

Aqua Otter's Arsenic Solution

Aqua Otter's Arsenic Solution is engineered to remove both Arsenic-3 and Arsenic-5 directly without requiring pre-oxidation to convert As^{3+} to As^{5+} . It relies on a patented crystalline titanium oxide (TiO_2) sorbent that binds arsenic species effectively.

This sets it apart from many anion exchange resins that only target arsenate (As^{5+}) and need an oxidation step to handle arsenite (As^{3+}).

(Installation of a Reverse Osmosis under the sink for drinking water is recommended)



Arsenic Forms Removed: Both As^{3+} and As^{5+} reliably in adsorptive systems

Typical Capacity: ~7-12 g total As per kg media (pH 6.5-8.5)

Residual Levels: Often $<1.5 \mu\text{g/L}$ in treated water under correct conditions

Contact Time: ~1.5-3 min EBCT recommended

Tank Mode: Downflow with backwash in larger tanks

crystalline titanium oxide (TiO_2)

- Typical adsorptive capacity in drinking water applications is roughly 7-12 g of total arsenic per kg of media (pH ~6.5-8.5).
- In controlled (industrial) tests, much higher capacities (hundreds of g/kg) have been observed, but real-world performance will vary with water chemistry and contaminant levels.
- Empty Bed Contact Time (EBCT) in backwash/downflow systems is typically around 1.5-3 minutes for effective arsenic removal at residential scales.



SYSTEM SPECIFICATIONS			
Model #	Flow Rate	Tank Size	Dimensions
NWS-ARSENIC-6	6 GPM	10" x 54"	12w" x 12d" x 61h"
NWS-ARSENIC-10	10 gpm	13" x 54"	15w" x 15d" x 61h"

Aqua Otter's Tannin Solution Softener



Tannins are naturally occurring organic matter (NOM) that are produced by the metabolism of trees and plants and are also formed during the decomposition of vegetation.

Tannins can impart color to water in the range from slightly yellow to reddish brown colors. Tannins can occur in water in almost any location where large quantities of vegetation have decayed, especially in regions where water passes through marshlands and percolates down through peaty soils.

Aqua Otter's Tannin Solution Softener utilizes **SBACR-HP**, an acrylic gel strong base anion resin which is specifically designed for organics and color removal from potable water. The aliphatic structure of the resin allows organic anions to exchange in and out of the resin more easily than anion resins based on a polystyrene polymer structure.



TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

Polymer Structure Macroporous polyacrylic crosslinked with divinylbenzene

Appearance Spherical Beads

Functional Group Quaternary Ammonium

Ionic Form Cl form -

Total Capacity (min.) 0.8 eq/L (17.5 Kgr/ft³) (Cl form) -

Moisture Retention 66 - 72 % (Cl form) -

Particle Size Range 300 - 1200 μm

Uniformity Coefficient (max.) 1.7

Volume Change Cl OH (max.) - - 30 %

Specific Gravity 1.08

Shipping Weight (approx.) 680 - 730 g/L (42.5 - 45.6 lb/ft³)

Temperature Limit 80 °C (176.0 °F) (Cl form) -

SYSTEM SPECIFICATIONS

Model #	Flow Rate	Tank Size	Brine Tank	Dimensions
NWS-TANNIN-6	6 GPM	10" x 54"	15" W x 17" D x 36" H	27" W x 18" D x 61" H
NWS-TANNIN-10	10 GPM	13" x 54"	18" W x 40" H	27" W x 18" D x 61" H

Aqua Otter's Acidic Neutralizer

Aqua Otter's Acidic Neutralizer uses natural calcite media to gently raise the pH of acidic water as it flows through the tank. When acidic water comes into contact with the Calcite it slowly dissolve the calcium carbonate media to raise the pH. By balancing your water's acidity, it helps prevent the corrosion of pipes and reduces the chance of copper, lead, and other metals leaching into your home's plumbing system—protecting both your water quality and your investment.



****Depending on pH and service flow, the Calcite bed will have to be periodically added to as the dissolved calcite depletes.**



Calcite Media:

- Naturally occurring calcium carbonate media.
- Corrects pH only enough to reach a non-corrosive equilibrium.
- Periodic media refill is necessary to maintain system and water quality.

These filters are effective for neutralizing acidic waters and improving water quality.

MAX FLOW RATE	TANK SIZE	LBS of MEDIA
10 gpm	10" X 54"	100 lbs
20 gpm	13" X 54"	150 lbs

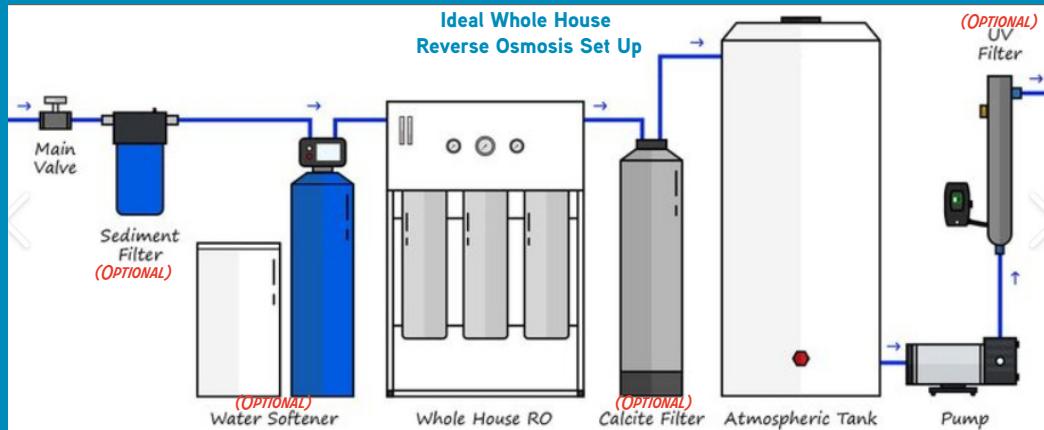
Aqua Otter Whole House Reverse Osmosis

The **Aqua Otter Whole House Reverse Osmosis System** provides the purest water possible for your entire home.

Unlike standard filters or softeners, whole-house RO removes nearly all impurities—including dissolved minerals, salts, heavy metals, chemicals, and more—delivering bottled-water-quality from every tap, shower, and appliance.

Because it purifies every drop entering the home, this system uses **advanced equipment**, storage, and pre-filtration, making it a premium solution for customers who want the absolute highest water quality available. For homes with very hard water, high TDS, problem contaminants, or well-water challenges, whole-house RO is the only way to achieve truly perfect water.

Annual maintenance typically includes replacing pre-filters, post-filters, and RO membranes based on your home's water use and incoming water quality.



Aqua Otter Repressurization Systems

The Repressurization Systems are pre-plumbed and ready to use when you receive them. These systems are custom built to your specific application. Included in the plumbing package 1" inlet threaded bulkhead fitting, float switch with 20 foot cord, 1/2" overflow threaded bulkhead fitting w/plug and 1" bulkhead fitting at bottom of tank w/1" foot valve. All plumbing is pre-installed in the storage tank.

Follow these steps to order...

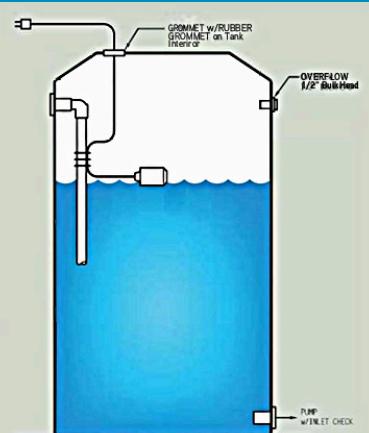
1. - Choose the Repressurization Pump from above
2. - Choose one of the storage tanks from the following page
3. - Choose one of the plumbing packages below, your plumbing package must match the voltage of your RO System

RP-110V

110 Volt, Repressurization Plumbing Pkg.

RP-220V

220 Volt, Repressurization Plumbing Pkg.



VERTICAL TANKS

ST2343	65 Gallon, 23" W x 43" H
ST3155	165 Gallon, 31" W x 56" H
ST3678	300 Gallon, 35" W x 78" H
ST4649	305 Gallon, 46" W x 50" H
ST4872	500 Gallon, 48" W x 73" H
ST48102	750 Gallon, 48" W x 102" H
ST6479	1000 Gallon, 64" W x 79" H



Whole House RO

Membrane Quantity:	1
Item Weight:	90.00 lbs per EA
Membrane Size:	4"
RO Model:	Simplx Series

4" SIMPLX ROS - 110 VOLT SYSTEMS

NRO-S-1440F-2500-1-XXX SIMPLX RO, 1x4x40 Membrane - 1600 GPD, 110V



HQ800H 1 hp, 110v, 1" SS Booster Pump

Model	Power (HP)	Phase (Ø)	Voltage (V)	Amp's (A)	Preset activation pressure (psi)	Max discharge pressure (psi)	Q max. (GPM)
HQ800H	1	1	115 or 230	10.0 or 5.0	31	64	26.4