



WaterSaver Technologies, LLC

AQUS™

Owner's Manual

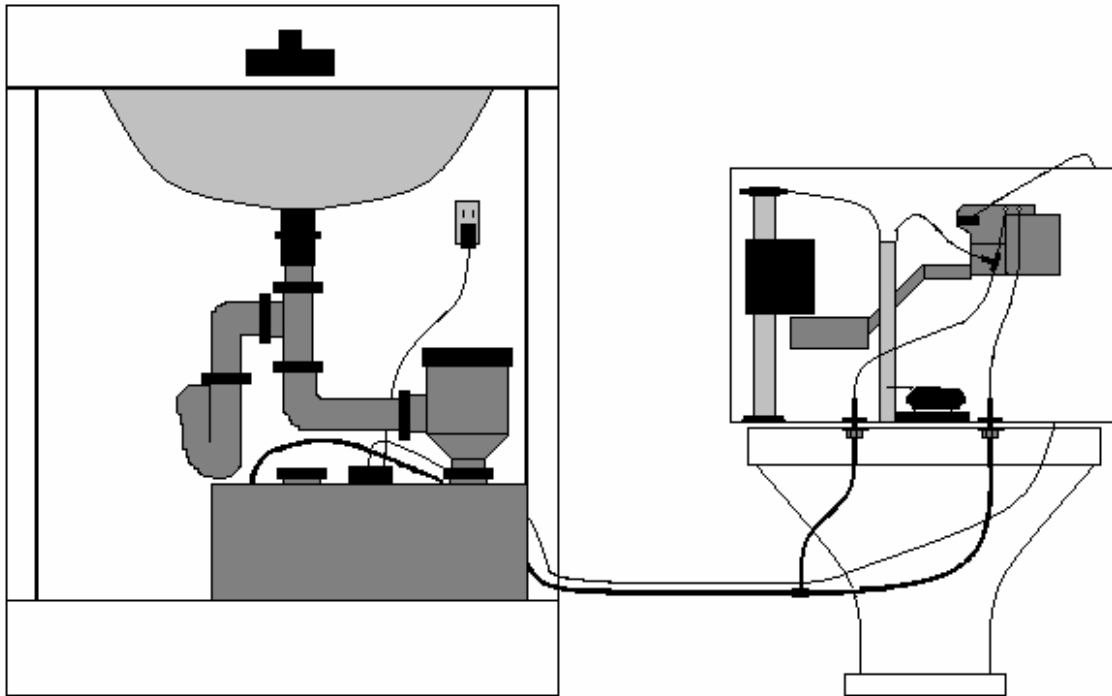
**All of us at WaterSaver technologies would like to thank you
for joining us in our dedication to conserving water, one of the
world's most precious natural resources.**

AQUS™ #WS-06000

WWW.WaterSaverTech.com

AQUS WaterSaver Technologies, LLC

Congratulations on your purchase!



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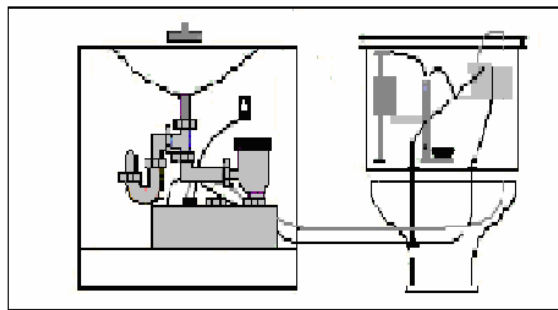
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Safety Instructions



Warning: To avoid fire, electric shock or injury, please follow these safety instructions.

Potential Hazard	Cause	Prevention
Fire	Improperly installed outlet	Engage certified electrician to install 110 volt inside vanity
Electric Shock	Crimped wiring	Prevent wiring from outlet to system from becoming damaged by bathroom materials that are stored on or around system
Poisoning	Ingestion of Chlorine	Keep out of reach of children. Chlorine Is highly corrosive and may be fatal if swallowed. Follow instructions on Chlorine package
	Ingestion of Household Cleaning products	Many common household cleaning products may be harmful if swallowed Do not pour harmful products down bathroom sink. Limit access to toilet bowl by children and pets, as some cleaning products washed down the sink will flow to the toilet bowl



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Typical Bathroom Installation

Thank you for purchasing the Aqus. Properly maintained, your system will provide years of savings in fresh water and waste water charges as well as make a positive environmental impact.

The installation instructions provided are a guide for a typical installation of the system. Depending upon your specific bathroom configuration, these instructions may need to be altered to adapt to the specific bathroom application.

A typical bathroom installation application.

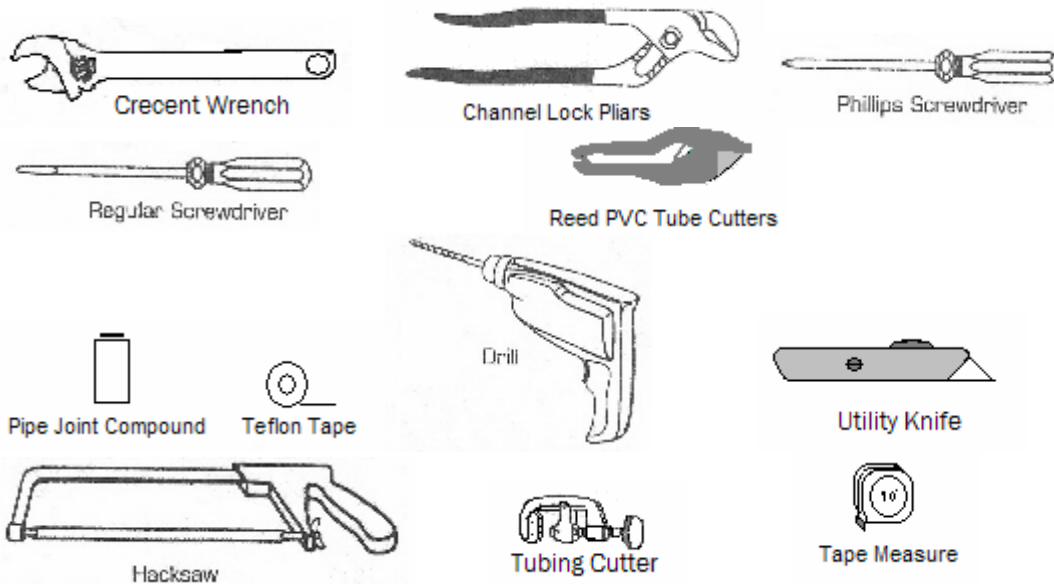
- Wall Drain Outlet 18" rough-in off finish floor.
- Wall Drain Outlet 12" up from vanity cabinet shelf.
- Lavatory vanity and toilet within 15 feet of each other.
- Fluid master 400 A fill valve.
- Two-piece Toilet with Tank
- Gravity Fed Toilet
- 110 Volt Electrical Outlet *inside* the vanity cabinet

NOTE> See Troubleshooting Guide if your bathroom configuration varies for suggestions and alternatives to be considered

Aqus by WaterSaver Technologies

Thank you for purchasing the Aquus. This system is designed to recycle lavatory sink water to flush the toilet and as an alternative to using fresh water. This system is intended for both retrofit and new construction installation. Please read through all instructions carefully before beginning the installation. A step by step guide with illustrations has been provided, along with a list of basic tools you will need. The installation should take approximately one and one half hour.

Tools Required

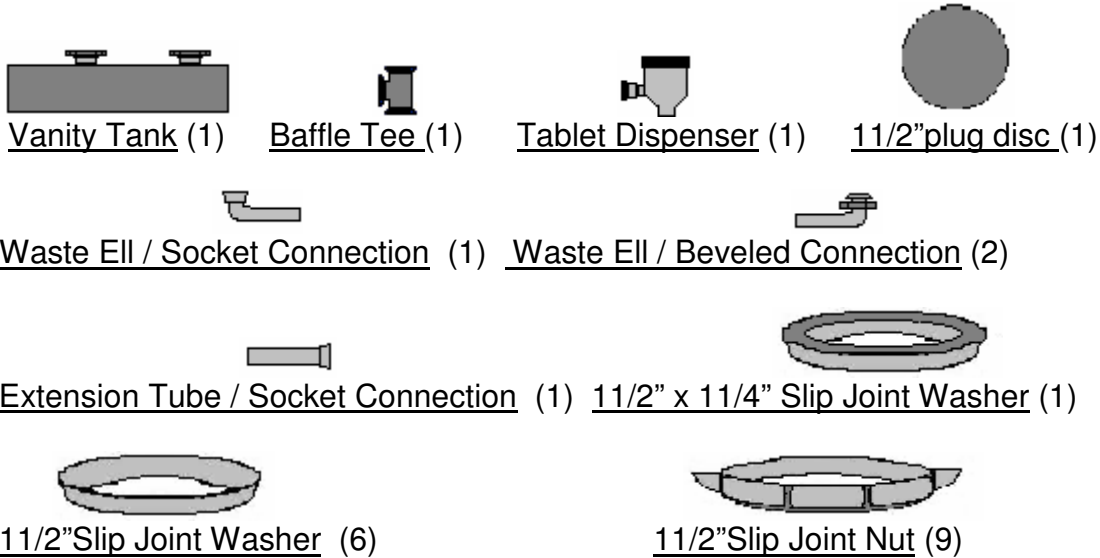


NOTE> A hacksaw or tubing cutter is required

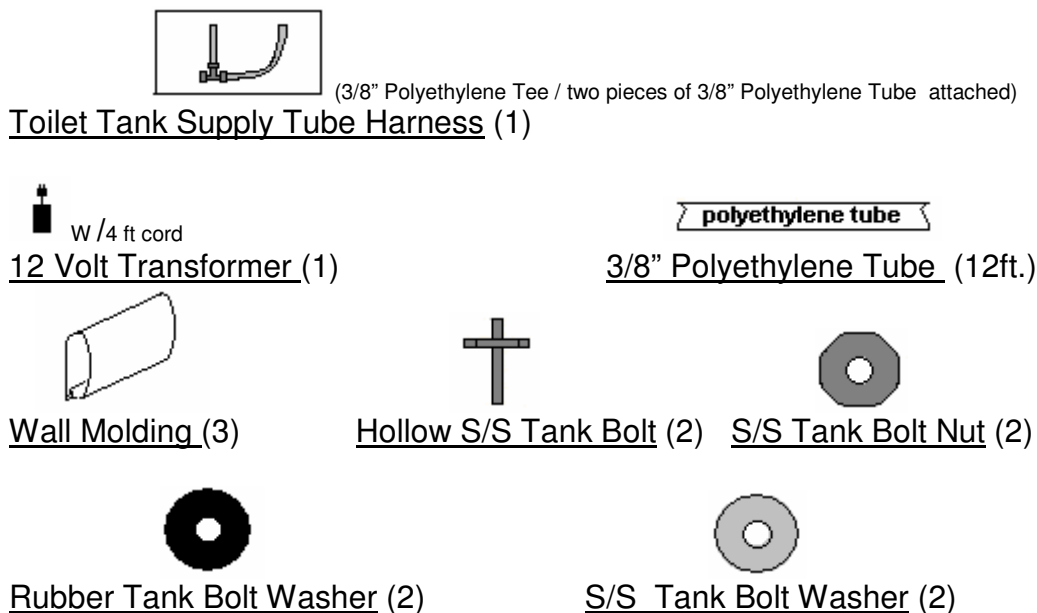
Pre-Installation Instruction

1. Unpack parts on smooth surface
2. Check parts against list on Page #7 and for visible damage
3. Read all instructions carefully prior to beginning installation

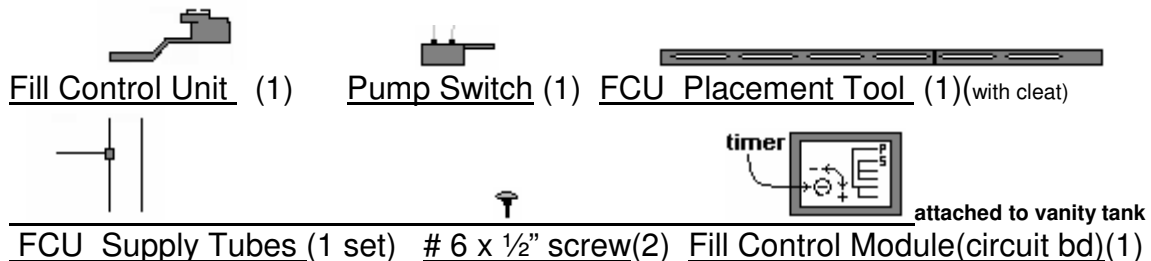
Waste Connection Parts List



Aqus Vanity Tank / Toilet Tank Connection Parts List



Toilet Tank / Fill Control Unit Parts List

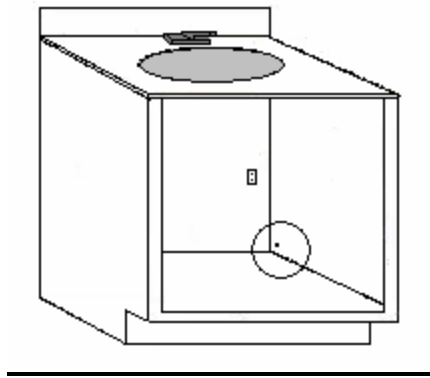


Vanity Preparation

REMINDER> Prior to beginning installation, install a 110 volt electrical outlet *inside* vanity. (Engage a certified electrician to install electrical outlet).

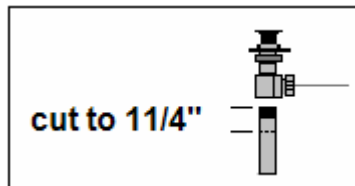
a. Disconnect existing plumbing components between sink pop-up and wall drain (to include 1 1/4" Threaded Tail piece, P-Trap). Lay parts aside for reuse.

b. Drill one hole in the side of the vanity (toilet side), for the discharge hose and Fill Control Unit electrical wire, (1/2" maximum diameter hole) Be sure to drill hole as close to the back wall and baseboard as possible, to allow for proper coverage of the tubing and wiring with the provided wall channel pieces.



c. Shorten threaded tailpiece to 11/4" in length by, using a # 15 ridged tubing cutter, or a hacksaw, and re-install shortened threaded tailpiece onto the pop-up. (use Teflon tape or pipe joint compound on the threaded portion of the tailpiece, before repositioning onto pop-up assembly)

This shortening will allow maximum usable space in the vanity, and allows for the Baffle Tee to be installed as high as possible for re-installation of the P-Trap.



d. Slide the Vanity Tank into the vanity, and arrange the tank for best position to reinstall the P-Trap, and the Tablet Dispenser

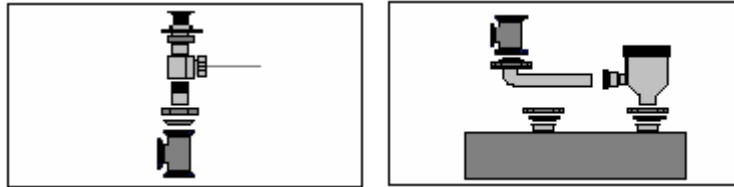
e. For ease of installation **Reminder>** the center line of the lavatory sink drain wall outlet should be a minimum of 12" above the vanity shelf.

Vanity Tank Drain Installation

- a. Install the Baffle Tee on to the 1 1/4" threaded tail piece.
(using, 1 1/2" Slip Joint Nut, 1 1/2" x 1 1/4" Slip Joint Washer)



Do not tighten drain connections completely until all drain fittings are in proper position.

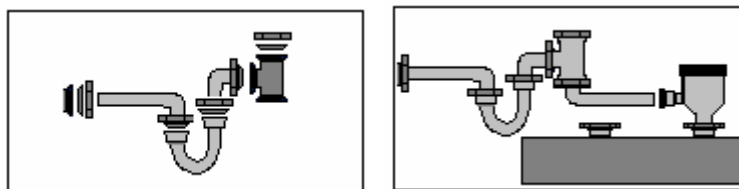


- b. Select one of two threaded openings on the Vanity tank for placement of the Tablet Dispenser.
- c. Select the position which allows for the waste arm connection from the bottom outlet of the Baffle Tee to the Tablet Dispenser inlet.
- d. Secure the Tablet Dispenser onto the 1 1/2" threaded openings using a 1 1/2" Slip Joint Nut and a 1 1/2" Slip Joint Washer.
(Remove the Tablet Dispenser lid and insert three Disinfectant Tablets, close lid.)



Please read the handling instructions on the tablet package before opening.



- e. Cap the unused 1 1/2" threaded Vanity tank opening with a 1 1/2" Plug Disc and secure it with a 1 1/2" Slip Joint Nut.
- f. Connect the P-Trap to the wall drain, and the Baffle Tee side outlet
Note > additional fittings have been provided for alternative drain connections

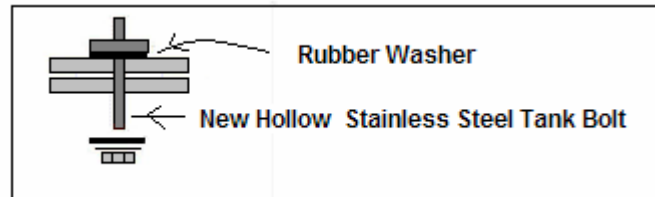


- h. Connect the Tablet Dispenser to the bottom outlet of the Baffle Tee using a 1 1/2" Waste Ell Beveled, and securing it with a 1 1/2" Slip Joint Nut.

Drain Piping Should Look Similar to the Illustrations, and upon completion of all drain piping, tighten all drain fitting joints. This completes the drain piping and Vanity tank installation.

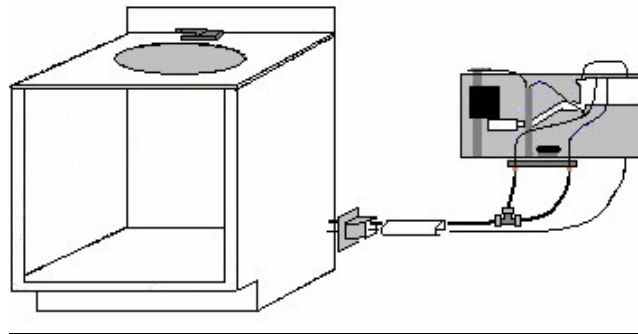
Tank Bolt Replacement

1. Turn off water supply to the toilet tank.
2. Flush the toilet and hold down the handle to remove as much water as possible. Use a sponge or a small towel to remove the remainder of water from the toilet tank
4. Loosen the nuts that secure the tank bolts to the toilet tank.
5.  Remove and replace one Tank Bolt at a time to allow the toilet tank to remain stable.
6. Be sure to install the rubber washer as shown in the illustration
7.  Do not tighten the hex nuts on the tank bolts completely until both tank bolts are in place.
8. Tighten the hex nuts making sure the toilet tank is secure.

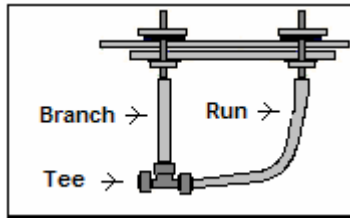


3/8" Polyethylene Tube / Fill Control Module wire Installation

1. Attach the wall molding from the side of the vanity to approximately one inch short of reaching the toilet tank bolt, (bolt closest to the vanity cabinet.). Leave molding open until 3/8" polyethylene tubing and electrical line for the Fill Control Unit are in place.
2. Connect the Fill Control Module (circuit board) wires on the vanity tank. **Note >** If the Fill Control Module cannot be easily accessed, the screws which hold the cover in place may be removed for easier access.
3. Run the 3/8" polyethylene tubing and the Fill Control Unit wires thru the side of the vanity cabinet toward the toilet tank along the wall molding.



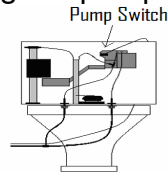
3/8" polyethylene Tube Harness Installation



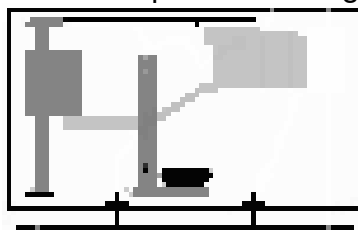
1. Push the polyethylene tube *BRANCH* end onto the new stainless steel tank bolt (bolt closest to the vanity). (The excess tubing may be trimmed for proper length)
2. Push the polyethylene tube *RUN* end onto the second stainless steel tank bolt
3. Insert the polyethylene tube end from the vanity tank into the Tee fitting. (The excess polyethylene tubing may be trimmed for proper length or pulled back into the vanity)

Aqus Fill Control Unit (FCU) Installation

- a. Remove the FCU Placement Tool from the top of the FCU
- b. Attach the Pump Switch to the Fill Control Unit with a # 6 x 1/2" screw. Prior to attaching the pump switch, pre-tap the plastic hole

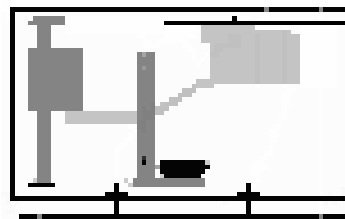


- c. Position the FCU inside the toilet tank. The arm of the FCU should be placed under the float of the Fluidmaster Fill valve.
- d. Adjust the FCU up or down making sure the actuating arm is under the float of the fill valve and parallel to the water line (neutral position).
- e. Place the Placement Tool, cleat side down, against the top of the Fluidmaster fill valve, with the cleat farthest away from the Fluidmaster fill valve.
- f. While holding the Placement Tool against side of the top of the Fluidmaster fill valve, slide the FCU toward the Fluidmaster fill valve till it touches the Placement Tool cleat. This is the correct horizontal position for the FCU.
- g. Turn the Placement Tool over and with the cleat facing up, slide the Placement Tool toward the right side of the toilet tank, secure the Placement Tool on top of the FCU using a # 6 x 1/2" screw. This step braces the FCU and maintains its position during operation.



Positioning Fill Control Unit

Steps E & F.

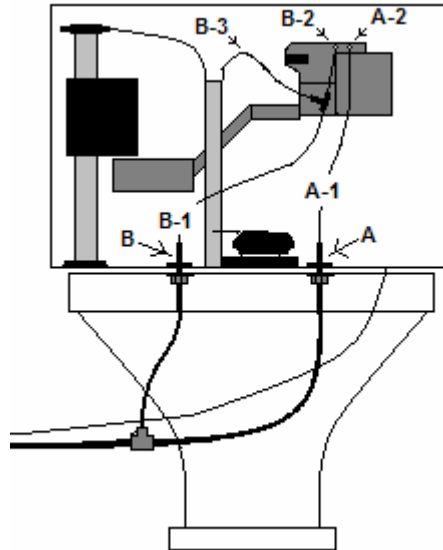


Bracing Fill Control Unit

Step G

Fill Control Unit (FCU) Supply Tube Installation

- a. Connect the FCU Supply Tube (A-1) to the stainless steel (S.S.) Tank bolt (A)
- b. Connect the FCU Supply Tube (B-1) to the S.S. Tank bolt (B)
- c. Connect the Supply Tube, (A-1), to the FCU supply inlet (A-2).
- d. Connect the Supply Tube (B-1), to the FCU supply inlet (B-2).
- e. Connect the Supply Tube, (B-3), to the overflow tube.



Be sure the tubes do not interfere with moving parts inside the toilet tank such as, toilet tank flush handle, tank flapper, or Fill Control Unit actuating arm. The tubes may be trimmed as necessary, to avoid interference with moving parts.



It is important to note, both tubes attached to the overflow tube must always be attached with a holding clip to maintain an air gap.

Final Adjustments

- a. Open the toilet water supply valve and turn on lavatory faucet.
- b. Check all connections for leaks.
- c. When the system is full of gray water, plug in the 12 Volt Transformer to the wall outlet and to the Fill Control Module.
- d. Flush the toilet to check operation.
- e. Make any adjustments necessary to allow the FCU to operate smoothly with no interference of moving parts in the toilet tank or to operate with less/more reused water. SEE Troubleshooting Guide if adjustments are required.

Congratulations

You have successfully completed the installation of the Aqus WaterSaver System.

WaterSaver Technologies

Purchaser / Contact Information

Name	_____
Address	_____
City	_____
State	_____
Zip	_____
Telephone	_____
Email	_____
Date Installed	_____
Comments	_____

Mail To: **WaterSaver Technologies**
 120 Webster Street, # 322
 Louisville, KY 40206

Please return this form to the address above to initiate limited warranty found on page # 16 of this Owner's Manual.

Troubleshooting Guide

Symptom	Cause	Solution
Bubbles in toilet bowl	Heavy usage of hand soaps or detergents	Make several flush cycles to dilute soaps and reduce amount of bubbles
Connections inside Vanity will not fit	Wall drain is NOT 18" off finished floor and/or wall drain is NOT 12" off vanity cabinet shelf	Wall drain is not at normal plumbing code level. If wall drain is too low, then alternatives may inc: * cut opening in vanity floor to recess reservoir * Use shallow P-trap or alternative PVC parts If wall drain is too high, then alternatives may inc: * reverse P-trap * Shim tank higher
FCU will not raise fill valve to OFF position	Brass not adjusted properly	Brass weight is preinstalled to operate properly. Depending upon the fill valve used, there may be obstructions on the bottom of the fill valve that cause the FCU to snag. Moving brass weight may avoid interference
No 110 V plug inside Vanity cabinet	Many bathrooms have 110V plug above vanity cabinet	Engage certified electrician to install 110 V plug inside vanity cabinet
Pump is noisy	Normal pump operation	Pump is no louder than icemaker or electric shaver. Sound is different and requires getting used too
	Pumping without water	When reservoir is dry, pumps labors as it sends air to toilet and noise level increases. Normal bathroom activities resolve noise level
	Pump is failing	Turn water on in sink for 2-3 minutes. Flush toilet. Has noise level reduced? YES. Continue normal operations NO. Possible pump failure. Call for service
Pump runs too long, too short, or intermittantly	Circuit board timer failure	Call for service
Pump runs too long or too short for toilet size	Pump timer is preset for 1.6 gallon gpf toilets	Pump timer located on top of the reservoir may be adjusted to increase or decrease the length of pumping. Adjust the timer clockwise to increase the pump run time. Reverse this process to reduce run time. Move timer in ¼ turn increments.
Reused water in toilet is ugly	Unattractive liquid poured in sink (ex. Coffee, cola)	Rinse clear water down sink and flush toilet to flush unattractive liquid from system

Reused water is not filling tank	Electrical system has failed	
	A. Become unplugged	A. Replug transformer into wall outlet
	B. Switch on FCU failed	B. Call for service
	C. Pump isn't running	C. Call for service
Toilet will not flush	D. Hose is clogged	D. Call for service. DO NOT pour drain unclogging products down sink May damage Aqus system
	Fresh water supply is OFF	Turn ON fresh water supply
	FCU is out of alignment and is interfering with proper toilet operation	Remove toilet tank lid, flush toilet and observe operation. If FCU is interfering then remove Placement Tool from FCU and reposition FCU
Toilet does not have a Fluidmaster 400A fill valve	Toilet is equipped with a different fill valve	Aqus has been successfully tested and designed to function properly with a Fluidmaster 400A fill valve. Other similar style fill valves may be used in conjunction with the Aqus. We recommend replacing existing fill valve with Fluidmaster 400A
Toilet does not have Tank	Aqus was designed to work exclusively with tank type Toilets	Aqus prevents cross contamination of the fresh water system and does not interfere with back flow prevention when used with tank type toilets Replace tankless toilet.
Toilet is dual flush or pressure assist type	Aqus was designed to work with gravity fed toilet tanks where FCU can operate Properly	Replace dual flush or pressure assist toilet with gravity fed toilet
Unpleasant odor	Chlorine tablets have dissolved and reservoir has grown odor causing Bacteria	Step 1. Turn water on in sink and pour a capful of chlorine bleach down drain to shock odor Step 2. Replace tablets
	P-Trap is dry	Turn water on for 5 minutes to reprime P-trap
Time it takes to refill toilet tank	12 V DC Pump Performance	The pump is intended to provide an effective reused water supply at a distance of less than 25 ft with 4 ft head pressure. As distance exceeds 15 ft, the performance begins to Diminish and fill time takes longer
Water backing up into sink	Clog in P-trap or waste line	Clog is downstream from reservoir. DO NOT pour unclogging products down drain. May damage Aqus system. Call plumber to clear obstruction

Maintenance Requirements

The Aquus™ requires annual maintenance. Once a year:

- **Disinfection Tablet Replacement.** The semi-clear tablet dispenser allows the user to visualize the need to replace the disinfection tablets annually. Replacement tablets may be purchased from WaterSaver Technologies, LLC through our website or through your neighborhood retail store. Remove tablet dispenser lid, insert three (3) disinfection tablets and resecure the dispenser lid.
- **Filter Screen.** The filter screen should be removed, rinsed and reinstalled annually. The screen is secured in place with four (4) #6 philips head screws. Remove the screws and pull screen straight up from vanity tank lid. After screen has been rinsed of any residue, reinstall with the four (4) #6 philips head screws.

Product Specifications

Vanity Tank.	Size:	13.5 X 15.5 X 8.75 inches
	Volume:	5.5 gallons
Electrical	Low Voltage	12 Volt DC
Fill Control Unit	Requires a minimum 1.6 gallon toilet tank with fill valve	
Tubing	3/8 inch outside dimension	
Pump	12 Volt DC Submersible. Average flow rate: 1/6 gal/1 min 12 sec.	

Limited One Year Warranty

This WaterSaver Technologies, LLC (WST) product is guaranteed to be free from defective materials and workmanship for a period of one year. Subject to the Exclusions set forth below, WST promises to the consumer to repair, or at the option of WST, to replace any part of this plumbing product which proves to be defective in workmanship or materials under normal use for one year from date of purchase. All costs of removal, transportation and reinstallation to obtain warranty service shall be paid by the consumer. During this one year period, WST will provide, subject to the Exclusions section set forth below, all parts free of charge, necessary to correct such defects if this plumbing product has been installed and maintained in accordance with written instructions furnished by WST with this plumbing product.

Exclusions: WST shall not be liable for incidental or consequential damages, including costs of installation or water damage, or for damages resulting from abuse or misuse or from failure to install or maintain this plumbing product in accordance with the written instructions furnished by WST. The only warranty made by WST is set forth above and all implied warranties which might arise, including the implied warranties of merchantability or fitness for a particular purpose are hereby excluded.

Warranty Service: In order to obtain warranty service or adjustments, the consumer must contact the builder, dealer, distributor or plumber from whom the product was purchased. In obtaining warranty service, all transportation, shipping and freight charges connected with transporting any part of this plumbing product must be prepaid by the consumer. It is the responsibility of the consumer to establish the warranty period by verifying the original purchase date. A bill of sale, cancelled check or some other appropriate payment record may be kept for this purpose. This warranty gives the consumer specific rights. The consumer may also have other rights which vary from state to state.

Please return Purchaser/Contact Information found on page # 13 of this Owner's Manual to begin limited warranty.