

enduroTEQ™

ULTRA-S

INSTALLATION MANUAL

Introduction

What's in the Box

Bundled package

- 12VDC power adapter
- Outlet ball valve (3/8" NPT x 3/8" OD Ball Valve)
- Overflow hose barb (1/2" NPT hose barb)
- Toggle anchor (x3)
- 3/16" x 2 1/2" bolts (x3)
- Disc screen
- Disc nozzle (clear)
- Disc diverter



Wall Mount Assembled Unit (Configured for bottle use. See instructions below for disc use)

- Reservoir
- Top
- Cover
- Electronics package
- Inlet assembly

Additional Items Needed



- Inlet tubing (3/8" OD)
- Outlet tubing (3/8" OD)
- Overflow tubing (1/2" ID)
- Masonry screws 3/16" x 2 1/2" (if installing in solid wall)

Tools Needed

- Drill - 1/2" bit (if using supplied toggle anchors) **OR** 5/32" masonry drill bit (for solid wall)
- Philips screwdriver
- Level
- Tape measure
- PTFE Tape
- 14 mm or 9/16" socket and driver w/ extension (for disc conversion)



SAFETY WARNINGS

- *Before working with solid dissolving equipment and chemicals, review SDS for chemical handling procedures.*
- *Always wear protective clothing and eyewear when working with solid dissolving equipment and chemicals.*
- *Regularly inspect all tubing for cracking or deterioration. Replace as needed.*
- *Do not modify supplied power adapter and/or cord.*
- *If supplied power adapter is damaged or frayed, contact manufacturer or local representative.*
- *Always shut off water supply before removing cover.*
- *Disconnect power adapter from supply source before performing any maintenance or service.*

GENERAL INSTALLATION CONSIDERATIONS

- *The Ultra-S is weather-resistant. If installing outdoors, take appropriate measures to minimize exposure to the elements.*
- *All installations should be done in accordance with local plumbing codes and requirements.*
- *Ensure that dissolver is installed on a structurally sound surface that is able to hold up to 50 lbs.*
- *Take proper precautions if installing where water hammer is a concern.*

DISSOLVER SPECIFICATION

- *Weight - 7.5 lbs dry (up to 35.0 lbs with full bottle/4 discs and full reservoir)*
- *Dimensions – 10" w x 23" h x 13.6" d (not including solution outlet valve)*

INSTALLATION INSTRUCTIONS

Select location for installation.

1. Reference **FIGURE A** on page 6 for Ultra-S dimensions.
2. NOTE: Be sure to allow extra room above and below the Ultra-S for product loading and tubing hookups.

Locating the wall mount.

1. Reference **FIGURE B** on page 6 for mount dimensions and hole locations.
2. Using a level, draw a vertical center line on the installation location (see below for installing multiple mounts)
3. Line mounting holes on mount with the vertical line
4. While holding mount in place, mark the 3 hole locations
5. Remove the mount from wall



Installing the mount

1. Installing in hollow wall (i.e. drywall not mounted on stud)
 - a. Using a 1/2" drill bit, drill out the wall at the marked locations in previous step.
 - b. Install toggle anchors into holes.
 - i. Hold metal channel flat alongside plastic straps and slide channel through hole.
 - ii. Hold ends of straps between thumb and forefinger and pull toward you until channel rests flush behind wall. Slide plastic cap along straps with other hand until flange of cap is flush with wall.
 - iii. Place thumb between straps at wall. Push thumb side to side, snapping off straps level with flange of cap.
2. Installing on solid wall (i.e. masonry)
 - a. Using a 5/32" masonry drill bit, drill pilot holes into solid wall.
 - b. Place mount over holes with flat side against the wall.
 - c. Insert masonry screws (not supplied) through mount into holes and tighten.

Hanging the Ultra-S

1. Lift assembled Ultra-S up and slide down onto mount, allowing to mount to fit in the recessed back portion of the reservoir.
2. Ensure unit is level and plumb.

Connecting water supply

1. Connect water supply via 3/8" OD tubing to the inlet assembly by inserting it into the ball valve quick connect. (NOTE: It is recommended to have an inline shutoff valve located upstream of the Ultra-S)
2. Ensure tubing is completely seated in the fitting.

Connecting solution outlet

1. Using PTFE tape, wrap the threads of the outlet ball valve.
2. Screw the outlet ball valve into the 3/8" NPT port located on the bottom of the reservoir. (NOTE: be sure to not cross-thread fitting when installing)
3. Insert 3/8" OD tubing into the outlet ball valve.
4. Ensure tubing is completely seated in the fitting.
5. Connect the other end of the tubing to the chemical pump (or equivalent).

Connecting overflow port

1. Using PTFE tape, wrap the threads of the overflow hose barb.
2. Screw the overflow hose barb into the ½" NPT port located on the bottom of the reservoir. (NOTE: be sure to not cross-thread fitting when installing)
3. Slide ½" ID tubing onto the hose barb.
4. Route tubing to drain.

Inserting product

1. Bottles
 - a. Remove the cover from the Ultra-S and set aside
 - b. Invert bottle and gently place into product receptacle.
 - i. NOTE: Seals may need to be removed from product before inserting.
 - c. Re-install cover onto Ultra-S
2. Discs
 - a. Remove the cover from the Ultra-S and set aside
 - b. Using a 14mm socket and driver w/ extension, remove the bottle nozzle installed in the Ultra-S
 - c. Install disc nozzle. Do not over-tighten.
 - d. Install disc screen with the screen side up.
 - e. Remove product disc from packaging and gently slide into product receptacle.
 - i. NOTE: Up to 4 discs can be installed at a time.
 - f. Place the disc cap on top of the installed discs.
 - g. Re-install cover onto Ultra-S.

Turning on water

1. Slowly open the ball valve located on the inlet assembly.
2. Open any upstream shutoff valves.

Connecting power

1. Only use the supplied power adapter.
2. Plug power supply into a GFCI 120V outlet that is always hot.
3. Connect barrel connector to electronics package.
4. The Ultra-S will run through a series of checks when first powered on. This process takes about 20-30 seconds. When the Ultra-S is first powered on, if the reservoir is empty or mostly empty, the solenoid will energize for 8 additional seconds to check the operation of the system.

INSTALLING MULTIPLE UNITS

When mounting units next to each other, mounts should be installed at least 10 ½" apart on center from each other.

TROUBLESHOOTING

The Ultra-S is equipped with a green and a red LED located on the side of the electronics box. The lights will flash in a certain pattern (see table below) to show the status or error. Whenever the green light is on or flashing, the Ultra-S is still functional. If the green light is not on, then the Ultra-S is in a permanent error state and will need to be reset by unplugging the power and plugging it back in.

LED Flashes	Status	Potential Causes	Corrective Action
Solid Green	System healthy	n/a	n/a
Flashing Green	System healthy & spraying	n/a	n/a
Solid green and flashing red	Overflow state	<ol style="list-style-type: none"> 1. Leak from above is dripping into the Ultra-S 2. Solenoid is leaking past, not closing properly 3. Pump is back flowing up into Ultra-S 4. Defective electronics package – if constant red flashing LED within 45 seconds of powering unit ON and minimal solution in reservoir 	<ol style="list-style-type: none"> 1. Fix leak or install overhang above Ultra-S 2. Replace inlet assembly / install strainer upstream 3. Repair/replace pump 4. Replace electronics package
1 flash red	Solenoid energized for too long	<ol style="list-style-type: none"> 1. Water has been shut-off upstream of the Ultra-S 2. Local shut-off valve on Ultra-S is in the closed position 3. Major leak in the reservoir or solution outlet fitting 4. Pump/eductoer pumped faster than .30 GPM for an extended period of time 	<ol style="list-style-type: none"> 1. Open valve located upstream 2. Open local shut-off valve on Ultra-S 3. Repair/replace bottom or fitting 4. Adjust speed, stroke, and feed time
2 flashes red	Ultrasonic read distance too long	<ol style="list-style-type: none"> 1. Top piece of the Ultra-S was lifted up/off the bottom 2. Major damage/hole in bottom reservoir 3. Faulty electronics package 	<ol style="list-style-type: none"> 1. Properly reinstall the top piece 2. Replace bottom piece 3. Replace electronics package
4 flashes red	Erratic ultrasonic readings	<ol style="list-style-type: none"> 1. Large vibrations where Ultra-S is mounted 2. Faulty electronics package 	<ol style="list-style-type: none"> 1. Fix vibration or install Ultra-S in a different location 2. Replace electronics package

SPARE PARTS

DESCRIPTION	PART NUMBER
Inlet assembly	370550
Electronics package	370170
12VDC power adapter	170171
Inlet valve, 3/8" OD elbow	170551
Outlet valve, 3/8" OD straight	179331
Overflow barb, 1/2" ID	179333
Cover	175001
Disc conversion kit (screen, nozzle, and diverter)	273401

DIMENSION FIGURES

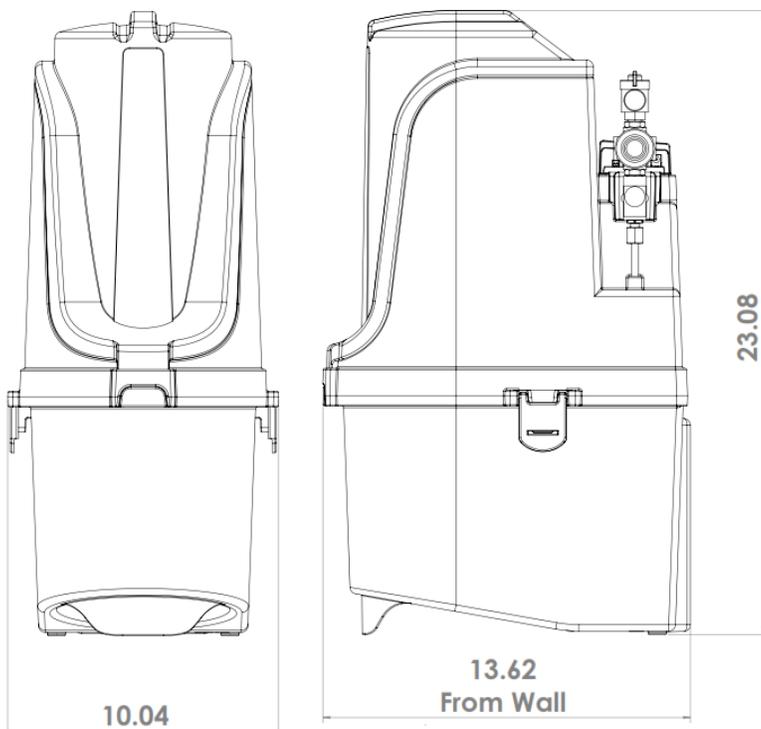


FIGURE A

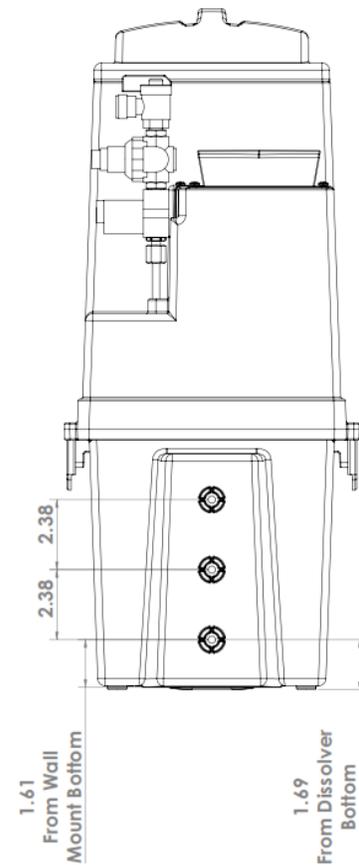


FIGURE B

(DIMENSIONS ARE IN INCHES)

DISCLAIMER

The **enduroTEQ Ultra-S** product is provided without any guarantees or warranties, except the Limited Warranty on Parts set forth below. There is no warranty of merchantability, no warranty of fitness for a particular purpose, no warranty of title, and no guarantee of non-infringement of third party rights. Use of the product by the user is solely at the user's risk.

LIMITED WARRANTY

APTech Group, Inc., will provide a one-year Limited Warranty on parts for the **enduroTEQ Ultra-S** from the receipted date of purchase, provided the **enduroTEQ Ultra-S** has been used by the customer only for distribution of APTech's supported products. Upon proper submission of a claim, in writing, for parts or materials, to APTech Group, Inc., accompanied by a receipt for the purchase, dated within a one-year period from the date of the original purchase, new replacement parts will be provided free of charge, subject to shipping and handling costs.

Who we are

APTech Group manufactures solid, concentrated water treatment products for boilers, cooling towers and other water systems. APTech has developed a product to be easier, safer and more environmentally friendly than traditional water treatment products.

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