

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

AquaContour Barrier Free, Bi-Level, Sensor Operated, Wall Mounted Water Cooler



A132408B-SO / A132408F-SO

**TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:
1.800.591.9360**

Technical Assistance Fax: 1.626.855.4894

NOTES TO INSTALLER:

1. Please leave this documentation with the owner of the fixture when finished.
2. Please read this entire booklet before beginning the installation.
3. Check your installation for compliance with plumbing, electrical and other applicable codes.

LIMITED WARRANTY - UNITED STATES & CANADA

Acorn Aqua warrants that its products are free from defects in material or workmanship under normal use and service for a period of one year from date of original shipment or for 18 months the date of shipment from the factory, whichever comes first. The compressor, condenser and refrigeration tubing is warranted for five years. Acorn's liability under this warranty shall be discharged solely by replacement or repair of defective material, provided Acorn is notified in writing within one year from date of shipment, F.O.B. Industry, California.

This warranty does not cover installation or labor charges and does not apply to materials, which have been damaged by other causes such as mishandling or improper care or abnormal use. The repair or replacement of the defective materials shall constitute the sole remedy of the Buyer and the sole remedy of Acorn under this warranty. Acorn shall not be liable under any circumstances for incidental, consequential or direct charges caused by defects in the materials, or any delay in the repair or replacement thereof. This warranty is in lieu of all other warranties expressed or implied. Product maintenance instructions are issued with each unit and disregard or non-compliance with these instructions will constitute an abnormal use condition and void the warranty. Stainless steel must be protected on jobsites during construction and must be properly maintained after the water has been introduced into the water cooler or drinking fountain, or Acorn's limited warranty is void.

LIMITED EXPORT WARRANTY – One year on parts only.



ACORN AQUA
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IMPORTANT

This fixture is intended to dispense water that has been lowered in temperature, but otherwise remains unchanged by the materials in the water cooler. It is common for electrical equipment to be grounded to water lines either within a structure or away from it. Every attempt should be made to prevent this kind of grounding from generating electrical feedback into the water cooler creating electrolysis. Electrolysis will cause a metallic taste or cause water metal content to increase.

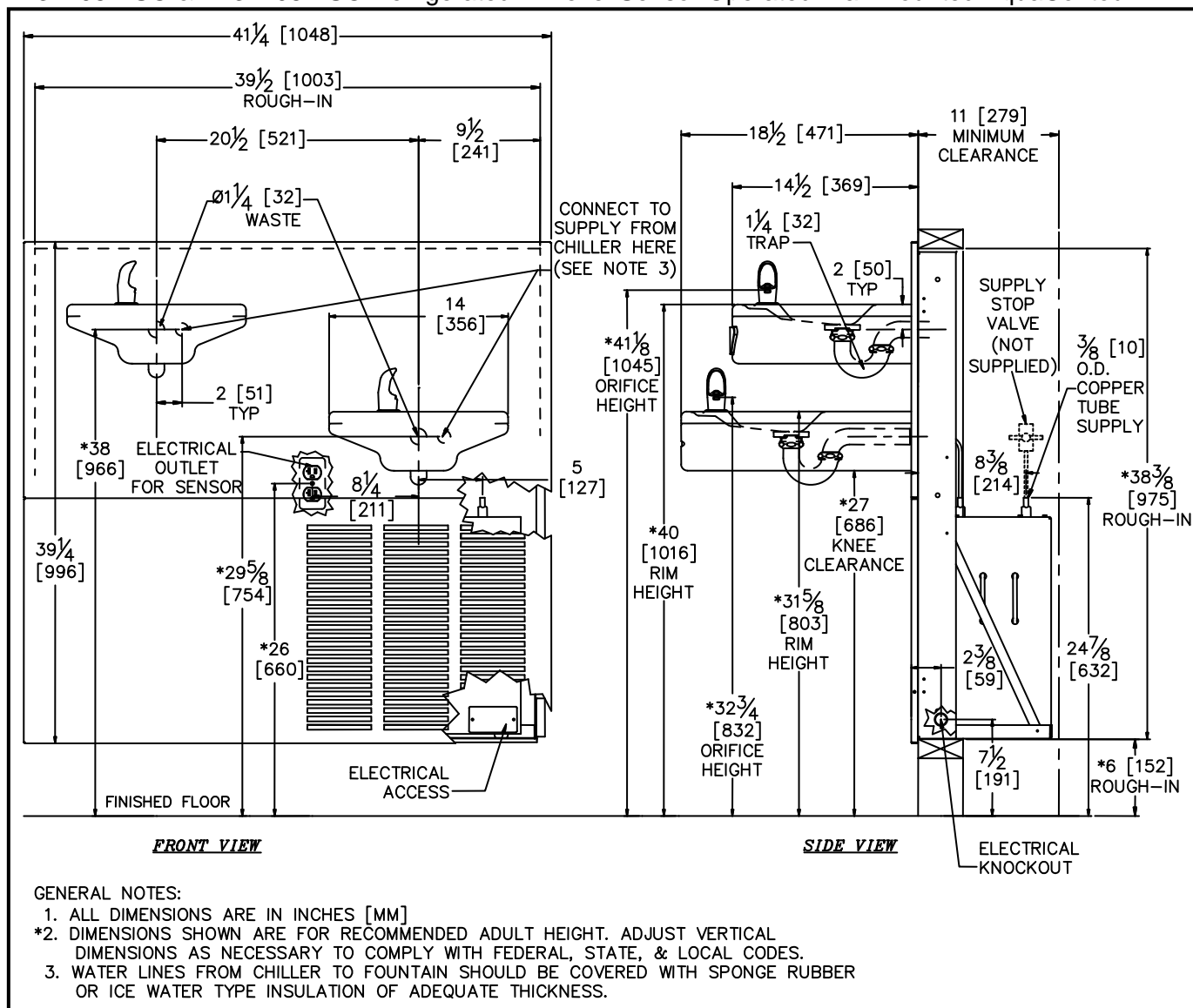
NOTICE

A dielectric coupling must be used to connect the water cooler to the water supply.

ROUGHING-IN AND DIMENSIONAL DRAWING

Prior to roughing consult with local, state, and federal codes for proper compliance.

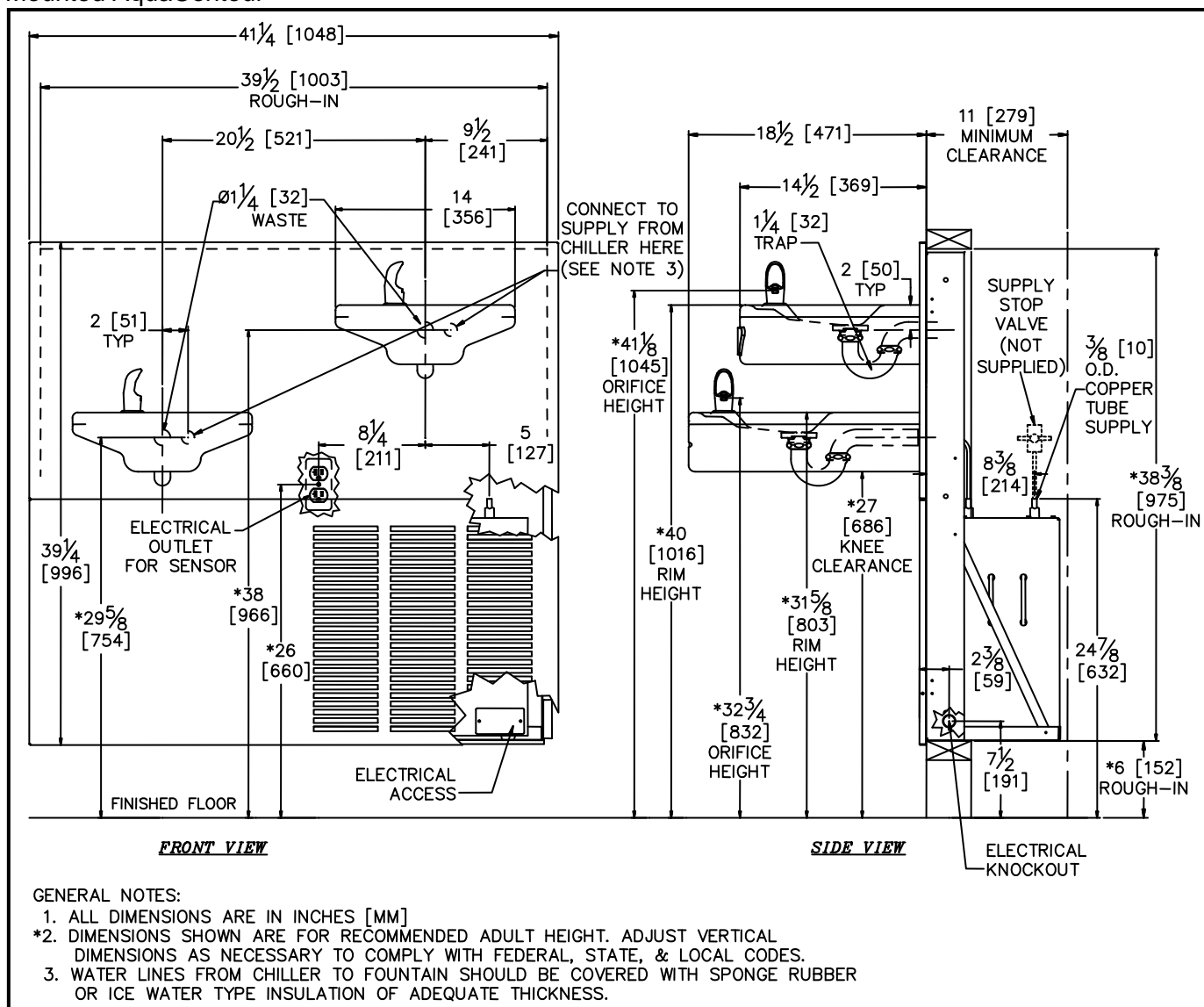
A132408B-SO & A132408F-SO Refrigerated Bi-Level Sensor Operated Wall Mounted AquaContour



NOTES: Dimensions shown for Adult ADA compliant installation. For Child ADA compliant parallel approach installation, decrease height of installation by 3 inches. Provide clear floor space as required. Adjust vertical dimensions as required to comply with federal, state, and local codes.

See next page for A132408B-RBL-SO & A132408F-RBL-SO Refrigerated Reverse Bi-Level Sensor Operated Wall Mounted AquaContour roughing-in and dimensional drawing.

A132408B-RBL-SO & A132408F-RBL-SO Refrigerated Reverse Bi-Level Sensor Operated Wall Mounted AquaContour



NOTES: Dimensions shown for Adult ADA compliant installation. For Child ADA compliant parallel approach installation, decrease height of installation by 3 inches. Provide clear floor space as required. Adjust vertical dimensions as required to comply with federal, state, and local codes.

See previous page for A132408B-SO & A132408F-SO Refrigerated Bi-Level Sensor Operated Wall Mounted AquaContour roughing-in and dimensional drawing.

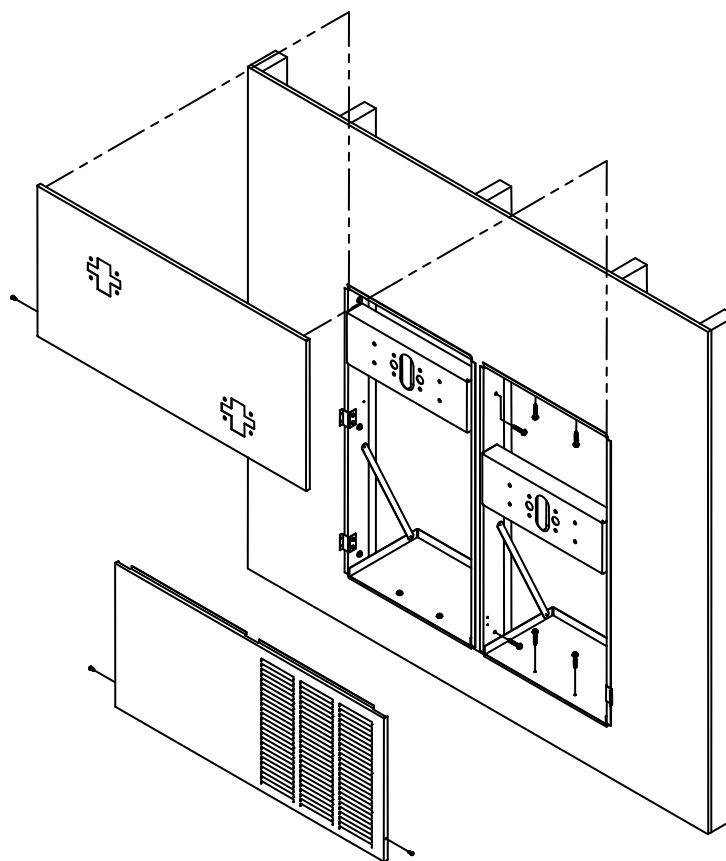
IMPORTANT:

1. Water Supply Service Stop Valve, Water Connections, Electrical Outlet and Electrical Connections to be supplied by others in accordance with local codes.
2. Provide 4" minimum clear space in front of bottom trim panel and above in-wall chiller to allow for proper ventilation.
3. Waste is 1-1/4" Outer Diameter. Chiller water inlet is 3/8" Outer Diameter copper tube. Chiller water outlet is 3/8" Outer Diameter copper tube. Drinking Fountain water inlets are 3/8" Outer Diameter copper tube. Water lines by others from in-wall chiller to drinking fountains must have adequate insulation.

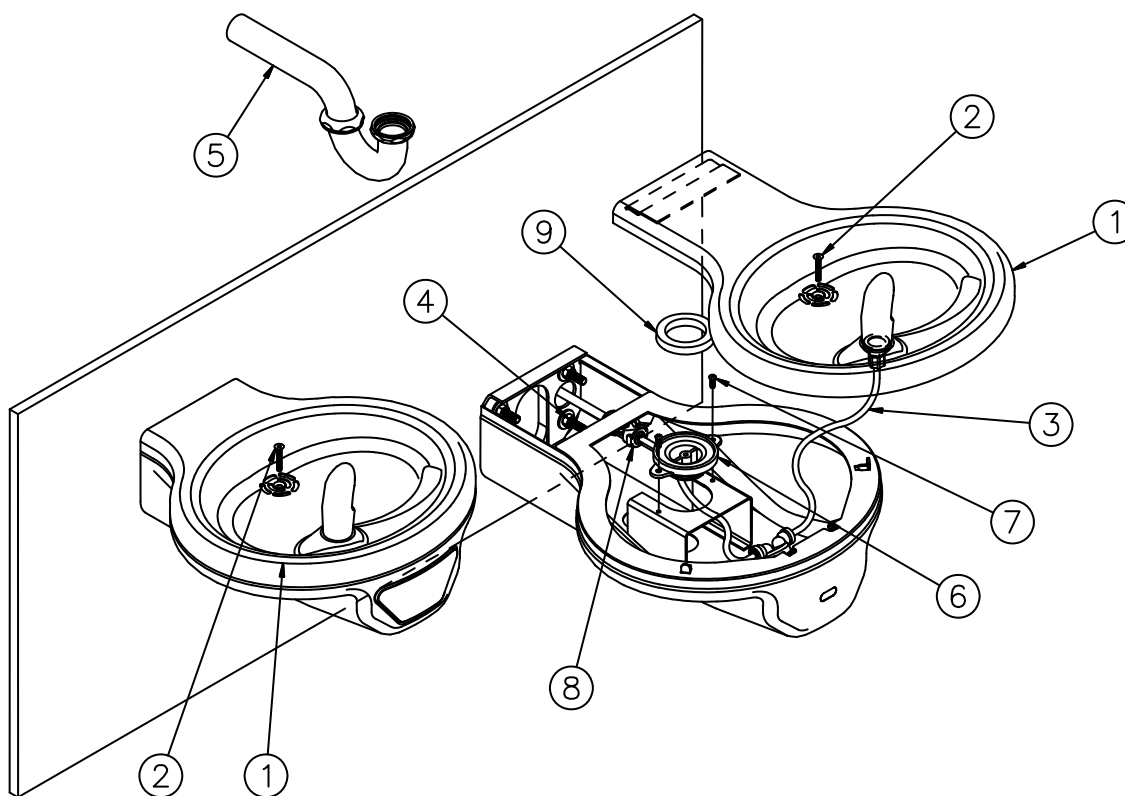
4. Completely flush supply lines of all foreign debris before connecting to fixture. Water cooler designed to not cause problems with taste, odor, color, or sediment. Optional water filter (WF1), is available should any of these problems arise from the water supply.
5. Do **NOT** solder tubes inserted into the chiller or the fountain strainer as damage to the o-rings on the push-in fittings may result.
6. All burrs must be removed from outside of cut tubes before inserting into strainer or other components.
7. Chiller power supply must be identical in voltage, cycle and phase to that specified on the chiller data plate.
8. This unit must be grounded per the requirements of applicable electrical codes.
9. **WARNING:** Warranty is voided if installation is not made following current Acorn Aqua installation instructions and if components are assembled to the fixture that are not approved by Acorn Aqua.
10. Fixture operates within water pressure range of 20 to 105 psig. Acorn Aqua will not warranty chiller damaged when connected to supply lines with flow pressure lower than 20 psig or higher than 105 psig. A pressure regulator must be furnished by others on supply line if inlet pressure is greater than 105 psig.
11. Due to cold waste water, Acorn Aqua recommends that waste piping supplied by installer be insulated appropriately to prevent excessive condensation.
12. Per UPC 609.10-*All building water supply systems in which quick acting valves are installed shall be provided with devices to absorb the hammer caused by high pressure resulting from the quick closing of the valve. These pressure-absorbing devices shall be approved mechanical devices. Water pressure-absorbing devices will be installed as close as possible to the quick closing valve.*

INSTALLATION:

1. Install –MF4 Chiller and Bi-Level Drinking Fountain Wall Mounting Frames following the instructions included with the frames.



2. Verify frame chiller shelf is secure and install the chiller on the right-hand side following the instructions included with the chiller.
3. Hang upper trim panel on both mounting frames and secure with screw provided to the wall mounting frame bracket on the high fountain side.
4. Install the eight threaded studs (four for each drinking fountain) into the Wall Mounting Frames.



5. Remove the drinking fountain tops [1] by taking out the drain screws [2] and lifting at the front while pulling forward. Disconnect bubbler tubes [3]. Set tops [1] aside in a safe place where they will not be damaged. Place the screws [2] in a secure location where they will not be lost.
6. Slide fixtures over studs and secure with nuts and washers [4].
7. Assemble p-traps [5] to drain adapters [6] and then assemble to units with Phillips screws [7].
8. Make-up 1-1/4" outer diameter waste connections.
9. After thoroughly flushing the 3/8" outer diameter supply line, connect water supply to in-wall chiller and provide connection from chiller to each drinking fountain in-line strainer [8].
10. With transformer NOT plugged-in, run wire from behind Wall Mounting Frame and Trim Panel into lower drinking fountain and connect to sensor.
11. Place drain gaskets [9] on drain adapters [6]. Reconnect bubbler tubes [3]. Reassemble tops [1] to units (engage back clip on lower drinking fountain) and securing with screws [2].

START UP:

1. Before connecting power supply to chiller or sensor, but after thoroughly flushing the supply line and connecting it to the cooler, turn on building water supply and check all connections for leaks.
2. Air within the water cooler system or the structure supply piping will cause an irregular bubbler outlet stream until purged out by incoming water. Covering the bubblers with a clean cup (or similar object) is recommended when first activating water cooler to prevent excessive splashing. Plug in the sensor transformer. Trigger lower unit sensor and depress upper unit front push pad until steady water stream is achieved from both bubblers.

3. If water flow requires adjustment, insert a slotted narrow blade screwdriver in the hole centered on the underside of the fixture in the knee clearance area up to the flow regulator. Turning clockwise will increase flow and turning counterclockwise will decrease flow.
4. Recheck all water connections with water flowing through system.
5. Provide power to water chiller and make sure unit begins to function.
6. Assemble louvered bottom trim panel with screws provided to brackets on either side of wall mounting frame.

TROUBLE SHOOTING:

IMPORTANT: BEFORE MAKING ANY OF THE REPAIRS LISTED, MAKE SURE THE WATER CHILLER IS DISCONNECTED FROM THE ELECTRICAL SUPPLY AND THE WATER SUPPLY VALVE IS SHUT OFF.

1. Adjustments
 - a. Cartridge – The water flow can be adjusted using a slotted narrow blade screwdriver and turning clockwise to increase flow and counterclockwise to decrease flow.
 - b. Cold Water Thermostat – The water temperature can be adjusted using a slotted screwdriver and turning clockwise to make colder and counterclockwise to make warmer.
2. Compressor Does Not Run
 - a. Check the electrical supply for power and correct voltage. The incoming voltage must be within 10% of the rated voltage on the serial nameplate.
 - b. If the cold thermostat capillary bulb loses its charge or becomes kinked it will fail in the open position causing a disruption of power to the compressor. Disconnect electrical supply to the water chiller and using an ohm meter check for continuity across the two electrical terminals on the thermostat. Install a new thermostat if there is no continuity.
 - c. Check for loose wires within the compressor box. The incoming power leads must be connected to the overload and relay.
 - d. If all components check positive for continuity then test the wiring harness plug for continuity to see if there is a broken wire within the wiring harness insulation.
3. Compressor Runs – Water Is Warm
 - a. The most common cause for a water chiller to run without producing cold water is a loss of refrigerant. The water chiller must be taken to a certified refrigerant technician for repairs.
 - b. Make sure the condenser fan motor is operative. The fan blade must turn freely to help remove the heat of compression.
 - c. An incorrect refrigerant charge, restriction or defective compressor (not pumping) will also cause the compressor to run without producing cold water. All these signs indicate a problem within the refrigeration system and the water chiller must be checked by an authorized service company.
4. Compressor Cycling On Overload Protector
 - a. A dirty condenser or a blocked fan will cause a high head pressure and frequent cycling of the overload protector.
 - b. Check the incoming voltage to make sure it is within 10% of the serial nameplate rating.
 - c. A restriction or moisture in the system will also cause intermittent cycling. A certified refrigeration mechanic should be contacted in this situation.
 - d. Change the overload or relay if defective.
5. Noisy Operation
 - a. Check to make sure the fan blade is rotating freely.
 - b. Check the compressor mounting to make sure the pins and clips are not rattling. If the compressor appears to be noisy internally, it must be replaced.
6. Restricted Or No Water Flow
 - a. Ensure water supply service stop valve is fully open.
 - b. Verify minimum 20 psig supply line flow pressure.
 - c. Check for twists or kinks in outlet tubing.

- d. Check the water inlet strainer. Sediment from the main supply can get trapped in the screen along with installation materials such as pipe dope and flux. The screen should be cleaned and checked on a regular basis and replace if needed.
 - e. The cartridge valve located in the water control assembly can also become clogged with foreign material. The cartridge valve can only be replaced and not repaired.
 - f. The water chiller may also develop a freezing condition in which the water will become frozen inside the evaporator coil. This indicates a refrigeration problem or thermostat failure in which case the water chiller needs to be checked by a qualified technician.
 - g. For lower sensor operated unit, if light within sensor does not flash when the users' hands are within range:
 - I. Verify power supply to transformer.
 - II. Replace defective 9VDC transformer.
 - III. Transformer polarity crossed. Replace transformer. (Sensor may be damaged and need replacement.)
 - IV. Sensor in "Security Mode" after 90 seconds of constant detection. Remove source of detection and wait 30 seconds before checking.
 - V. Sensor range is too short or too long. See SENSOR RANGE ADJUSTMENT section.
 - VI. Sensor is picking up a highly reflective surface. Eliminate cause of reflection and wait 30 seconds before checking.
 - VII. Replace defective sensor.
 - h. For lower sensor operated unit, if light within sensor flashes once when the users' hands are within range:
 - I. Repair bad connection from sensor to solenoid.
 - II. There is debris or scale in the solenoid assembly. Remove solenoid, pull out plunger and spring. Clean with scale remover solution or pressurized air.
 - III. There is debris or scale on the water diaphragm. Remove and clean.
7. Water Drips Or Will Not Shut Off
- a. For upper push pad operated unit:
 - I. Open fixture. Loosen nuts holding valve bracket assembly to bottom of fixture but do not remove. Move complete valve bracket assembly further back from the front push pad and retighten down to lock in place.
 - II. Replace cartridge valve located in the water control assembly.
 - b. For lower sensor operated unit, if light within sensor flashes once when the users' hands are within range:
 - I. Clean water diaphragm that has debris or scale.
 - II. Replace defective or torn water diaphragm.
 - c. For lower sensor operated unit, if light within sensor does not flash when the users' hands are within range:
 - I. Sensor is dirty or covered. Clean or uncover and wait 30 seconds before checking.
 - II. Sensor is being triggered because range is too long or by sunlight, reflective surface, bright lights, etc. Correct lighting or reflections. Decrease range and wait 30 seconds before checking.

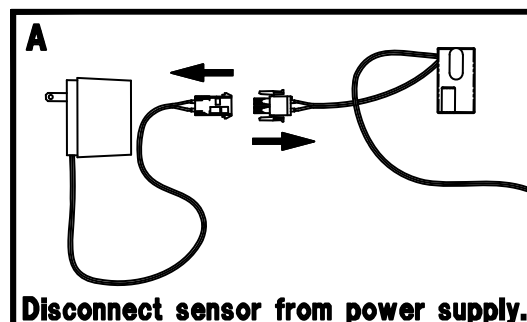
CLEANING & MAINTENANCE GUIDE:

1. Motors have lifetime lubrication and do not require scheduled maintenance.
2. Excess dirt or poor ventilation will cause the compressor overload protector to turn the compressor off and it will cycle on and off with no cold water coming out of bubbler. Periodically clean with vacuum cleaner, air hose or brush the condenser fins and cabinet ventilation louvers. In environments where dirt and dust is more prevalent, clean more frequently.
3. Periodically remove fountain tops and clean out in-line strainers.

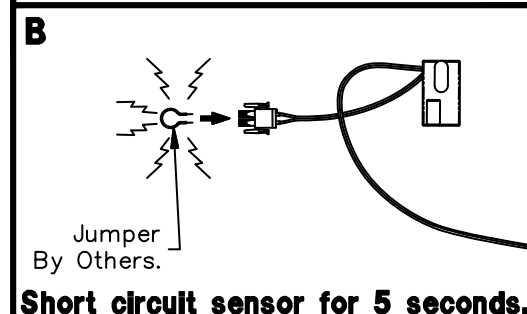
4. Do NOT use harsh chemicals, abrasive or petroleum based cleaners. Use of these will void the Acorn Aqua warranty.
5. Exterior panels can be cleaned using mild household detergents or warm, soapy water. Extra care must be used cleaning chrome plated items and mirror finished stainless steel. They can scratch easily and should only be cleaned using a clean, soft cloth and mild soap with water or a mild glass cleaner.

SENSOR RANGE ADJUSTMENT

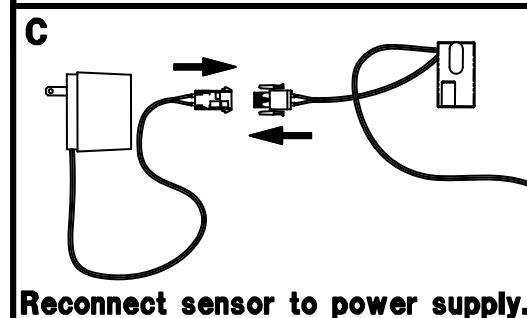
A. Disconnect sensor from power supply.



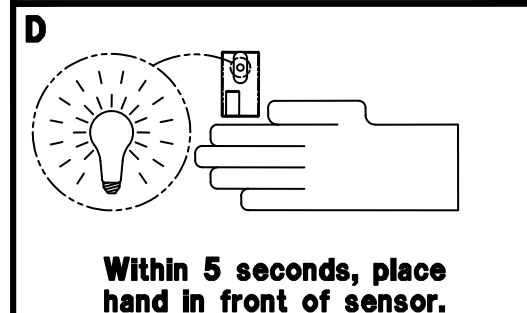
B. Create a short circuit between the positive and negative connections on the sensor for five seconds. **WARNING:** Do NOT create a short circuit on the power supply or while the sensor is connected to the power supply!



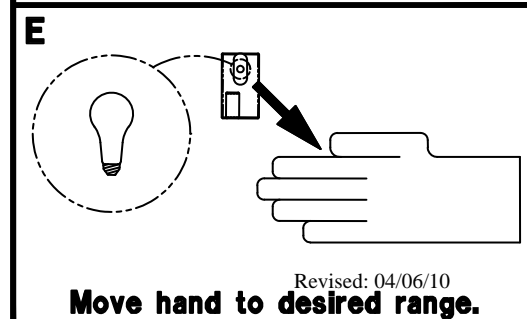
C. Reconnect the sensor to the power supply.



D. Within 5 seconds of making the connection to the power supply, place and hold hand 2" to 4" in front of the sensor.



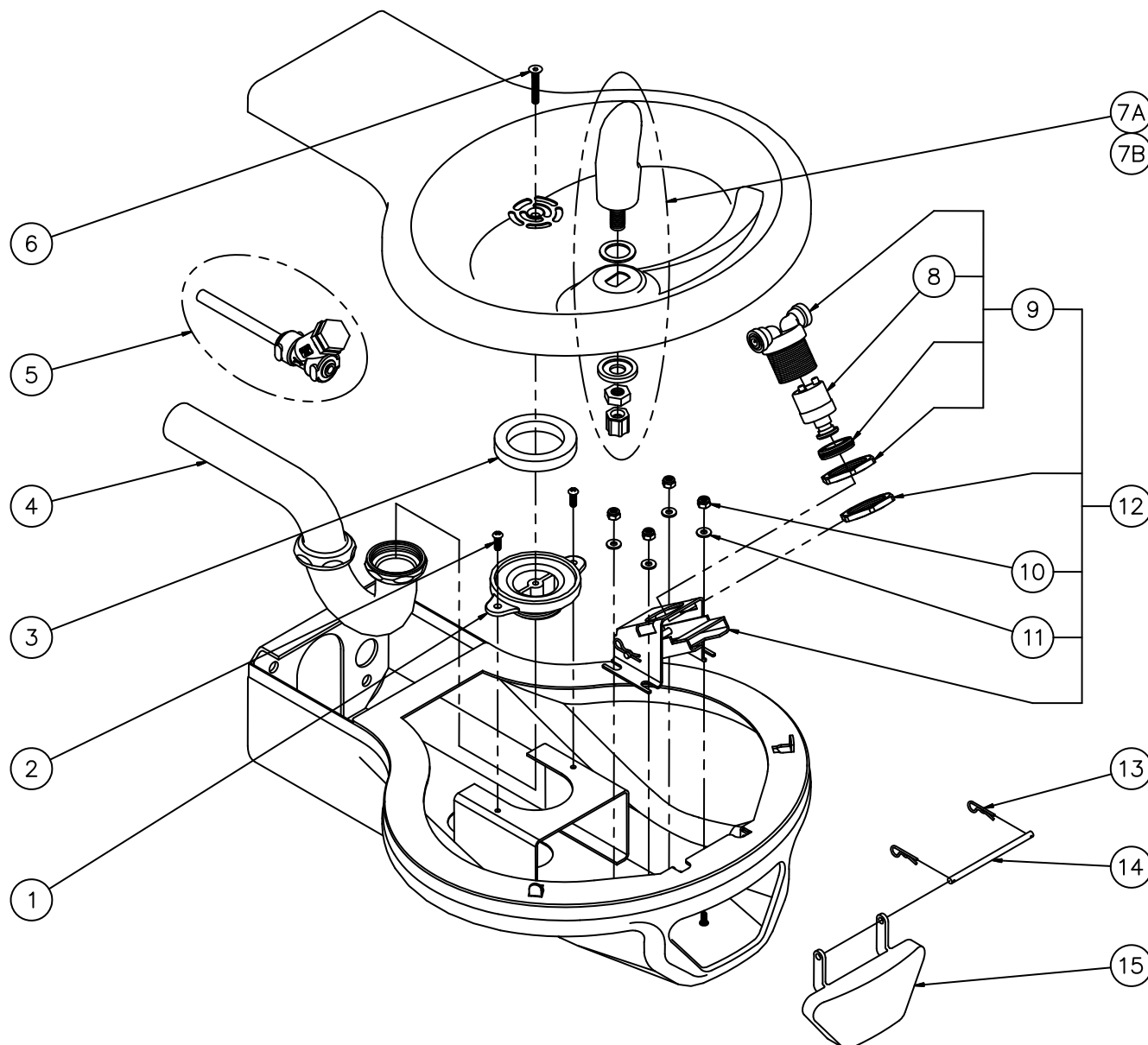
E. Once red light within sensor begins flashing quickly, move hand to preferred activation distance and hold there until light stops flashing. Check sensor activation distance. If unsatisfactory, repeats steps A through E.



CHILLER PARTS BREAKDOWN

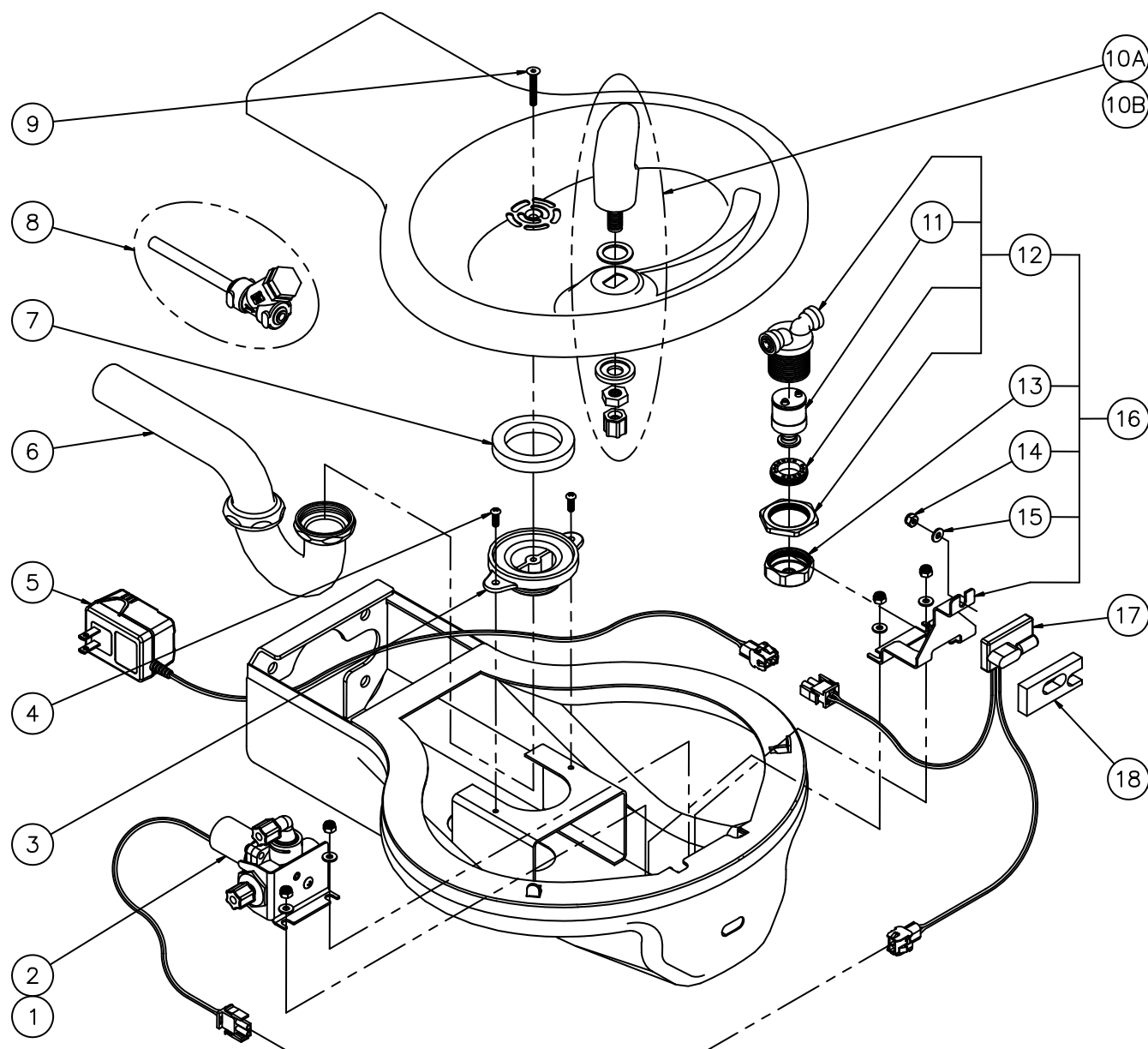
Reference installation manual included with in-wall chiller for appropriate Chiller Parts Breakdown.

UPPER PUSH PAD OPERATED FOUNTAIN PARTS BREAKDOWN



ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	7000-005-199	Drain Adapter	9	7000-050-001	Valve Assembly
2	0116-016-000	Phillips Truss Head Screw	10	0308-009-000	Nylon Insert Locknut
3	7000-006-000	Flat Drain Adapter Gasket	11	0331-004-000	Flat Washer
4	7000-015-000	1-1/4" Outer Diameter P-Trap	12	7001-008-001	Valve Activation Assembly
5	7000-022-000	"Y" Strainer	13	0341-100-000	Wire Clip
6	0152-040-000	Allen Flat Head Screw	14	7000-100-199	Black Delrin Shaft
7A	7000-002-001	Standard Chrome Plated Brass Bubbler Assembly	15	7000-004-000	Push Pad
7B	7000-410-002	"F" Option Flexible Gray Bubbler Assembly			
8	7000-060-000	Valve Cartridge			

LOWER SENSOR OPERATED FOUNTAIN PARTS BREAKDOWN



ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	7001-200-001	Solenoid Valve Assembly With Mounting Bracket	10B	7000-410-002	"F" Option Flexible Gray Bubbler Assembly
2	2563-326-001	9V DC Latching Solenoid	11	7000-060-000	Valve Cartridge
3	7000-005-199	Drain Adapter	12	7000-050-001	Valve Assembly
4	0116-016-000	Phillips Truss Head Screw	13	7000-059-199	Valve Cap
5	0711-410-001	9V DC Plug-In Transformer	14	0308-009-000	Nylon Insert Locknut
6	7000-015-000	1-1/4" Outer Diameter P-Trap	15	0331-004-000	Flat Washer
7	7000-006-000	Flat Drain Adapter Gasket	16	7000-067-001	Flow Adjustment Valve & Sensor Bracket Assembly
8	7000-022-000	"Y" Strainer	17	2562-373-001	9V DC Sensor Assembly
9	0152-040-000	Allen Flat Head Screw	18	7001-202-199	Sensor Spacer
10A	7000-002-001	Standard Chrome Plated Brass Bubbler Assembly			

Repairs must be made with Acorn Aqua parts only. Please order through your local representative or distributor. The phone number to locate your local representative is 1.800.591.9360.