

## **STARLINE<sup>®</sup>**

### **Non-Carbonated Beverage Dispenser Models S-1 (900-0021) and S2 (900-0020)**

## **Installation Instructions, Configuration Guides, and Parts Lists**



### **NOTICE:**

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# PRODUCT SPECIFICATIONS

## 1. DIMENSIONS

<u>Model</u>	<u>Width</u>	<u>Depth</u>	<u>Height</u>	<u>Bowl Capacity</u>
S-1	8in 20.32cm	20 1/8in 41.435cm	29in 73.66cm	5 gal / 20qt 18.92 lt
S-2	16 1/8in 41.275cm	20 1/8in 41.435cm	29in 73.66cm	5 gal / 20qt 18.92 lt

## 2. WEIGHTS

<u>Model</u>	<u>Base</u>	<u>Bowl</u>
S-1	48lbs 21.77kgs	10lbs 4.54kgs
S-2	77lbs 44.93kgs	10lbs each 4.54kgs each

## 3. SHIPPING DETAILS

<u>Model</u>	<u>Width</u>	<u>Depth</u>	<u>Height</u>	<u>Weight</u>	<u>Box Count</u>
S-1	40in 101.6cm	48in 121.92cm	30in 76.2cm	100lbs 45.36kgs	2 2
S-2	40in 101.6cm	48in 121.92cm	39in 99.06cm	125lbs 45.36kgs	3 3

## 4. AMBIENT OPERATING TEMPERATURES

40°F – 90°F (4.4°C – 32.2°C)

## 5. ENERGY REQUIREMENTS

Operating Voltage 120V  
 Electrical Hertz 60Hz  
 Total Amperage 4.4A  
 Single Phase  
 NEMA 5-15 Plug

NOTÉ: A properly grounded electrical outlet with proper electrical requirements must be provided. Circuit should be fused at 15amps.

## 6. UNPACKING AND INSPECTION

- A. After the unit has been unpacked, remove shipping tape and other materials.
- B. Unpack loose-shipped parts. Make sure all items are present and in good condition.

NOTE: If unit has more than one Bowl, repeat applicable instructions for review, cleaning, and troubleshooting as needed.

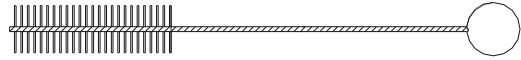
## 7. IDENTIFICATION OF LOOSE-SHIPED PARTS (reference ACCESSORIES, p3)

- A. ALLEN WRENCH is used when adjusting drive magnet.
- B. SPRAY TUBE BRUSH is used for general cleaning.
- C. DRIP TRAY to be installed after BOWL GASKET and BOWL have been installed.
- D. BOWL COVER to be installed on Bowl after Bowl has been filled with product.

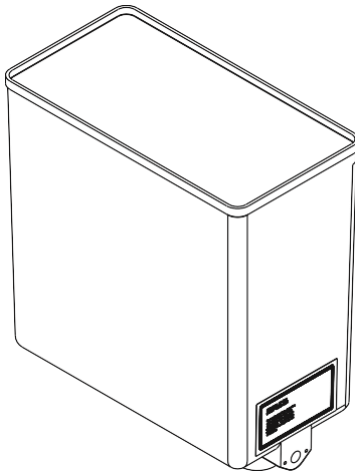
# ACCESSORIES



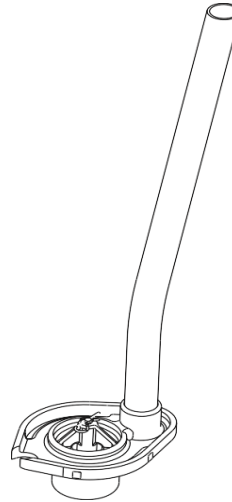
ALLEN WRENCH .093 HEX  
PN 316-0014



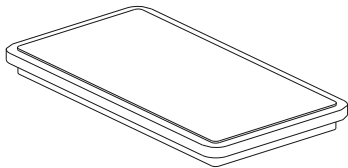
SPRAY TUBE BRUSH  
PN 316-0002



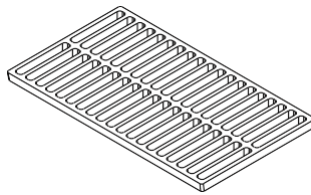
BOWL ASSY WITH DECALS  
PN. 631-0008



SPRAY TUBE &  
IMPELLER ASSY  
PN.631-0006



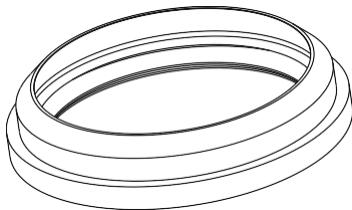
BOWL COVER  
PN.265-0050



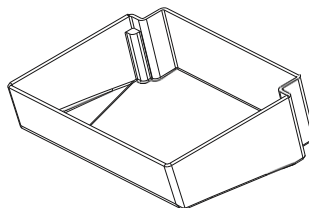
CUP REST S-1  
PN.265-0016



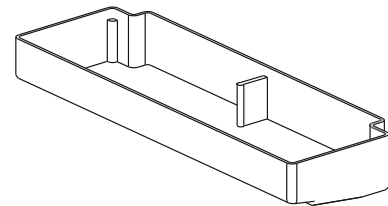
CUP REST S-2  
PN.265-0057



BOWL GASKET  
PN. 210-0004



DRIP TRAY S-1  
PN. 265-0064



DRIP TRAY S-2  
PN. 265-0222

## 8. SELECTING LOCATION

- A. Unit must be installed on a solid and level countertop or island-mounted.
- B. A minimum of 8in (20.32cm) air space must be maintained between unit side panels, back panels, and nearest wall or obstruction to allow for circulating air to cool refrigeration system. If placed next to refrigerated equipment, a minimum of 12in (30.48cm) is required.
- C. Adequate clearance must be maintained above unit to replenish product supply and to remove Bowl Cover, Spray Tube, and Bowl for periodic cleaning.
- D. A properly grounded and dedicated 15amp circuit must be provided. ALL ELECTRICAL WIRING MUST CONFORM TO NATIONAL AND LOCAL ELECTRICAL CODES.

**NOTE:** Areas around unit must be kept free of obstructions at all times. Circulating air (required to cool the condenser coil) is drawn in through Grille and Filter on Back Panel and is discharged through Grilles on Sides of unit. Restricting air in and out of unit will decrease cooling efficiency and cause compressor damage.

## 9. INSTALLATION

- A. Thoroughly wash Bowl, Bowl Cover, Bowl Gasket, Spray Tube Assembly, and Evaporator Dome with mild soap solution. After washing, thoroughly rinse parts with warm water.
- B. **INSTALLING BOWL GASKET:** Place Bowl upside down on a flat surface. Wet Bowl Gasket with water, then place Bowl Gasket in Bowl with flange down (reference INSTALLATION DIAGRAMS, FIGURE 4.1, p5).
- C. **INSTALLING BOWL:** Wet Evaporator Dome with a damp cloth. Lower Bowl around Evaporator Dome while rocking Bowl back to front to facilitate Bowl Gasket sliding down over Evaporator Dome (reference INSTALLATION DIAGRAMS, FIGURE 4.2, p5).
- D. **INSTALLING SPRAY TUBE ASSEMBLY:** Place Spray Tube Assembly down into designated sump well in base of Bowl (reference INSTALLATION DIAGRAMS, FIGURE 4.3, p5). Make sure Spray Tube is pressed down far enough into sump well that it “snaps” into place.
- E. Place unit in operation location on countertop meeting requirements of SELECTING LOCATION above. Make sure unit is sitting level and solid by adjusting the four Leg Levelers on the bottom of the unit base. Leg Levelers provide approximately 3/8in (.953cm) of adjustment per corner.
- F. Install Drip Tray on unit then install Cup Rest in Drip Tray.

## 10. PREPARATION FOR OPERATION

- A. Mix product as instructed by product manufacturer in preparation to fill unit bowl.
- B. Plug unit Power Cord into electrical outlet with proper electrical requirements.
- C. Fill Bowl with product as instructed.
- D. Install Bowl Cover then check for leaks.
- E. Press Pump Motor Switch (located on the lower side of the unit) to the “ON” position. Spray Tube will begin pumping product to top of Bowl.
- F. Press Refrigeration Switch (located on the lower rear left-hand side of unit) to the “ON” position.
- G. Allow refrigeration system to operate for 2 - 2.5hrs.

# INSTALLATION DIAGRAMS



FIGURE 4.1  
INSTALLING BOWL GASKET

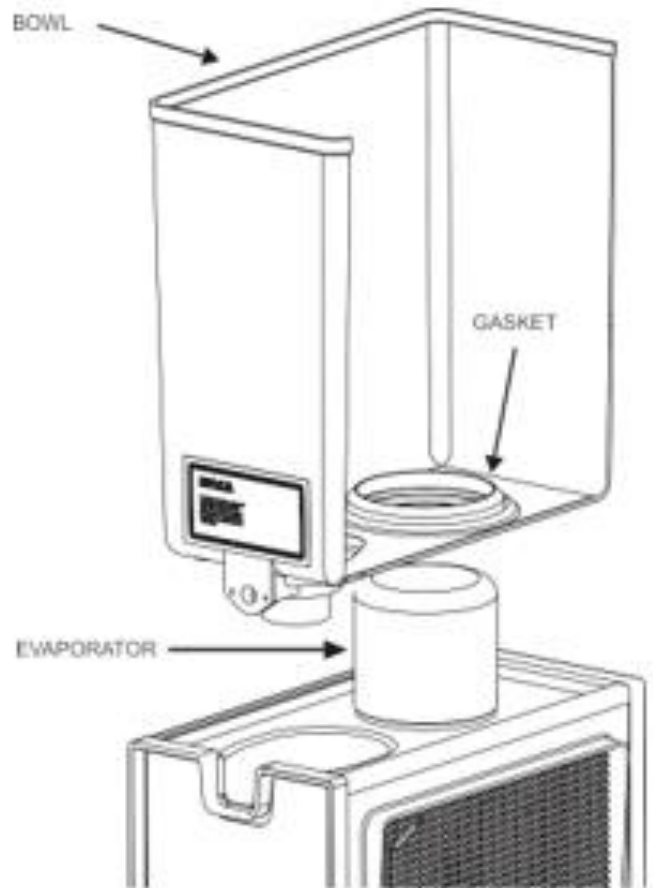


FIGURE 4.2  
INSTALLING BOWL

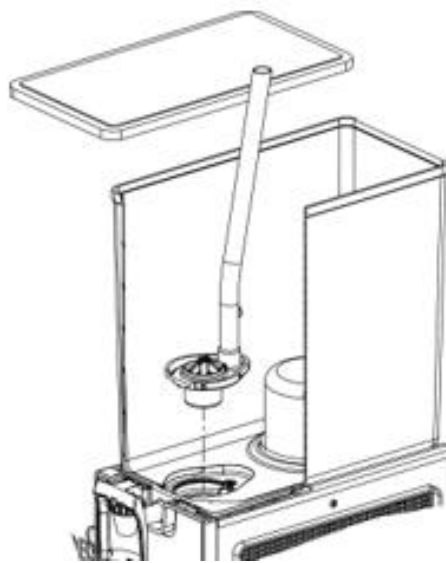


FIGURE 4.3  
INSTALLING SPRAY TUBE ASSEMBLY

## 11. OPERATION

- A. On units equipped with PUSH Handle, press cup against Faucet Bail to dispense product. When cup is full, release Faucet Bail.
- B. On units equipped with PULL Handle, grasp handle with one hand while holding cup with then other hand under faucet and pull on handle. Release handle when cup is full.

## 12. DAILY PRE-OPERATION CHECKS

- A. Make sure Bowl contains enough product for proper operation. Stainless Steel Evaporator Dome must be covered by product while unit is active.
- B. Make sure Spray Tube Assemblies are operating properly and circulating product in Bowl.
- C. Make sure Drip Tray and Cup Rest are clean and properly installed.

### WARNING

DISCONNECT ELECTRICAL POWER TO UNIT TO PREVENT PERSONAL INJURY BEFORE ATTEMPTING ANY INTERNAL MAINTENANCE. ONLY QUALIFIED PERSONNEL SHOULD SERVICE INTERNAL COMPONENTS OR ELECTRICAL WIRING.

## 13. PERIODIC INSTPECTION

- A. Condenser Coil should be periodically checked for excessive amounts of dust, lint, and grease which will restrict air flow through the Coil and cause loss of cooling efficiency.
  - a. Unplug Power Cord from electrical outlet.
  - b. Remove screws from Back Panel and remove Back Panel from rear of unit.
  - c. Remove Filter and wash Filter if it is determined to need cleaning.
  - d. Vacuum or use a soft brush to clean the Condenser Coil if needed.
  - e. Install Filter and secure Back Panel with screws.
  - f. Plug Power Cord into electrical outlet.

## 14. ADJUSTMENTS

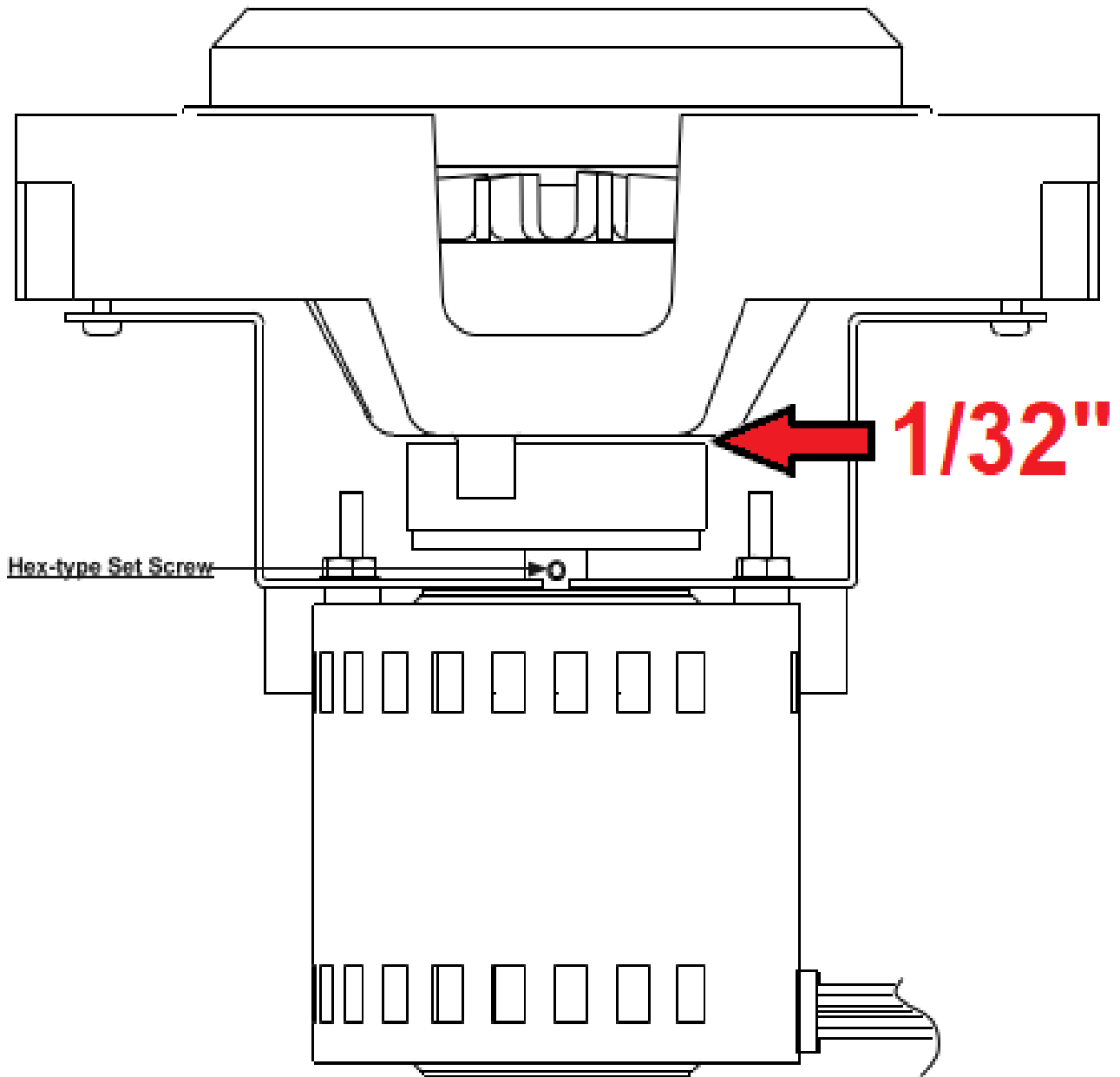
### A. DISPENSING FAUCET DRIP ADJUSTMENTS

- a. Using a screwdriver, turn Pivot Pin very slightly to the right (clockwise) or to the left (counterclockwise) until dripping stops.
- b. Test by dispensing product from Faucet and note if Faucet drip has stopped after dispensing.

### B. ADJUSTING SPRAY DRIVE MAGNET

- a. Unplug Power Cord from electrical outlet.
- b. Remove Cup Rest and Drip Tray from unit.
- c. Remove the two screws securing Front Panel, then remove Panel for access to Pump Motor and Magnet.
- d. Rotate Motor Shaft until Hex-Type Set Screw is visible on Spray Drive Magnet (reference MAGNETIC IMPELLER DRIVE MOTOR ASSEMBLY, p8).
- e. Check clearance between bottom side of platform and Spray Drive Magnet for clearance between base of Cabinet Cover and Magnetic Impeller Drive. If clearance is not adequate, loosen Set Screw and slide Spray Drive Magnet up or down to proper clearance, then securely tighten the Set Screw (reference MAGNETIC IMPELLER DRIVE MOTOR ASSEMBLY, p8).
- f. Install Front Panel and secure with the two screws removed in step c.
- g. Plug Power Cord into electrical outlet.
- h. Test Recirculation System by pressing the Pump Motor Switch to the "ON" position.
- i. Install Drip Tray and Cup Rest back on unit.

## MAGNETIC IMPELLER DRIVE MOTOR ASSEMBLY



### IMPORTANT

Clearance between bottom side of Cabinet Cover and Magnetic Impeller Drive must be 1/32in (.07938cm). Adjust Spray Drive Magnet per instructions in 14.B.e.



## 15. CLEANING AND SANITIZING

### A. DAILY CLEANING

#### IMPORTANT

DO NOT WASH REMOVED PARTS IN MECHANICAL DISHWASHER.

- a. Press Pump Motor and Refrigeration Switches on side of unit to the “OFF” position.
- b. Ensure Bowl is empty of product.
- c. Remove Bowl Cover.
- d. Remove Spray Tube Assembly by facing front of unit, grasp Spray Tube at top, then with a brisk snap- push the Tube straight back and pull up.
- e. Wash Spray Tube Assembly thoroughly in sanitizing solution using provided Cleaning Brush.
- f. Install Spray Tube Assembly back inside Bowl. Make sure Spray Tube Assembly is pressed down far enough into Spray Tube Well until it snaps back into place.
- g. Wash Bowl Cover in sanitizing solution, wipe down Bowl Cover with clean cloth, then install back onto unit.
- h. Pour a cup of warm water between Bowl and Cabinet Cover to rinse Condensation Drain Tube connected to Drip Tray.
- i. Remove Cup Rest and Drip Tray. Wash Cup Rest and Drip Tray in warm water, then dry with a clean, soft cloth. **DO NOT USE ABRASIVE TYPE CLEANERS OR CLOTHS.**
- j. Clean all external surfaces of unit with sponge. Rinse out sponge with clean water, the wring excess water out of sponge and wipe off all external surfaces of unit. Wipe unit dry with soft cloth. **DO NOT USE ABRASIVE TYPE CLEANERS OR CLOTHS.**
- k. Install Cup Rest and Drip Tray back on unit.
- l. Fill Bowl with product.
- m. Press the Pump Motor Switch to the “ON” position.
- n. Dispense product from unit to flush sanitizing solution residue from inside Dispensing Faucet.

### B. SANITIZING

- a. Press Pump Motor and Refrigeration Switches on side of unit to the “OFF” position.
- b. Unplug unit Power Cord from electrical outlet.
- c. Remove Bowl Cover and drain remaining product from Bowl.
- d. Disassemble and clean Dispensing Faucet as follows:
  1. Grasp Dispensing Valve Bonnet. Turn Bonnet to the left (counterclockwise), then lift Bonnet up and out of Valve Body.
  2. Using provided Cleaning Brush, thoroughly clean inside of Dispensing Valve Body with warm water.
  3. Using provided Cleaning Brush, thoroughly clean Dispensing Valve Bonnet with warm water.
  4. Install Dispensing Valve Bonnet in Valve Body by pushing down on Bonnet, then turn Bonnet to the right (clockwise) to lock in place.

- e. Clean product Bowl as follows:
  1. Remove Spray Tube Assembly by facing front of unit, grasp Spray Tube at top, then with a brisk snap- push the Tube straight back and pull up.
  2. Remove Bowl from unit by lifting straight up off Evaporator Dome.
  3. Remove Bowl Gasket from Bowl.
  4. Wash Bowl Cover, Bowl, Bowl Gasket, and Spray Tube Assembly in mild soap solution using provided Cleaning Brush. Rinse with plain water, then wipe dry with a clean, soft cloth. **DO NOT USE ABRASIVE TYPE CLEANERS OR CLOTHS.**
  5. Place Bowl upside down on flat surface. Wet Bowl Gasket with water, then place Bowl Gasket in Bowl with Gasket Flange down (reference INSTALLATION DIAGRAMS, FIGURE 4.1, p5).
  6. Wet Evaporator Dome with damp cloth. Lower Bowl around Evaporator Dome while rocking Bowl back to front to facilitate Bowl Gasket sliding down over Evaporator Dome (reference INSTALLATION DIAGRAMS, FIGURE 4.2, p5).
  7. Place Spray Tube Assembly down into designated sump well in base of Bowl (reference INSTALLATION DIAGRAMS, FIGURE 4.3, p5). Make sure Spray Tube is pressed down far enough into sump well that it “snaps” into place.
- f. Sanitizing inside of product Bowl as follows:
  1. Using a clean empty container, prepare 3 gallons (12qt / 11.36lt) of sanitizing solution by using 70°F – 100°F (21.1°C – 37.78°C) plain water and required sanitizer mix to provide 50ppm of chlorine.
  2. Pour 3 gallons (12qt / 11.36lt) of mixed sanitizing solution into Bowl.
- g. Install Bowl Cover, then plug unit Power Cord into electrical outlet.
- h. Press the Pump Motor Switch to the “ON” position.
  - i. Allow Spray Tube Assembly to operate for a minimum of five minutes, then press Pump Motor Switch to the “OFF” position.
  - j. Unplug unit Power Cord from electrical outlet.
- k. Dispense all sanitizing solution from the Bowl through the Dispensing Faucet then rinse with fresh water and completely drain through the Dispensing Faucet.
  - l. Fill Bowl with product.
- m. Plug unit Power Cord into electrical outlet.
- n. Install Bowl Cover, then press Pump Motor and Refrigeration Switches to the “ON” position.

## **16. REPLENISHING PRODUCT SUPPLY**

- A. Mix product as instructed by product manufacturer.
- B. Press Pump Motor Switch to the “OFF” position.
- C. Remove Bowl Cover, fill, then press Pump Motor Switch to “ON” position.

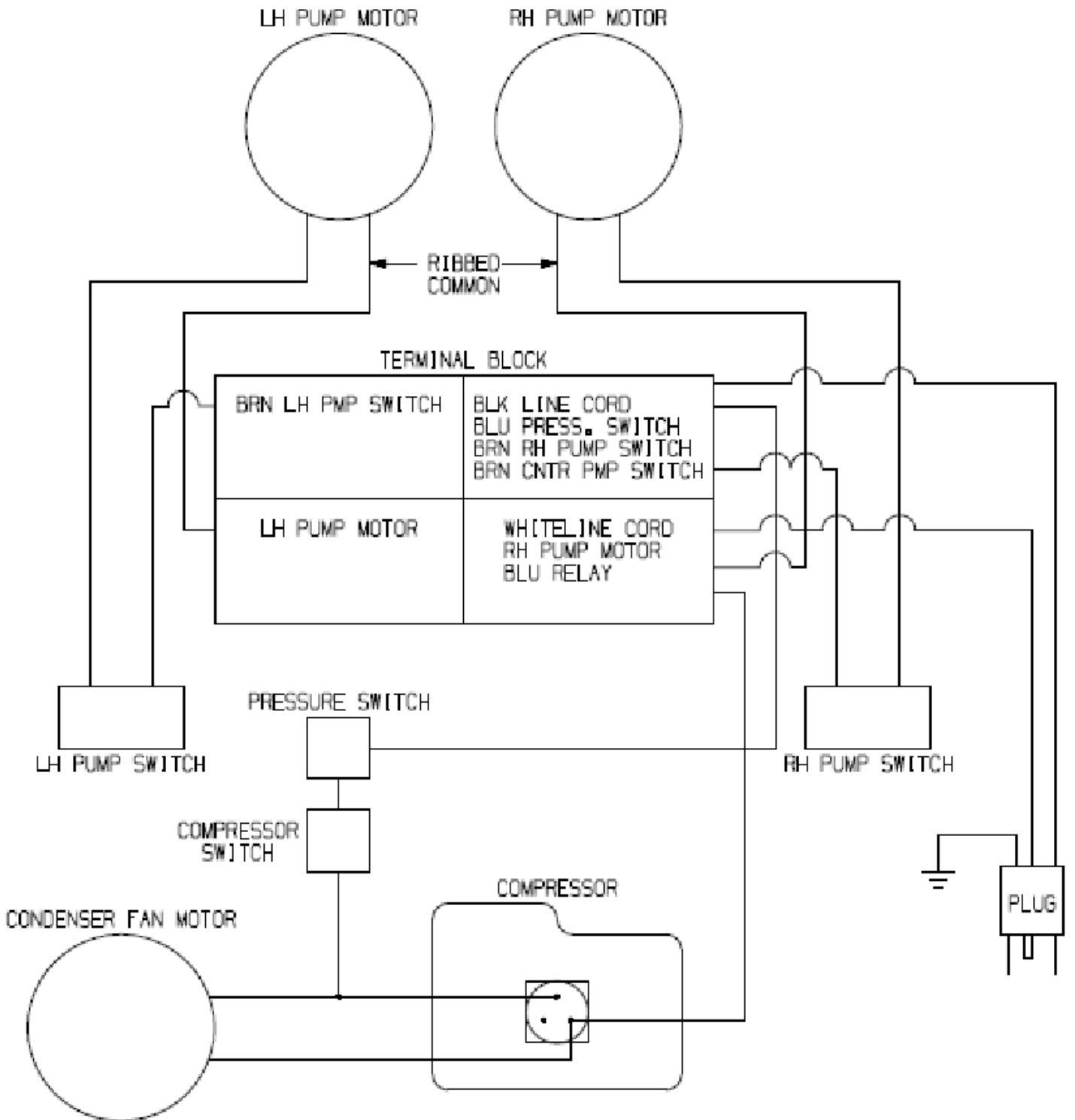
## **17. PRODUCT FLAVOR CHANGE**

- A. Sanitize unit as instructed in step 15.B., then fill Bowl with new flavor product.

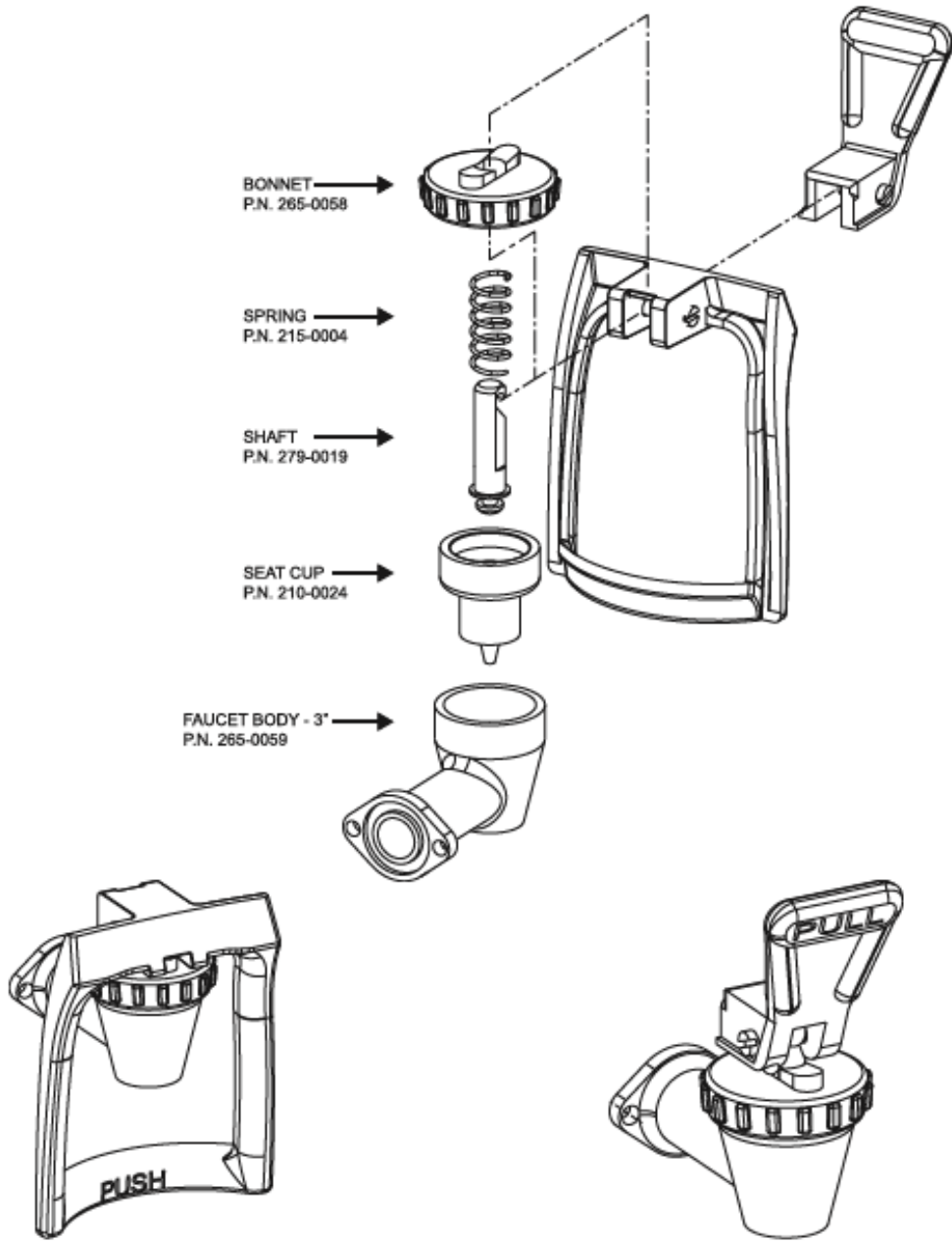
## 18. TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
1. Spray Tube not operating properly	A. Bowl not properly installed.	A. Make sure Bowl is setting squarely on unit and is pushed all the way down.
	B. Spray Tube not properly installed.	B. Make sure Spray Tube is pushed all the way down into the Spray Tube Well and snapped into place
	C. Residue buildup on Impeller.	C. Remove Spray Tube and clean thoroughly.
	D. Drive Magnet out of adjustment.	D. See ADJUSTMENTS step 14 B.
	E. Pump Motor Switch defective.	E. Replace Pump Motor Switch.
	F. Pump Motor defective.	F. Replace Pump Motor.
	G. Pump Motor only runs is Spray Tube is removed.	G. Worn Impeller Shaft or Impeller Bearing: Replace.
	H. Starts to pump when turned on, but stops right away.	H. Screw on Magnet could have gotten lose. Tighten Screw.
	I. Spray Tube Magnet keeps vibrating or jumping and not agitating.	I. Bushing Impeller and Shaft worn out: Replace.
2. Product Leaking	A. Bowl Gasket improperly installed.	A. Reinstall Bow Gasket. Ribbed side of Bowl Gasket should always face Evaporator Dome Base.
	B. Work or damaged Bowl Gasket.	B. Replace Bowl Gasket
3. Compressor does not operate	A. Refrigeration Switch is in the "OFF" position.	Press switch to "ON" position.
	B. Product cold enough.	B. Refrigeration not called for.
	C. Unit Power Cord unplugged.	C. Plug Power Cord into electrical outlet.
	D. No power source, blown fuse, or tripped circuit breaker.	D. Replace fuse or reset circuit breaker.
	E. Low voltage.	E. Voltage must be at least 130VAC at Comperssor Terminatls when Compressor is trying to start.
	F. Loose, disconnected, or broken wiring.	F. Tighten or connect connections or replace broken wiring.
	G. Overlad Protector cut out/ overheated Compressor. Condenser Fan Motor not operating.	G. Compressor will not cool enough to restart. Refer to "Condenser Fan Motor does not operate" below.
	H. Inoperative Overload Protector or Relay.	H. Replace Overload Protector or Relay.
	I. Inoperative Compressor.	I. Call Wunder-Bar Tech Service at 1.707.448.5151 Opt 2.
4. Compressor operates all of the time, but product does not cool.	A. Unit located in excessively hot area or air circulation through Condense Coil is dirty or clogged.	A. Relocate unit or clean Condenser and Filter.
	B. System low on refrigerant.	B. Call Service Agent.
5. Condenser Fan Motor does not operate. NOTE: If overloaded, protector cuts out Compressor. Condenser Fan Motor will continue to operate; otherwise, trouble shooting Condenser Fan Motor has the same REMEDY references as "Compressor does not operate" above.	A. Jumper Wires loose or disconnected.	A. Tighten connection or replace Wires.
	B. Fan Blade obstructed.	B. Remove obstruction.
	C. Defective Condenser Fan Motor.	C. Replace Condenser Fan.
6. Getting shocked when making contact with unit.	A. Unit could have condensation on switches and/ or Terminal Block Assembly.	A. Dry off parts.

# WIRING DIAGRAM



# FAUCET ASSEMBLY AND PARTS



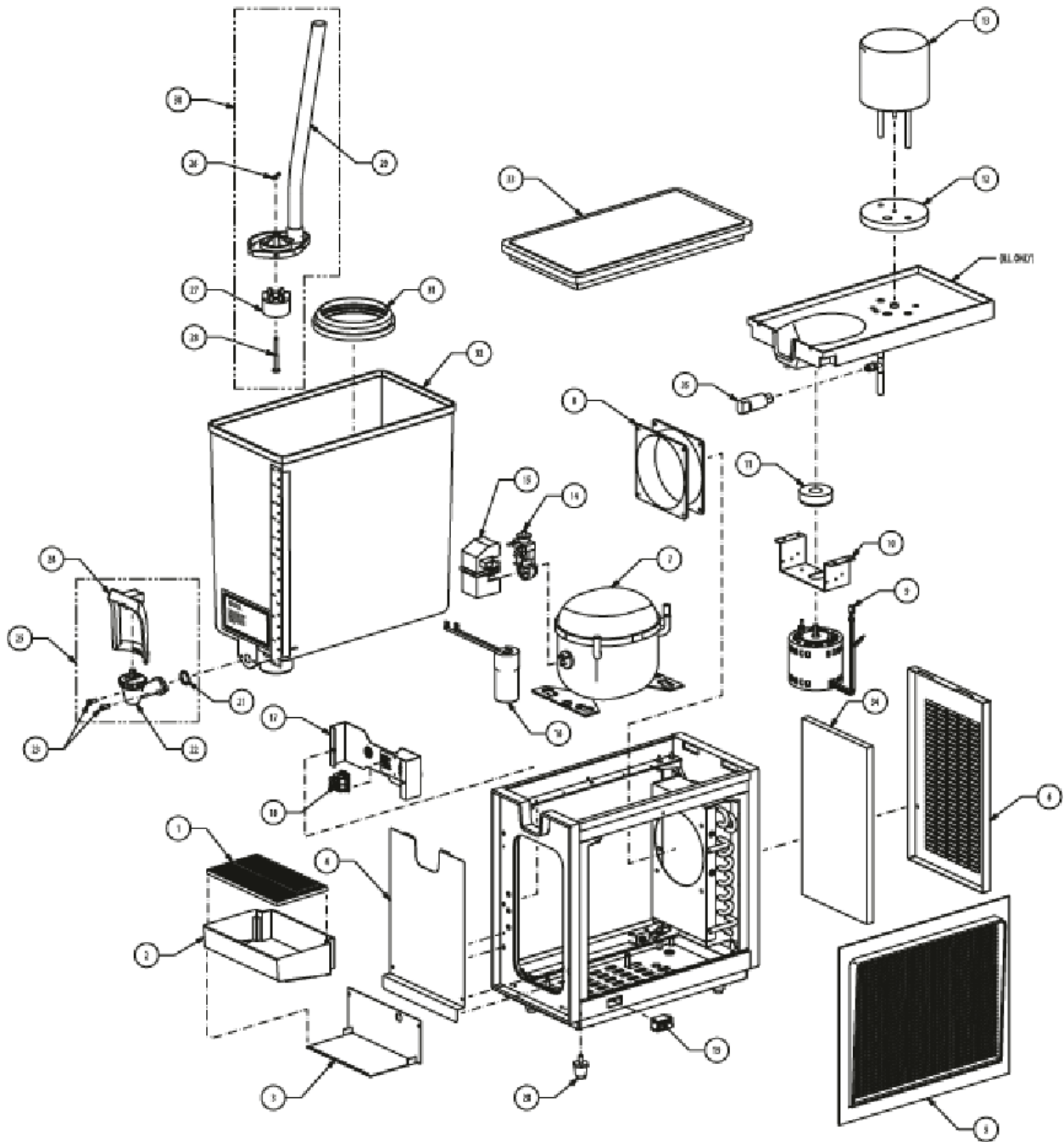
**FAUCET ASSY 3"**  
P.N. 645-0005

3" FAUCET ASSY W/FAUCET BAIL - "S" SERIES  
INCLUDES:  
(2) P.N. 220-0008 SCREWS  
(1) 208-1115 O-RING  
(1) 637-0001  
(1) 631-0007

**FAUCET ASSY W/ PULL HANDLE**  
P.N. 645-0119

3" FAUCET ASSY W/PULL HANDLE - "S" SERIES  
INCLUDES:  
(2) P.N. 220-0008 SCREWS  
(1) 208-1115 O-RING  
(1) 637-0001  
(1) 631-0065

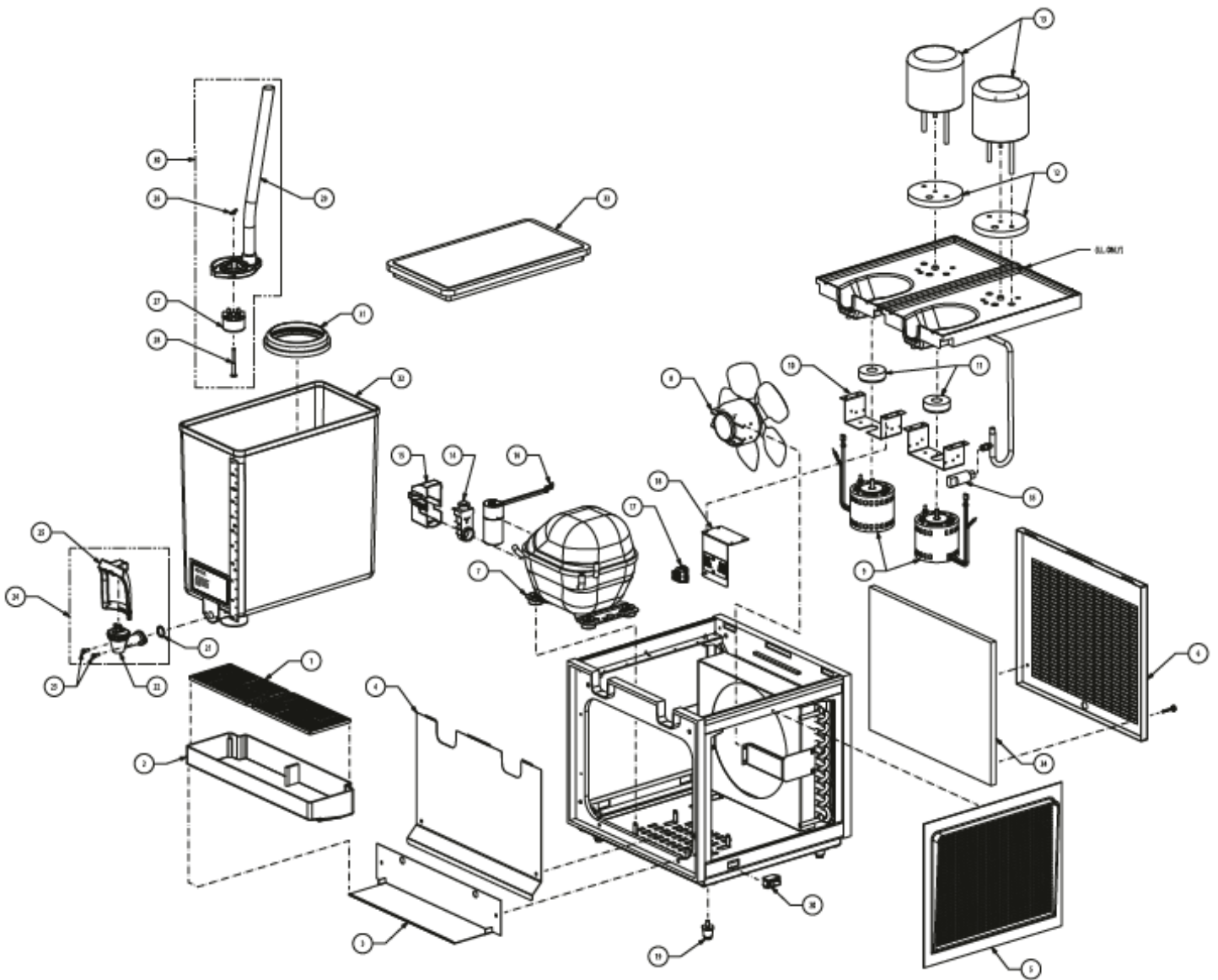
# S-1 (900-0021) SINGLE BOWL ASSEMBLY - DIAGRAM



## S-1 (900-0021) SINGLE BOWL ASSEMBLY – PARTS LIST

ITEM	PART NUMBER	DESCRIPTION
1	265-0016	CUP REST
2	265-0064	DRIP TRAY
3	319-0008	DRIP TRAY PANEL
4	319-0183	FRONT PANEL
5	265-0337	GRILL, SIDE
6	265-0557	PANEL, REAR
7	300-0001	COMPRESSOR
8	503-0003	MOTOR FAN
9	304-0001	PUMP MOTOR
10	319-0177	PUMP MTG BRACKET
11	645-0009	IMPELLER DRIVE ASSY W /SET SCREW
12	210-0002	GASKET, EVAPORATOR
13	645-0028	EVAP. DOME ASSYW/THERMOWELL
14	507-0002	RELAY /OVERLOAD
15	631-0014	COVER
16	507-0001	START CAP
17	319-0187	BRACKET, TERMINAL BLOCK
18	506-0015	TERMINAL BLOCK ASSY
19	505-0001	SPRAY/REF. SWITCH
20	234-0003	LEG, LEVELLER
21	208-1115	O-RING, FAUCET
22	637-0001	FAUCET BODY ASSY
23	220-0008	SCREW, FAUCET MTG
24	631-0007	PUSH HANDLE ASSEMBLY
25	645-0005	3" FAUCET ASSY
26	247-0001	HITCH PIN
27	645-0002	IMPELLER ASSY
28	279-0006	IMPELLER SHAFT
29	631-0005	SPRAY TUBE/KNOB
30	631-0006	SPRAY TUBE/IMPELLER ASSY
31	210-0004	BOWL GASKET
32	631-0008	BOWL ASSY
33	265-0050	BOWL COVER
34	286-0005	FILTER
35	505-0024	CONTROL, LOW PRESSURE

# S-2 (900-0020) DUAL BOWL ASSEMBLY - DIAGRAM





## S-2 (900-0020) DUAL BOWL ASSEMBLY – PARTS LIST

ITEM	PART NUMBER	DESCRIPTION
1	265-0057	CUP REST
2	265-0222	DRIP TRAY
3	319-0011	DRIP TRAY PANEL
4	319-0174	FRONT PANEL
5	265-0337	GRILL, SIDE
6	265-0552	PANEL, REAR
7	300-0002	COMPRESSOR
8	304-0005	FAN MOTOR
9	304-0001	PUMP MOTOR
10	319-0177	PUMP MTG BRACKET
11	645-0009	IMPELLER DRIVE ASSY W /SET SCREW
12	210-0002	GASKET, EVAPORATOR
13	645-0028	EVAP. DOME ASSYW/THERMOWELL
14	507-0009	RELAY /OVERLOAD
15	631-0014	COVER
16	507-0008	START CAP
17	506-0015	TERMINAL BLOCK ASSY
18	319-0184	BRACKET, TERMINAL BLOCK
19	234-0003	LEG, LEVELLER
20	505-0001	SPRAY/REF. SWITCH
21	208-1115	O-RING, FAUCET
22	637-0001	FAUCET BODY ASSY
23	220-0008	SCREW, FAUCET MTG
24	645-0005	3" FAUCET ASSY
25	631-0007	PUSH HANDLE ASSEMBLY
26	247-0001	HITCH PIN
27	645-0002	IMPELLER ASSY
28	279-0006	IMPELLER SHAFT
29	631-0005	SPRAY TUBE/KNOB
30	631-0006	SPRAY TUBE/IMPELLER ASSY
31	210-0004	BOWL GASKET
32	631-0008	BOWL ASSY
33	265-0050	BOWL COVER
34	286-0004	FILTER
35	505-0024	CONTROL, LOW PRESSURE