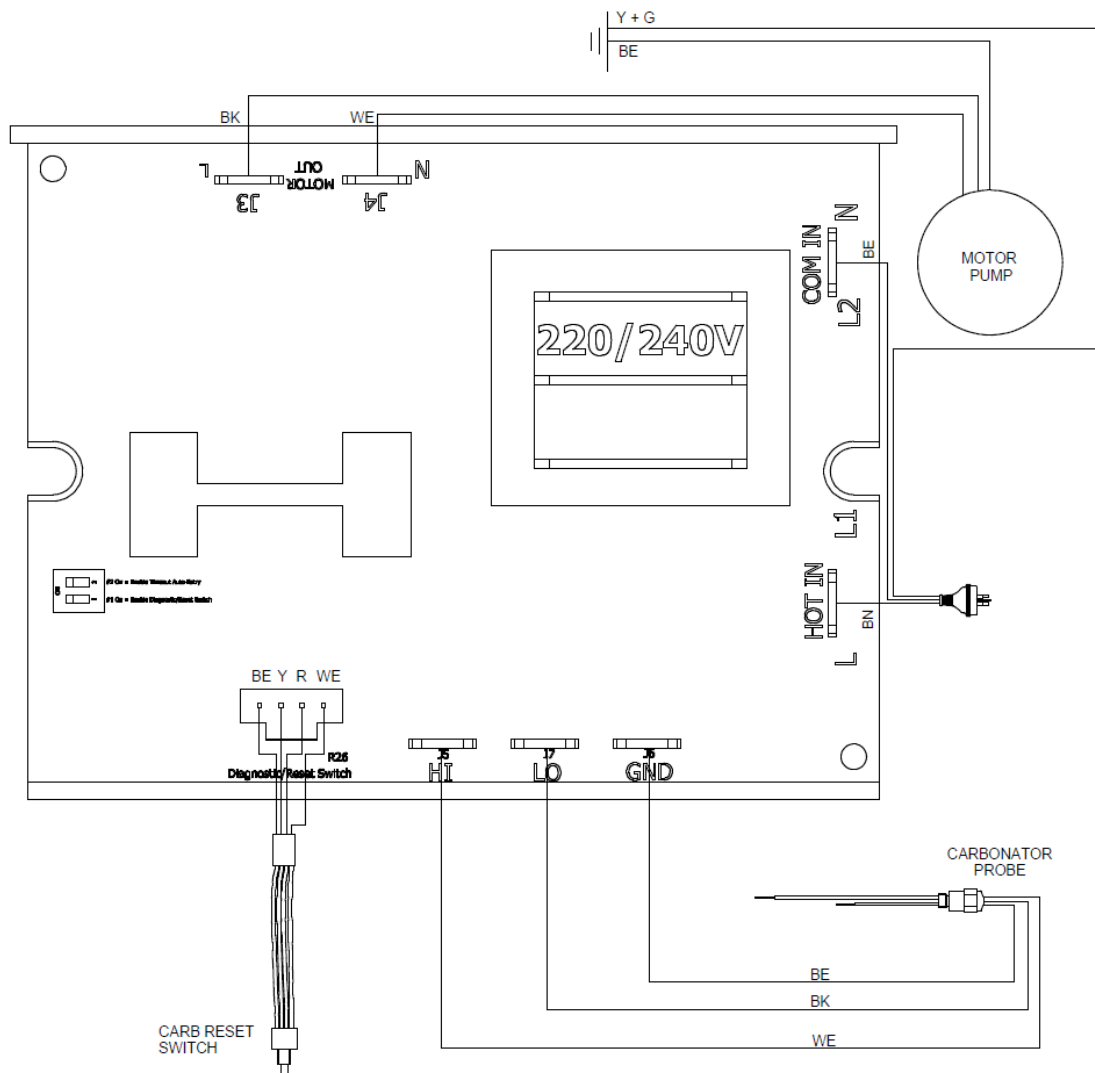
## 4. Operation

1. CO<sub>2</sub> gas pressure of 100 psi is maintained in the carbonator tank.
2. Water pressure of 40-70 psi enters the carbonator tank.
3. When the lower probe recognizes low water level in tank, the pump motor cycles to fill the tank.
4. Water is pumped into the tank through an orifice to create a spray for CO<sub>2</sub> absorption until the water level reaches upper probe level, then the pump shuts off.
5. As soda is dispensed at the valve, the soda level in the tank decreases until the lower probe is uncovered.
6. A fill cycle occurs with a repeat of steps 3 and 4.

## 5. Scheduled Maintenance

Periodically inspect for CO<sub>2</sub> or water leaks. Perform maintenance as necessary. Inspect and clean pump strainer.

## 6. Electrical Circuit Diagram



BE – Blue

BN – Brown

**Labels:**  
BK – Black    R – Red  
Y + G – Yellow & Green

W – White

Y – Yellow



## 7. Plumbing Diagram



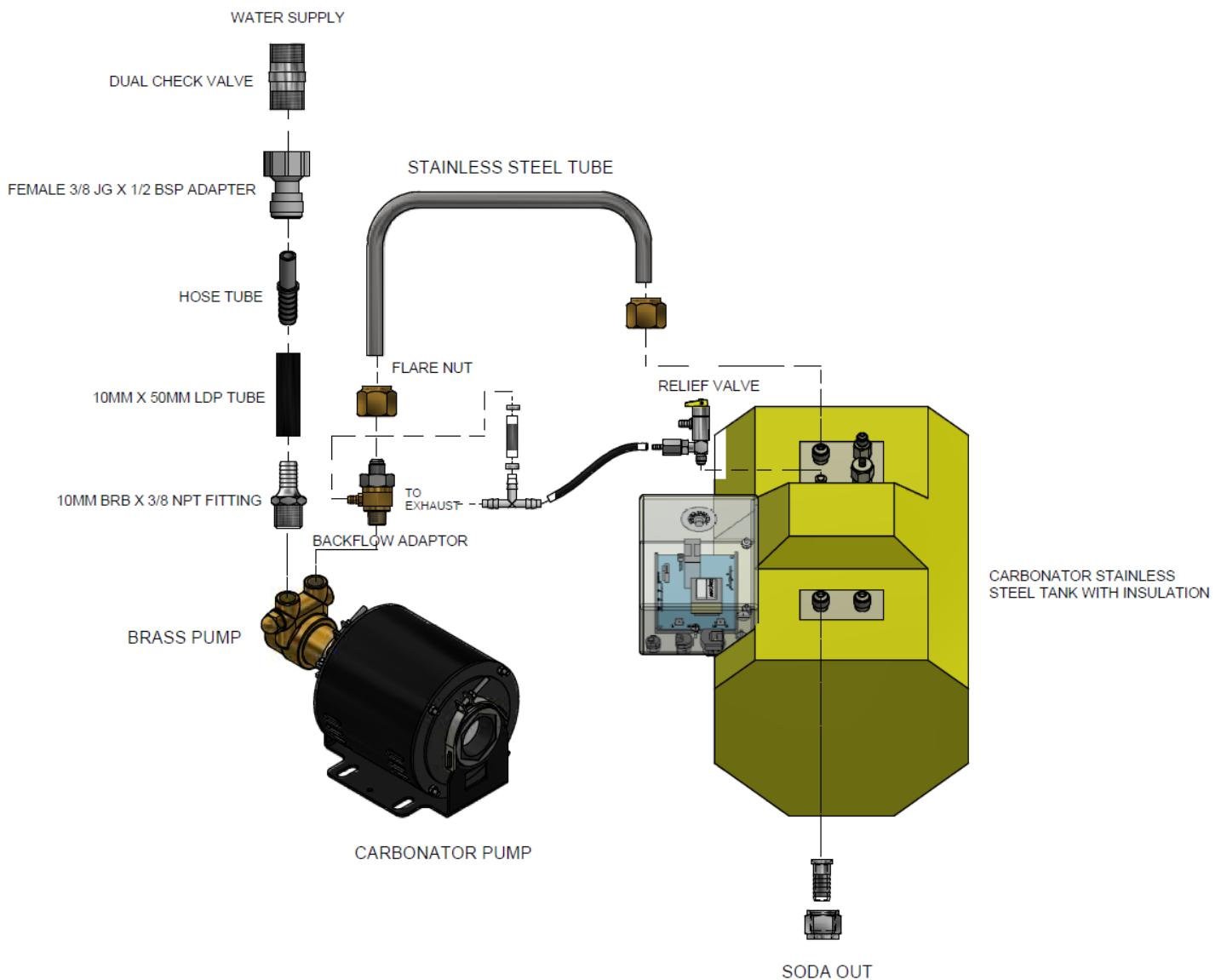
### Warning

The connections to the mains water supply must be made in accordance with the Plumbing Code of Australia and in accordance with AS / NZS 3500.1 and AS / NZS 3500.2. The dual check valve (backflow prevention) supplied with this unit must be connected between the main supply outlet and water inlet of appliance.



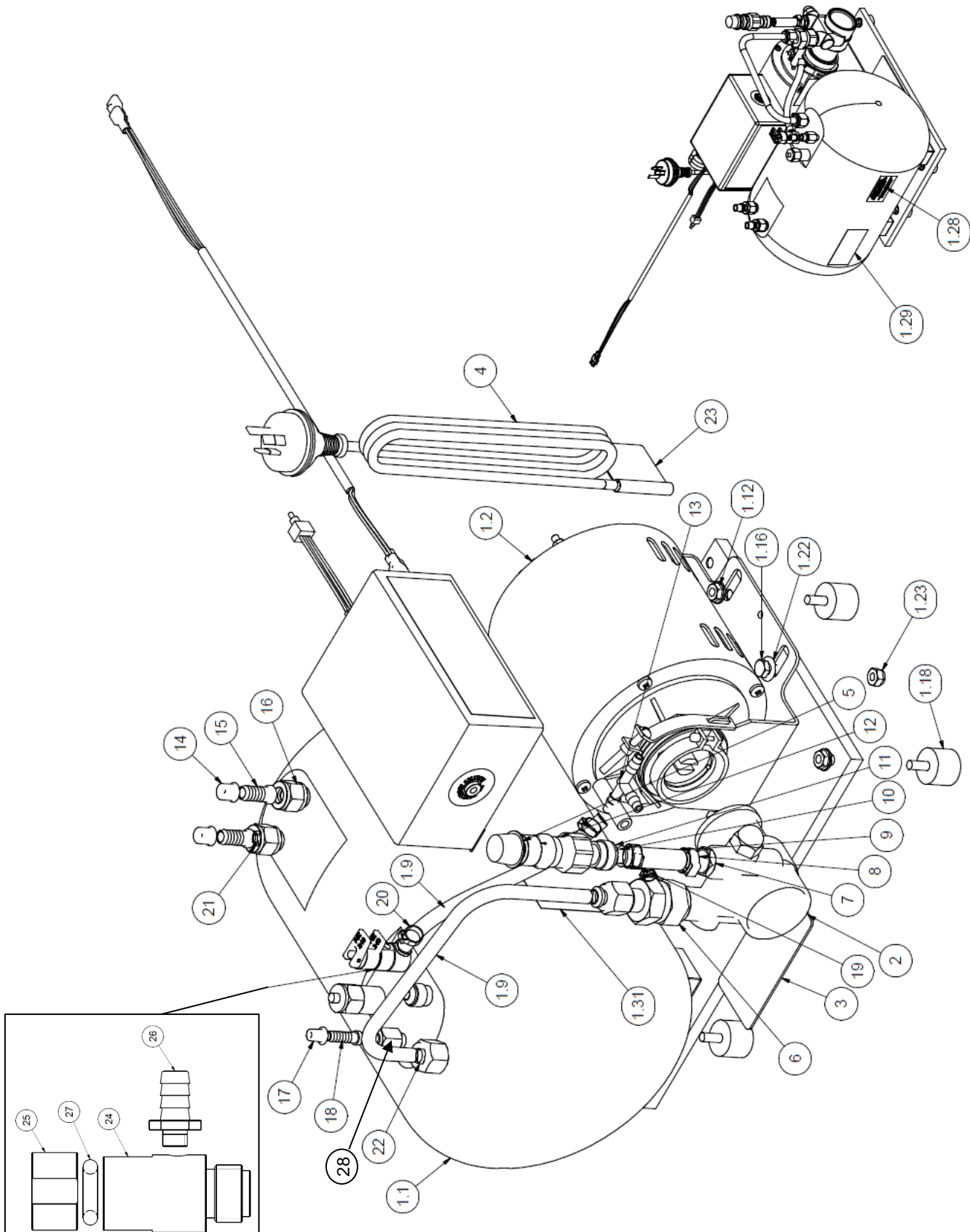
### Caution

Recommended maximum water supply pressure 345Kpa (50psi)  
 Normal operating water temperature should be within 7°C to 35°C.



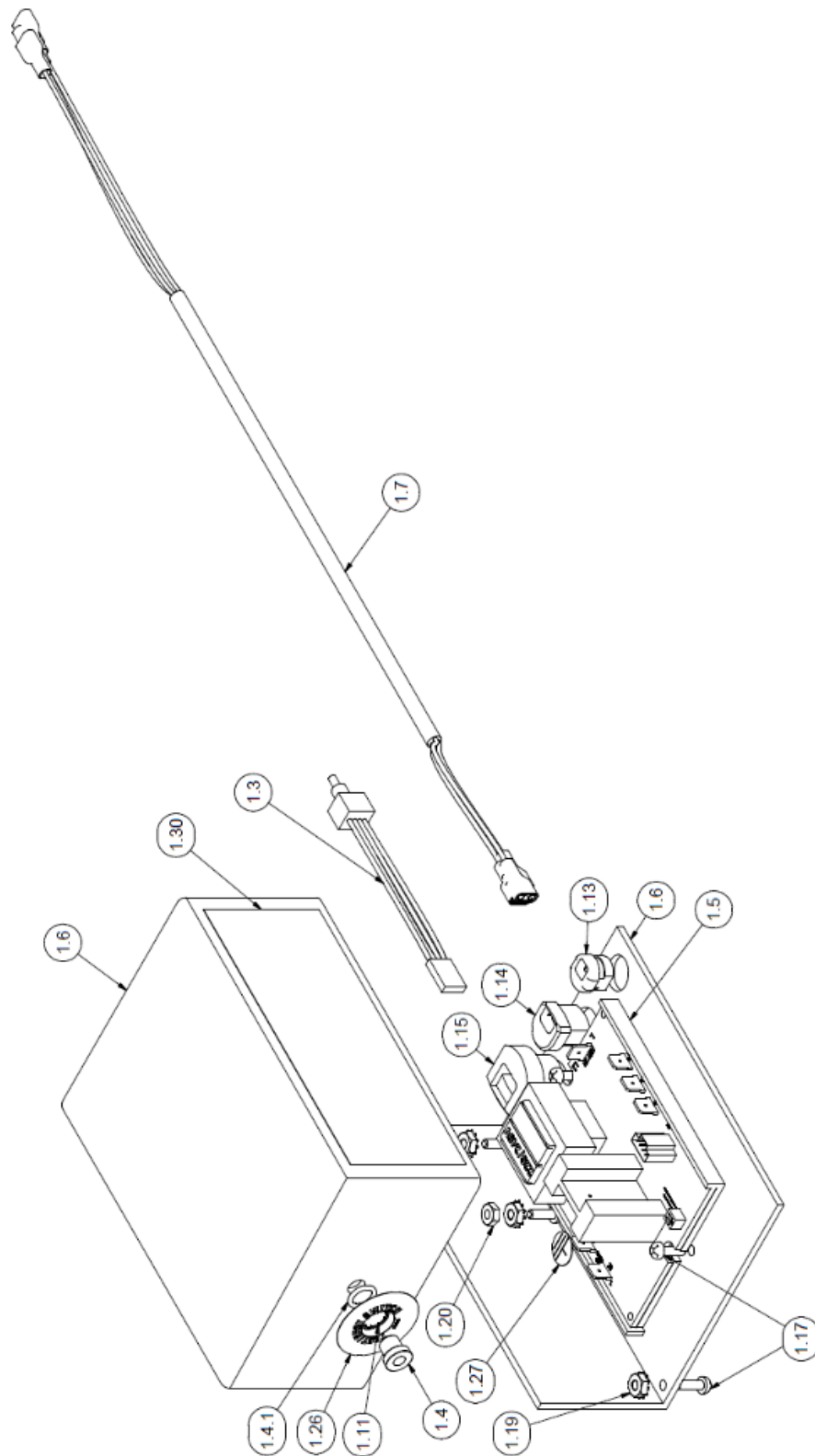
## 8. Diagrams & Parts

### 8.1 23000008 Non-Insulated Turbo Carbonator



**8.1.1. Non – Insulated Turbo Carbonator Electrical Box**

Note: Electrical Box also used in Insulated and Cased versions

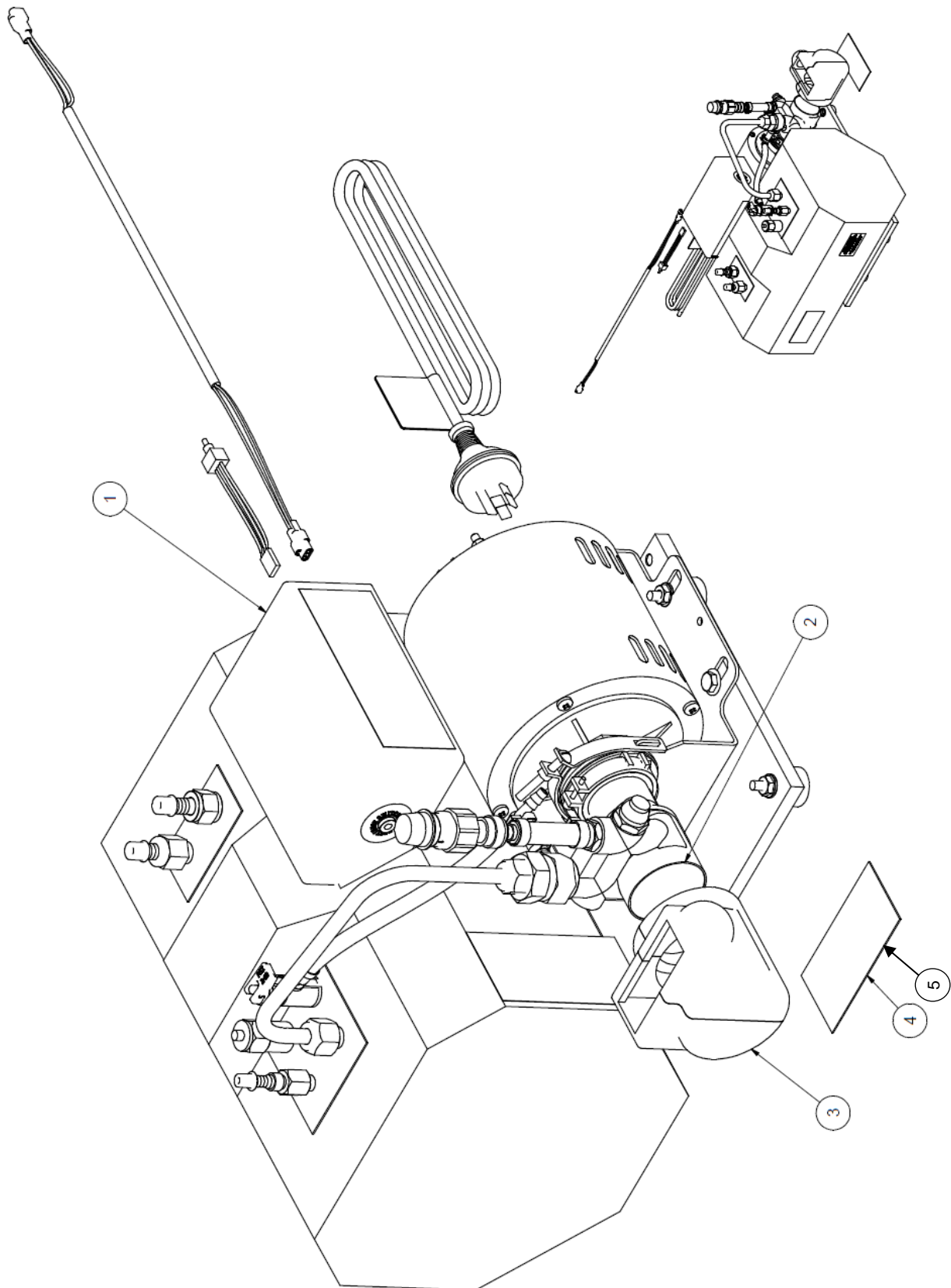


## 8.2 23000008 Non-Insulated Turbo Carbonator Parts List

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	23000038	KIT TURBO CARBONATOR NON INSUL
1.1	1		CARBONATOR TANK NON INSUL
1.2	1	80000106	MOTOR POSTMIX FASCO KEY
1.3	1		CARBONATOR SWITCH ASSY
1.4	1		SWITCH BOOT ASSY – SWITCH CAP
1.4.1	1		SWITCH BOOT ASSY – O-RING
1.5	1		PCB ASSY
1.6	1		ELECTRICAL ENCLOSURE
1.7	1		MOTOR CORD ASSY
1.8	1		TURBO CARBONATOR BASE
1.9	1		FEED TUBING 3/8 FLR IN
1.10	1		VENT TUBING ¼ ID X 0.063W
1.11	1		TOOTH LOCK WASHER ¼ IN
1.12	4		LOCK NUT WASHER ¼ IN MOTOR ASSY
1.13	1		BUSHING RELIEF PCB ASSY
1.14	1		STRAIN RELIEF SML PCB ASSY
1.15	1		STRAIN RELIEF LRGE PCB ASSY
1.16	3		SCREW 1/4 – 20 X 0.5 HHD
1.17	4		SCREW 6 – 19 X 0.5 PHD PCB ASSY
1.18	4		SINGLE STUD BASE FOOT
1.19	3		HEX NUT 8 – 32 KEPS PCB ASSY
1.20	1		HEX NUT 8 – 32 EARTH PCB ASSY
1.21	1		PROTECTIVE CAP BLUE 7/16 (SPARE)
1.22	3		FLAT WASHER ¼ X .065 X .281 ID X .625 OD
1.23	7		NYLOCK NUT BASE ¼ IN
1.24	1		3/8 SS FLARE CAP
1.25	3		NYLON SEAL WASHER 3/8
1.26	1		TEST RESET SWITCH LABEL
1.27	1		EARTH LABEL
1.28	1		LABEL CO2 PRESSURE

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1.29	1		WARNING LABEL POTABLE LIQ NO COP
1.30	1		TURBO CARB TROUBLESHOOT LABEL
1.31	1		WARNING LABEL CO2
2	1	78000101	PUMP FOT BRASS W CLAMP & KEY
3	1	69000423	WATERMARK SERIAL PLAQUE
4	1	83000033	3 PIN PLUG 3M LEAD
5	1	79000113	BLANKING CAP 20MM CP9X
6	1	79001099	BACKFLOW ABCO 3/8 NPT X 3/8 FL
7	1	79000337	FITTING S/S 10MM BARB X 3/8 NPT
8	2	79120854	CLAMP STEPLESSS/S 13.2-15.7MM
9	1	81000072	TUBE LDP 10MM UV BLK (50MM)
10	1	79152855	TUBE TO HOSE STEM 3/8 X 3/8 JG
11	1	79601206	ADAPTOR FEM 3/8 JG X 1/2 BSP
12	1	79000894	CHECK VALVE DUAL 1/2 "
13	1	79121506	TEE NYLON 6/6/6MM BARB
14	2	79000108	CAP BLANKING 3/8
15	2	79117818	TAIL S/S 10MM BARB 3/8 NUT
16	2	79000206	NUT SWIVEL 3/8 FL CHROME
17	1	79000109	CAP BLANKING SUIT 6MM BARB CP2
18	1	87000071	BARB TAIL S/S 6MM 1/4 NUT
19	1	81000080	TUBE LDP 6MM UV BLACK BLK (TEE – 40MM)
20	4	79221203	CLAMP STEPLESS S/S 10.1-11.8MM
21	2	79158134	SEAL FLARE 3/8 NYLON CLR
22	1	79158146	SEAL FLARE 1/4 NYLON CLR
23	1	83600134	LABEL APPLIANCE TEST TAG BLUE
24	1	08000086	BODY S/S CARB RELIEF
25	1	66600002	NUT S/S CARB RELIEF
26	1	66600003	BARB S/S CARB RELIEF
27	1	66600004	ORING BS008
28	1	79000205	NUT SWIVEL 1/4 FL NICKEL

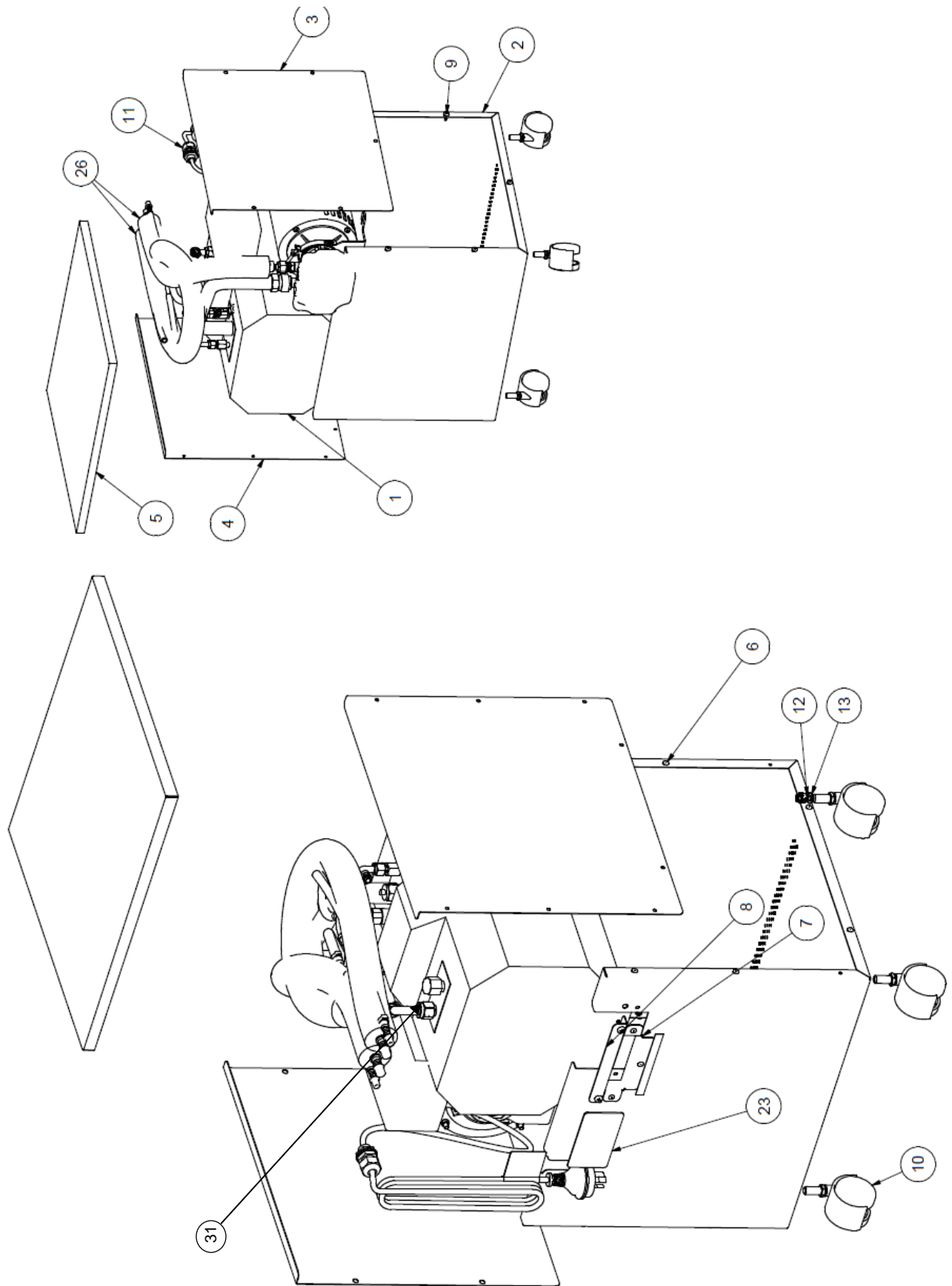
### 8.3 23000003/64000229 Turbo Carbonator Insulated Diagram



**8.4 23000003/64000229 Turbo Carbonator Insulated Parts List**

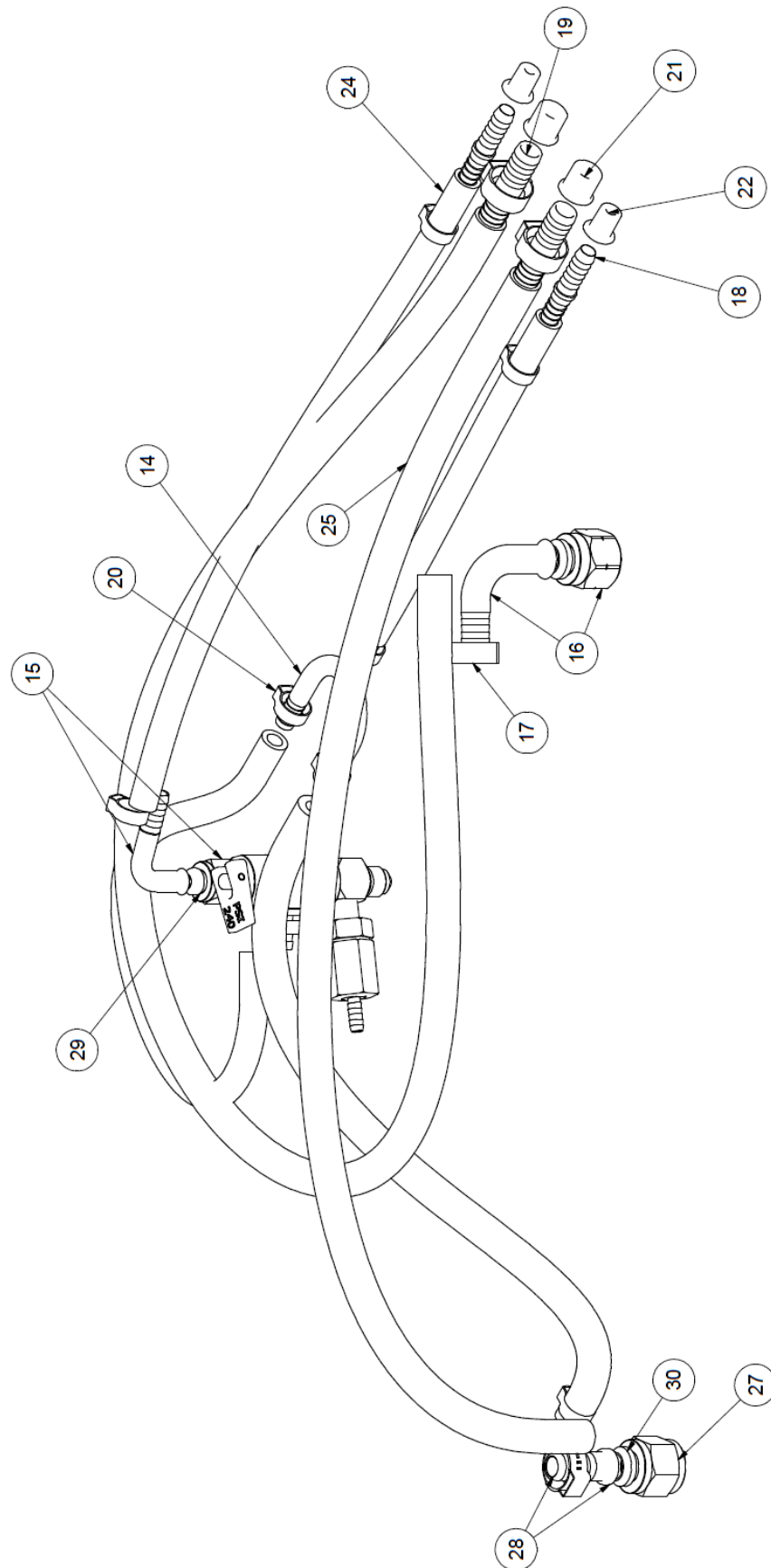
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	23000037	KIT TURBO CARBONATOR INSUL
CONTENTS OF 23000037 AS PER 23000038 EXCEPT THAT CARBONATOR TANK IS INSULATED			
2	1	23000008	TURBO CARBONATOR NON INSUL
3	1	87000034	INSULATOR ASSY FOR PUMP
4	1	69000087	SERIAL PLAQUE WATERMARK
5	1	69000045	SERIAL PLAQUE

## 8.5 23000003 Turbo Carbonator Cased Diagram





### 8.5.1. 23000003 Turbo Carbonator Cased Plumbing



## 8.6 230000026 Turbo Carbonator Cased Parts List

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	23000003	TURBO CARBONATOR INSULATED
2	1	61000288	MAIN WRAP PANEL
3	1	61000289	LEFT SIDE PANEL
4	1	61000290	RIGHT SIDE PANEL
5	1	61000291	CASED TURBO CARB LID
6	11	79000386	RIVET 1/8 S/S SHORT AVINOX
7	1	61000245	TUBE BRACKET SUPPORT
8	1	61000392	TUBE CLAMP SUPPORT
9	7	79000423	SCREW S/S 10G X 5/8 PK PHP PH
10	4	79613263	CASTER 50MM 3/8 BSW
11	1	83000058	GROMMET WATERTIGHT 16MM
12	4	79000552	NUT 3/8 UNC23
13	4	79654046	WASHER FLAT 304 SS 3/8 X 3.4
14	1	79000048	UBEND 6MM 1X 6MM TAKE OFF
15	1	79000335	ELBOW SWIVEL 6MM X ¼ FLARE FEMALE
16	1	79000334	ELBOW SWIVEL 10MM X 3/8 FL FEM
17	4	79120854	CLAMP STEPLESS S/S 157 10MM
18	2	79118227	SPLICE S/S 6MM BARB
19	2	87118197	SPLICE S/S 10MM BARB
20	8	79221203	CLAMP STEPLESS S/S 10.1 – 11.8
21	2	79000108	CAP BLANKING PLASTIC 3/8 CP4
22	2	79000109	CAP BLANKING SUIT 6MM BARB CP2
23	1	69000077	SERIAL PLAQUE TURBOCARB CASED
24		81000080	TUBE LDP 6MM UV BLACK
25		81000072	TUBE LDP 10MM UV BLACK
26		81000153	13MM ID X 13MM INSOLEX
27	1	79000206	NUT SWIVEL 3/8 FL
28	1	79117818	TAIL 18MM BARB 3/8 NUT
29	1	79158146	SEAL FLARE ¼ NYLON CLR
30	2	79158134	SEAL FLARE 3/8 NYLON CLR
31	1		KITS 23000037 & 23000038 – BLANK SS CAP

## 9. Trouble Shooting

TROUBLE	CAUSE	REMEDY
<b>Motor does not start (Motor hums)</b>	Pump binding	Rotate pump slightly to free binding. If this fails, replace pump.
	Open winding infield	Replace motor
<b>Motor does not start (Motor does not hum)</b>	Overload by pump binding	Let motor cool and free pump binding
	Fuse or circuit breaker	Replace fuse or reset circuit breaker
	Faulty motor	Replace motor
	Faulty PC board	Replace PC board
	Faulty probe	Replace probe
	Timeout feature has activated. This happens when the carbonator runs longer than three minutes without the demand for water being met	Reset power to the carbonator or press and release reset switch
<b>Motor runs continuously</b>	Restriction in inlet water check valve	Disassemble inlet water check valve and clean
	Restriction in pump	Clean strainer or replace pump
	Faulty board or probe	Replace board or probe
<b>Pressure relief valve releases water</b>	Faulty relief valve	Replace relief valve
<b>Low Carbonation</b>	Low CO <sub>2</sub> pressure	Increase CO <sub>2</sub> pressure or replace CO <sub>2</sub> tank
	Leaking CO <sub>2</sub> supply line	Locate leak and repair
<b>Foamy product</b>	Over carbonation	Reduce CO <sub>2</sub> pressure
<b>Rusty appearance and/or metallic taste to water</b>	Poor water supply - contaminated	Check with potable water filter specialist for remediation.
<b>CO<sub>2</sub> gas or water escapes from pressure relief valve. (Observed from CO<sub>2</sub> exhaust)</b>	CO <sub>2</sub> pressure too high	Check CO <sub>2</sub> pressure relief valve. Bleed gas by opening and closing the relief valve - set to 550 kPa
	Failed carbonator probes – carb pump motor will not stop	Check carbonator control using procedure in Section 7.2. Replace control or probe if defective
<b>Carb pump times out. (LED on control panel illuminated).</b>	Insufficient water supply.	Check filters, taps and supply tubing for blockages and rectify. Minimum water supply is 172 kPa flowing pressure.
	Higher than expected demand.	Move timeout jumper to next higher time interval.
	Coil Freeze-up.	Defrost. Check Icebank controls and coil positions.
	Worn / defective pump.	Replace pump.
	Failed carbonator / probe circuit.	

		Check carbonator control using procedure in Section 7.2. Replace control or probe if defective.
<b>Poor carbonation (low CO<sub>2</sub> volume).</b>	<p>Flooded carbonator.</p> <p>Dirty water supply.</p> <p>CO<sub>2</sub> pressure too low.</p> <p>CO<sub>2</sub> inlet check valve stuck, shut or blocked.</p> <p>Poor quality paper cups.</p> <p>Dirty or greasy glasses.</p> <p>Improperly drawn drink.</p>	<p>Check carbonator control using procedure in Section 7.2. Replace control or probe if defective.</p> <p>Check filters.</p> <p>Check CO<sub>2</sub> pressure at regulator. Should be set to 550 kPa.,</p> <p>Repair or replace.</p> <p>Purchase better quality cups.</p> <p>Wash all glasses.</p> <p>Open faucet all the way and draw against side of glass or cup.</p>
<b>Pump leaks from shaft seal.</b>	Worn pump seals.	Replace pump.
<b>Pump(s) will not run.</b>	<p>Power failure or low voltage.</p> <p>Loose terminal connections.</p> <p>Defective relays.</p> <p>Defective motor.</p> <p>Locked up pump. Motor has cut out on overload.</p> <p>Faulty low-pressure switch (if fitted).</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>Check fuses. Check power supply.</p> <p>Check and secure.</p> <p>Check relays. Replace board if defective.</p> <p>Replace motor.</p> <p>Replace pump.</p> <p>Ensure of adequate water supply. Switch should close above 172 kPa. Replace if defective.</p> <p>Check mains water pressure - must be at least 135 kPa lower than CO<sub>2</sub> (adjust water pressure regulator if necessary)</p> <p>Check CO<sub>2</sub> regulator.</p> <p>Check carbonator control using procedure in Section 7.2. Replace control or probe if defective.</p> <p>Check carbonator control Using procedure in Section 7.2. 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>Insufficient water supply.</p> <p>Excessive carbonator CO<sub>2</sub> pressure.</p>	<p>Check water supply and pumps for correct settings and operation.</p> <p>Check Carbonator CO<sub>2</sub> pressure regulator for creeping. It should be set at 550 kPa.</p>

## 10. Carbonator Test

### 10.1 Basic Go/No Go Carbonator Control Test

The label shown below is found on the cover of the carbonator assembly. It provides a basic troubleshooting procedure to determine if the liquid level control is operating properly. The procedure will help isolate problems to the probe, motor or PC Board.

NOTE: IN CASE OF CARBONATION PROBLEMS, VERIFY CARBONATOR OPERATION BY DRAWING DRINKS. IF PROBLEMS PERSIST, FOLLOW THE STEPS LISTED BELOW.

STEP 1--OBSERVE GREEN LIGHT

OFF-----CHECK POWER SUPPLY  
ON-----GO TO STEP 2

STEP 2--PUSH TEST SWITCH (WITH TANK EMPTY)

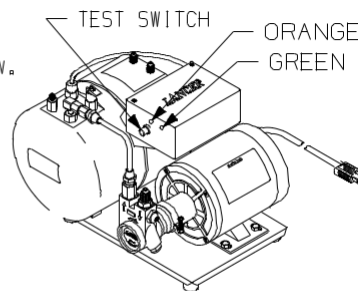
MOTOR STARTS-----REPLACE PROBE

MOTOR DOES NOT START AND ORANGE LIGHT ON--  
REPLACE MOTOR

ORANGE LIGHT OFF-----REPLACE BOARD

STEP 3--IF MOTOR DOES NOT TURN OFF-----

REPLACE BOARD AND PROBE



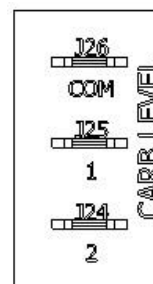
**LANCER**

P.N. 06-1236/01

## 10.2 Carbonator Probe Check

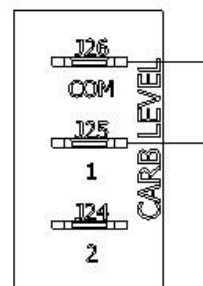
1. Remove the carbonator probe connections from terminals J24, J25 & J26. The carbonator pump relay should close.

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



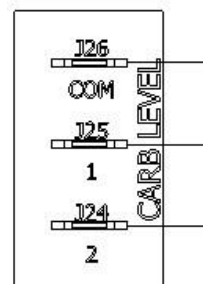
2. With carbonator pump operating connect alligator jumper from terminal J25 to terminal J26. Carbonator pump should continue to operate.

(Simulates water covering low level probe.)



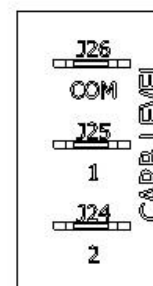
3. With carbonator pump operating, connect alligator lead to terminal J24. Carbonator pump should stop.

(Simulates water over low & high level probes)



4. Carbonator pump will not restart until alligator clips are removed from J24 & J25.

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



## 11. 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. Repair or replacement 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.

To obtain full details of your warranty and approved service agency, please contact your dealer/supplier, or the nearest Hoshizaki Office.

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