



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

A112.8FGVR Series
14 Gauge Stainless Steel Vandal Resistant Refrigerated
Universal Bi-Level Barrier Free, Wall Mounted Water Cooler



A112408B-FG-VR

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 Engineering warrants Water Coolers, Drinking Fountains and remote Chillers are free from defects in material or workmanship under normal use and service for a period of one year from date of installation or 18 months after date of shipment from the factory, whichever comes first. The compressor, condenser and refrigeration tubing is warranted for an additional four years after the period described above. Acorn's liability under this warranty shall be discharged solely by repair or replacement of defective material, provided Acorn is notified in writing within the time periods described above.

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 jobsite 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Acorn Engineering Company™ assumes no responsibility for use of void or superseded data.
© Copyright Acorn Engineering, City of Industry, CA Member of Morris Group International.
Please visit www.acorndrinkingfountains.com for most current specifications.

L1001033

COMPLIES WITH
STANDARDS



Test rating conditions are
compliant with ARI 1010.



Member of
MORRIS GROUP
INTERNATIONAL

**ACORN
ENGINEERING**
15125 Proctor Ave.
City of Industry, CA
91746 U.S.A.
Phone 800-591-9360
626-336-4561
Fax 626-855-4894
www.acorndrinkingfountains.com



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com for most current specifications.

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

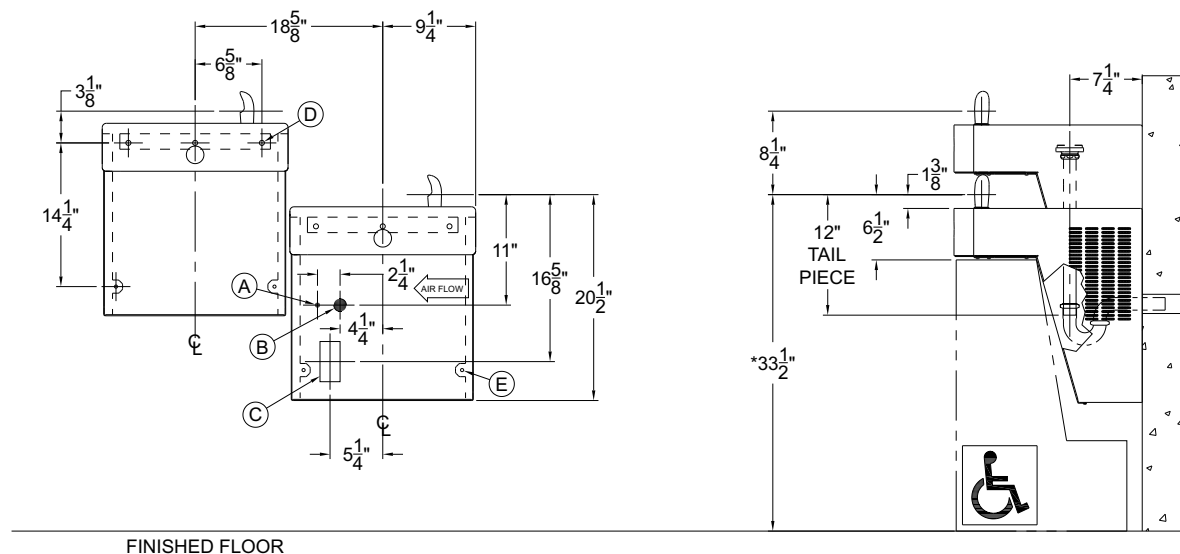
A dielectric coupling must be used to connect the water cooler to the water supply. A nonmetallic coupler is furnished with this water cooler to meet this requirement.

ROUGHING-IN AND DIMENSIONAL DRAWING

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

A112.8FGVR SERIES 14 GAUGE STAINLESS STEEL VANDAL RESISTANT REFRIGERATED UNIVERSAL BI-LEVEL (Standard Configuration Left Unit High with Right Unit Low)

- A. 3/8" NCT SUPPLY INLET
- B. WASTE OUTLET FOR 1-1/4" P-TRAP BY OTHERS.
- C. ELECTRICAL SERVICE ROUGH
- D. Ø1/2" HANGER BRACKET PUNCHING, 3 PLACES FOR ANCHORING HARDWARE BY OTHERS.
- E. Ø5/16" PUNCHING, 2 PLACES FOR ANCHORING HARDWARE BY OTHERS.



GENERAL NOTES:

- 1. ALL DIMENSIONS ARE IN INCHES [MM]
- 2. ALLOW 4 INCHES [102 MM] MINIMUM CLEARANCE PER SIDE FOR VENTILATION
- *3. DIMENSIONS SHOWN ARE FOR RECOMMENDED ADULT HEIGHT. ADJUST VERTICAL DIMENSIONS AS NECESSARY TO COMPLY WITH FEDERAL, STATE & LOCAL CODES.
- 4. ANGLE STOP VALVE & P-TRAP NOT SUPPLIED.
- 5. IMPORTANT: FIXTURES MUST BE ATTACHED TO WALL WITH APPROPRIATE WALL ANCHOR SCREWS.

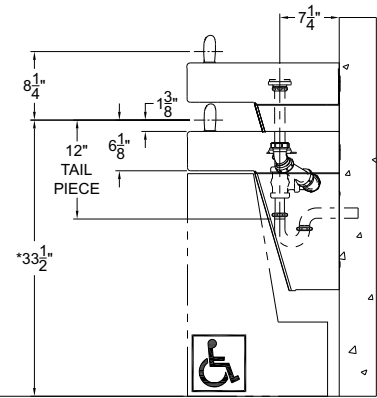
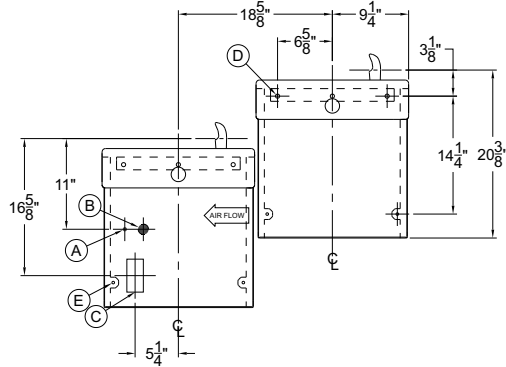
NOTES: Adjust vertical dimensions as required to comply with federal, state, and local codes. Dimensions indicated are for ADA frontal approach installation. For Child ADA-ABA compliant parallel approach installation, decrease height of installation for spout to be 30" maximum above finished floor. Provide clear floor space as required. Adjust vertical dimensions as required to comply with federal, state, and local codes.



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com for most current specifications.

A112.8FGVR SERIES 14 GAUGE STAINLESS STEEL VANDAL RESISTANT REFRIGERATED UNIVERSAL BI-LEVEL (Standard Configuration Left Unit Low with Right Unit High)



GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES [MM].
2. ALLOW 4 INCHES [102 MM] MINIMUM CLEARANCE PER SIDE FOR VENTILATION.
- *3. DIMENSIONS SHOWN ARE FOR RECOMMENDED ADULT HEIGHT. ADJUST VERTICAL DIMENSIONS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, & LOCAL CODES.
4. STOP VALVE, P-TRAP, & ELECTRICAL OUTLET NOT SUPPLIED.
5. IMPORTANT: COOLERS MUST BE ATTACHED TO WALL WITH APPROPRIATE WALL ANCHOR SCREWS.

FINISHED FLOOR

- A. 3/8" NCT SUPPLY INLET
- B. WASTE OUTLET FOR 1-1/4" P-TRAP BY OTHERS.
- C. ELECTRICAL SERVICE ROUGH.
- D. Ø1/2" HANGER BRACKET PUNCHING, 3 PLACES FOR ANCHORING HARDWARE BY OTHERS.
- E. Ø5/16" PUNCHING, 2 PLACES FOR ANCHORING HARDWARE BY OTHERS.

IMPORTANT:

1. Waste P-Trap, Water Supply Service Angle Stop Valve and 2" x 4" Electrical Plug-In Receptacle to be supplied by others in accordance with local codes. A metallic p-trap (by others) must be used for the drain connection.
2. Provide 4" minimum clear space on fixture sides to allow for proper ventilation through cabinet louvers.
3. Water supply is 3/8" Outside Diameter copper tube. Waste is 1-1/4" Outside Diameter.
4. Completely flush supply lines of all foreign debris before connecting to fixture. Water cooler designed to not affect 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 copper tube when inserted into the coupler as damage to the o-ring will result.
6. All burrs must be removed from outside of cut tubes before inserting into coupler or other components.
7. Power supply must be identical in voltage, cycle and phase to that specified on the cooler data plate. Electrical outlet and furnished power cord with plug must be used to supply power to fixture. Do **NOT** wire compressor directly to the power supply.
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 Engineering installation instructions and if components are assembled to the fixture that is not approved by Acorn Engineering.
10. Fixture operates within water pressure range of 20 to 105 psig. Acorn Engineering will not warranty fixtures 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.



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com
for most current specifications.

11. Due to cold waste water, Acorn Engineering recommends that p-trap supplied by installer be insulated 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. Mount hanger bracket to wall horizontally level as shown in Roughing-In and Dimensional Drawing. Note: Adjust height of bracket if bubbler outlet height is required to vary from that shown. WARNING: Hanger Bracket MUST be securely anchored to wall with fasteners sufficient to support weight of cooler. If wall can not provide adequate support, order and install optional fixture support carrier.
2. Remove the bottom cover from the water cooler and set aside in a safe place. Save the screws in a secure location for re-use in later stages of installation.
3. Hang the water coolers on the hanger brackets ensuring the bracket tabs engage AND seat in the slots in the back of the water coolers. Note: Hanging of refrigerated unit first is recommended since it is the heavier of the two. Verify water coolers are level, left to right AND front to back. Caution: The bubbler stream may be adversely affected if units are not square and level. Bottom of units and louvers should be used as reference to verify unit is square and plumb.
4. Anchor the water coolers to the wall at the other mounting points in each base. Shim lower rear mounting points to level unit if necessary.
5. Outlet tube from evaporator has an in-line tee with one tube going to refrigerated unit bubbler and one tube loose. Connect loose tube through unit shared sides to elbow on tube coming from non-refrigerated unit bubbler.
6. Thoroughly flush the 3/8" O.D. supply line and then connect water cooler to water supply angle stop valve (by others) with supplied 3/8" O.D. copper tube.
7. Use waste fittings supplied to connect waste tailpiece from upper unit to waste tailpiece of lower unit and then make up 1-1/4" O.D. p-trap waste connection. Do not insert 1-1/4" O.D. tailpiece into bottom of tee more than 1-1/4". Waste p-trap by others.

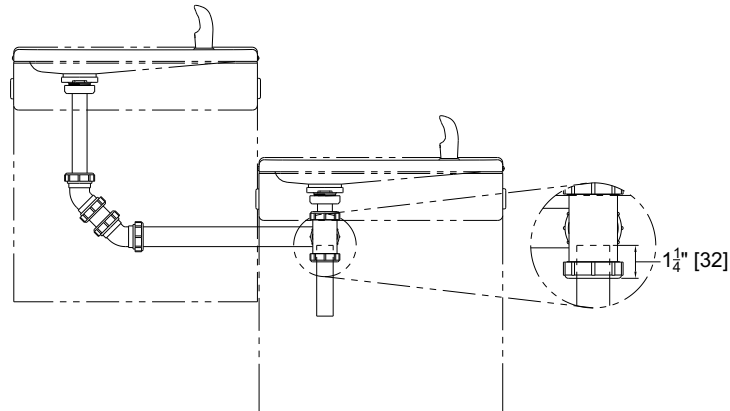
START UP:

1. Before connecting power supply and assembling bottom cover to water cooler, but after thoroughly flushing the supply line and connecting it to the fixture, 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 bubbler with a clean cup (or similar object) is recommended when first activating water cooler to prevent excessive splashing. Depress a side or front push bar until steady water stream is achieved.
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 and drain connections with water flowing through system.
5. With power still NOT connected, carefully manually rotate cooling fan to insure proper clearance and free fan action.
6. Plug water cooler in to electrical outlet and make sure unit begins to function.
7. Assemble bottom cover to water cooler with screws furnished.



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com
for most current specifications.



TROUBLE SHOOTING:

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

1. Adjustments

- Cartridge – The water flow can be adjusted using a slotted narrow blade screwdriver and turning clockwise to increase flow and counterclockwise to decrease flow.
- Cold Water Thermostat – The water temperature can be adjusted using a slotted screwdriver and turning clockwise to make colder and counterclockwise to make warmer.
- Bubbler Stream – Bubbler can be rotated slightly to direct the stream backwards or forwards. Adjust the stream to minimize splashing. Splashing may occur from bubbler stream if the unit is not level. Shim lower mounting points, if necessary, to level cooler.

2. Compressor Does Not Run

- Check the electrical receptacle for power and correct voltage. The incoming voltage must be within 10% of the rated voltage on the serial nameplate.
- The cold thermostat is accessible by removing the bottom access cover. 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. Unplug the water cooler 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.
- Check for loose wires within the compressor box. The incoming power leads must be connected to the overload and relay.
- 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

- The most common cause for a water cooler to run without producing cold water is a loss of refrigerant. The water cooler must be taken to a certified refrigerant technician for repairs.
- Make sure the condenser fan motor is operative. The fan blade must turn freely to help remove the heat of compression.
- 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 cooler must be checked by an authorized service company.

4. Compressor Cycling On Overload Protector

- A dirty condenser or a blocked fan will cause a high head pressure and frequent cycling of the overload protector.
- Check the incoming voltage to make sure it is within 10% of the serial nameplate rating.
- A restriction or moisture in the system will also cause intermittent cycling. A certified refrigeration mechanic should be contacted in this situation.
- Change the overload or relay if defective.



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com
for most current specifications.

5. Noisy Operation

- Check to make sure the fan blade is rotating freely.
- Make sure the water cooler is correctly mounted to the wall. Absence of the two lower mounting bolts may cause excess noise and vibration.
- 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

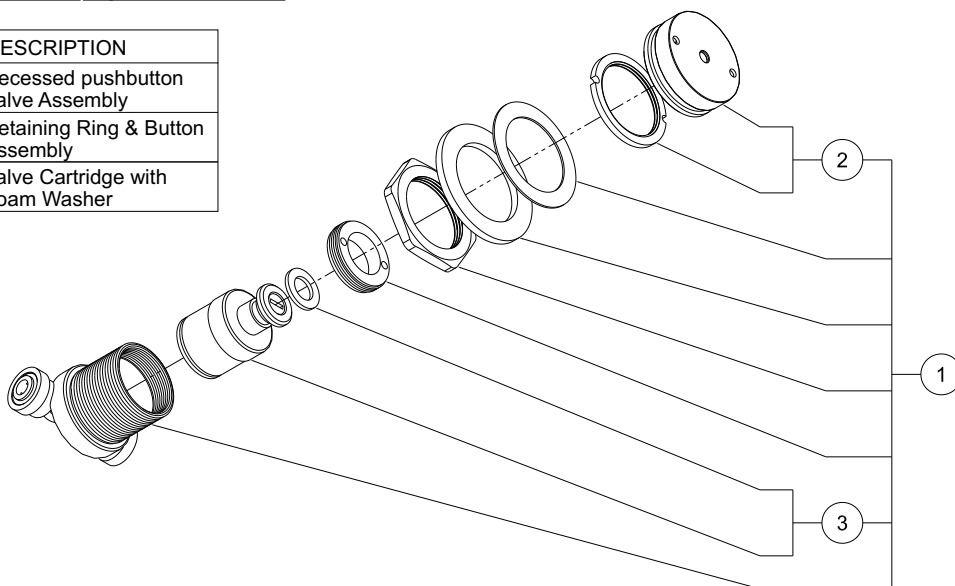
- Ensure water supply service stop valve is fully open.
- Verify minimum 20 psig supply line flow pressure.
- Check for twists or kinks in bubbler tubing.
- Check the water inlet strainer. Sediment from the main supply can get trapped in the screen along with installation materials such as pipe dope and flux. The screen should be cleaned and checked on a regular basis and replace if needed.
- The cartridge valve located in the water control assembly or bubbler can also become clogged with foreign material. The cartridge valve can only be replaced and not repaired.
- The water cooler 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 cooler needs to be checked by a qualified technician.

CLEANING & MAINTENANCE GUIDE:

- Motors have lifetime lubrication and do not require scheduled maintenance.
- 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.
- Periodically remove access panels and clean out in-line strainer.
- Do NOT use harsh chemicals, abrasive or petroleum based cleaners. Use of these will void the Acorn Aqua warranty.
- 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.

CARTRIDGE VALVE PARTS BREAKDOWN

ITEM #	PART NUMBER	DESCRIPTION
1	7000-065-001	Recessed pushbutton Valve Assembly
2	7000-068-001	Retaining Ring & Button Assembly
3	7000-069-001	Valve Cartridge with Foam Washer



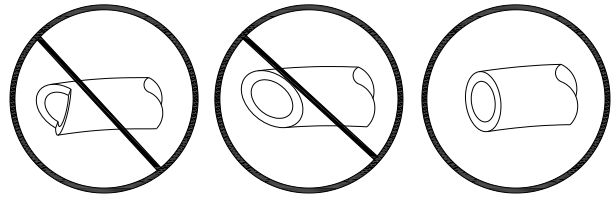


INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com for most current specifications.

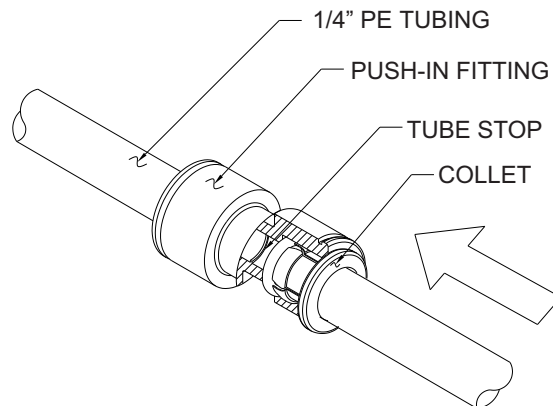
PUSH-IN FITTING INSTALLATION

NOTE: FITTINGS AND TUBE SHOULD BE KEPT CLEAN, BAGGED AND UNDAMAGED PRIOR TO INSTALLATION.

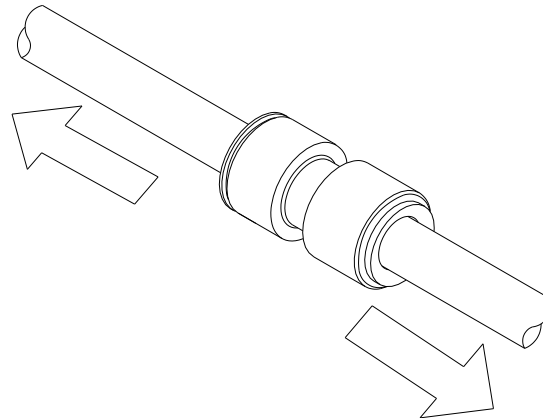


1. Cut to fit length of 1/4" PE tubing and remove any burrs or sharp edges. Ensure that the outside diameter is free from score marks. Tube ends should be square.

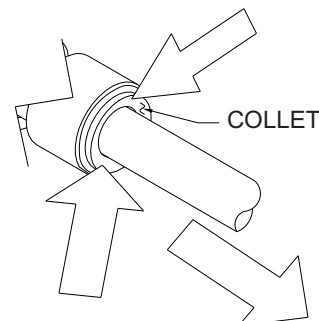
2. Firmly and fully insert the tubing end into the push-in fitting up to the tube stop located approximately 1/2" deep.



3. Pull on the fitted tubing to ensure it is secure. Tube should not come free from the fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.



4. To disconnect the tube from the fitting ensure that the water supply is off. Push collet square towards the push-in fitting body and hold. While holding the collet in, pull on the PE tubing to remove from the push-in fitting.

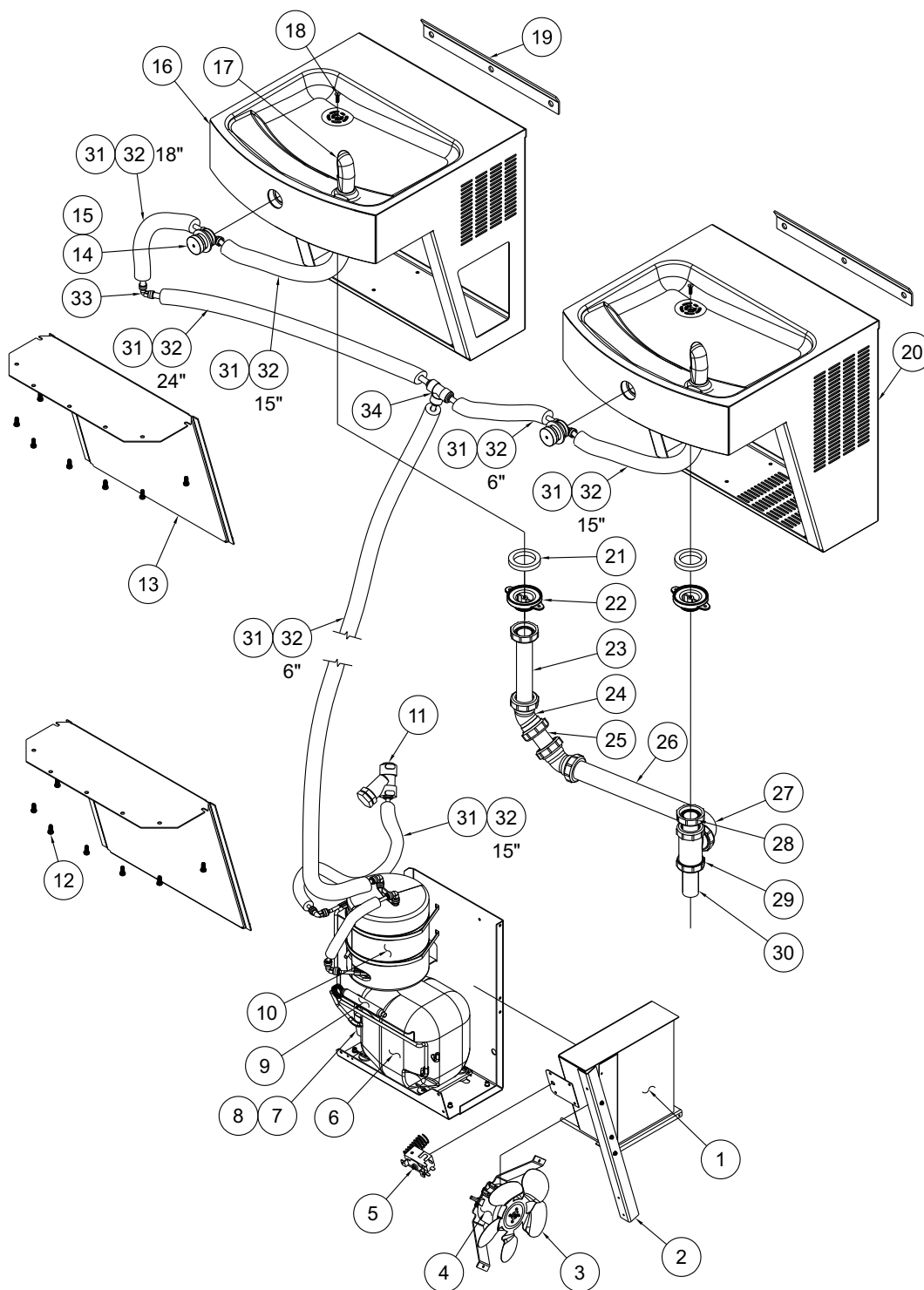




INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com for most current specifications.

COOLER PARTS BREAKDOWN DRAWING



Standard A112.8FGVR series 14 Gage Stainless Steel Enhanced Vandal Resistance Refrigerated Bi-Level shown.

NOTE: See next page for table of part numbers corresponding to drawing above.

ACORN ENGINEERING COMPANY

ACORN ENGINEERING FIELD SERVICE
TOLL FREE 800-743-8259 • LOCAL 626-855-4866 • FAX 626-855-4863



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit www.acorndrinkingfountains.com for most current specifications.

COOLER PARTS BREAKDOWN TABLE

NOTE: See previous page for fixture drawing corresponding to table of part numbers below.

ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	7003-201-000	Condenser	16	7003-616-004	FG-VR Stainless Steel Bi-Level Right Lower Cabinet
2	7003-634-199	FG-VR Support Strut		7003-618-004	RBL FG-VR Stainless Steel Right Upper Cabinet
3	7003-355-000	Fan Blade	17	7000-002-001	"B" Brass Bubbler Assembly
4	7003-302-000	Fan Motor	18	0152-006-000	Center Reject Allen Flat Head Screw
	7012-062-000	Fan Motor – 220V	19	7003-635-199	FG-VR Hanger Bracket
5	7003-250-000	Cold Control	20	7003-615-004	FG-VR Stainless Steel Bi-Level Left Upper Cabinet
6	7012-001-001	Compressor		7003-617-004	RBL FG-VR Stainless Steel Left Lower Cabinet
	7012-030-001	Compressor – 220V	21	7000-006-000	Flat Drain Adapter Gasket
7	7012-002-000	Start Relay	22	7000-005-199	Drain Adapter
	7012-031-000	Start Relay – 220V	23	7000-019-001	Upper Waste 1-1/4" O.D. Tailpiece Assembly
8	7012-003-000	Start Capacitor	24	7003-073-000	1-1/4" x 1-1/2" Compression 45 Degree Elbow
	7012-032-000	Start Capacitor – 220V	25	1758-043-299	1-1/2" O.D. x 3" Long Drain Tube
9	7012-050-000	Filter / Dryer	26	7003-072-000	1-1/2" x 1-1/2" Compression 45 Degree Elbow
10	7003-100-001	Evaporator Assembly	27	1758-043-199	1-1/2" O.D. x 15" Waste Arm
11	7000-021-001	"Y" Strainer	28	7000-032-001	2-3/4" Long Lower Waste 1-1/4" O.D. Tailpiece Assembly
12	0112-002-000	Center Reject Allen Button Head Screw	29	7003-070-000	Compression Tee
13	7003-607-199	FG-VR Stainless Steel Knee Panel	30	7000-032-299	1-1/4" O.D. Waste Tailpiece
14	7000-065-001	Recessed Push Button Valve Assembly	31	2169-000-000	1/4" O.D. LLDPE Tubing, Blue
			32	7012-055-000	Foam Pipe Insulation 3/8" I.D.x1/4" thk
15	7000-069-001	Valve Cartridge With Foam Washer	33	1895-708-000	1/4" Elbow Push-in Connector
			34	1895-710-000	1/4" "T" Push-in Fitting

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