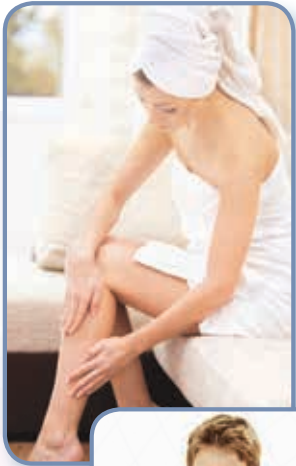


Hydrotech



PRODUCT CATALOG

Water Conditioning Products



Forward Thinking!

Innovation, Quality & Value

Continuous Innovation, Leading Edge Technology

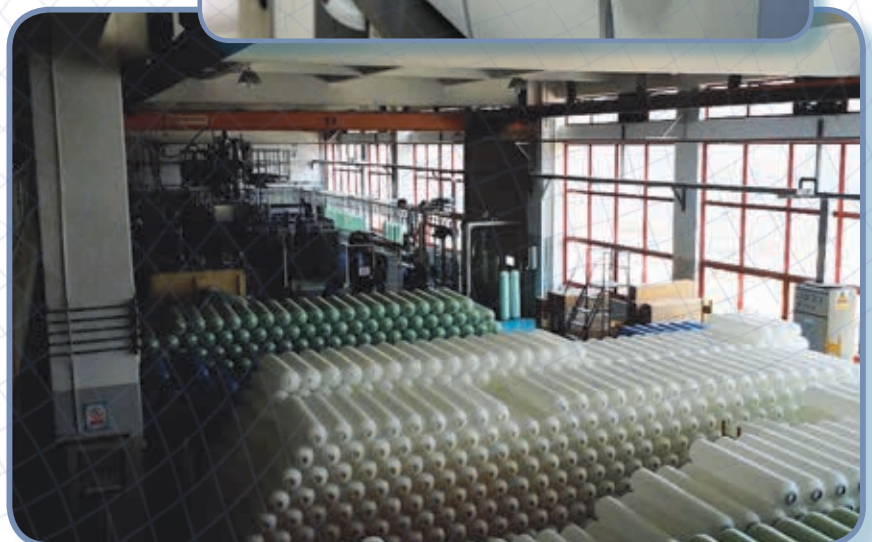
1. The world's most advanced water conditioning manufacturing facility
2. Over 925,000 sq ft featuring the newest, most advanced robotic technology
3. Over 1M unit production capability
4. Professional North American Engineering
5. Dedicated Product Development Centre
6. Injection & blow molding, tank winding and assembly

Quality Products That You Can Count On

1. Dedicated Quality Assurance Team
2. ISO9001:2008 Quality Assurance Certified
3. State-of-the-art robotics for precise, consistent production
4. NSF Certified Tanks & Control Valves
5. WQA Gold Seal Softeners Certified to NSF / ANSI 44 Standards
6. Chemical Analysis Laboratory
7. World-class Testing Laboratories

Value That You Deserve

1. Innovative, quality products at very competitive pricing equals greater value
2. Complete dealer training & support to ensure success in the market
3. Superior technical and application support
4. Experienced field support & responsive customer service
5. Professional marketing materials
6. Water testing services and product recommendations



New innovative, high-quality products at the lowest possible cost has allowed Hydrotech to grow in today's competitive global economy. Better value for your hard-earned dollar.

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147- 151	Water Conditioning Glossary

Industry Leaders in Customer Service

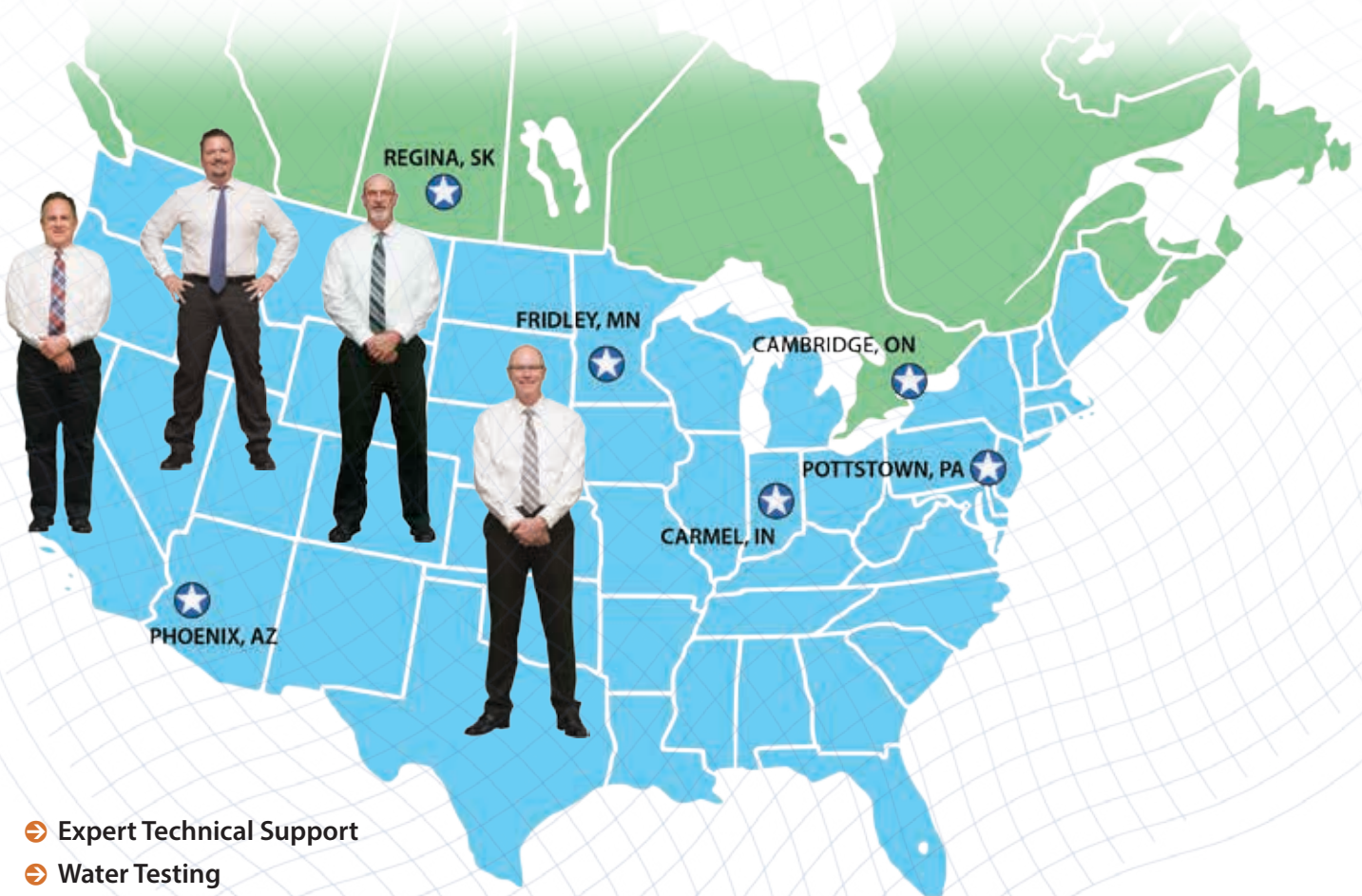
We are the fastest growing, most innovative manufacturer of high-quality water conditioning products in the world! No one is doing what we are!



1000+ Years of Industry Experience

Value-Added Support From The Industry Experts

- ▶ Our **Regional Sales Managers** are in the field learning your business, understanding your needs and helping you grow! We have 35 RSM's with **700+** years of experience!
- ▶ Our **Customer Service Team** provides best-in-class technical support. Our 10 CSR's have over **200+** years of experience!
- ▶ Our **Dedicated Commercial Engineering Division** has the best Professional Engineers and Technologists with over **125+** years of combined experience



- ➔ Expert Technical Support
- ➔ Water Testing
- ➔ Product Selection & Sizing
- ➔ Order Placement
- ➔ Troubleshooting
- ➔ Specialized Commercial Engineering

Presidents Message



Since becoming involved in the water conditioning industry over 40 years ago, my vision has always been to create more value for the Professional Water Dealer by manufacturing innovative, high quality water conditioning products at the lowest possible cost.

Hydrotech North America is unlike any other competitor in the market in that we eliminate a step in distribution. Our products come right from the manufacturing floor to our company-owned regional assembly & distribution facilities and then directly to you.

Our Dealer Direct Model offers several unique advantages:

- ➔ **Factory Expertise** - Our people are true experts on our products working directly with our Product Development and Quality Assurance Teams. Whether it is our Field Sales Team or our Inside Customer Service Team, their factory training and focus on only our products ensures that you will always have expert support only a phone call away.
- ➔ **Lower Cost** - Our business model is streamlined to reduce unnecessary cost common in multi-step distribution models. Because we are leaner the savings can be passed on to you.
- ➔ **Dealer Driven Features** - The direct link to manufacturing ensures effective and meaningful two way communication. Ideas generated in the field are shared directly with our Product Development Team so we can quickly innovate products with features that are meaningful to our Dealers.

As owners, our Management Team has a vested interest in ensuring we provide our customers with the best value for their dollar. With over 1000 years combined experience our team has grown up in this industry and share a common passion.

We are excited about our future plans to continue expansion of our Regional Assembly & Distribution Centers throughout North America as well as the establishment of a new state-of-the-art tank manufacturing facility in the United States.

The Hydrotech North America Team is eager to show you how we can help improve your water dealership by providing products with better features, quality and overall value - all backed by experienced, dedicated support.

A handwritten signature in black ink, appearing to read "D. F. ...".

President
Hydrotech North America

Capabilities

Operations & Product Development



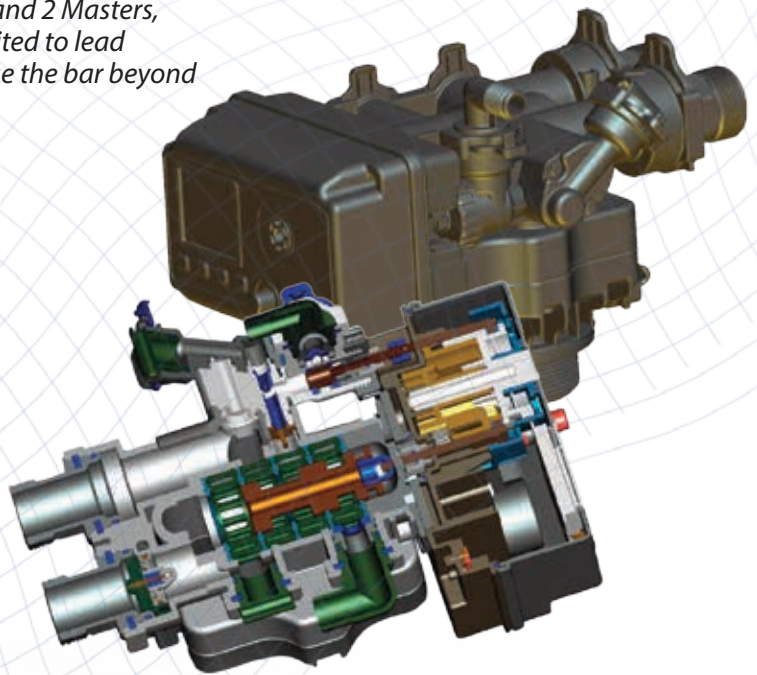
Toby Hughes P. Eng.
Chief Operations Officer

"The Hydrotech Product Development Center and manufacturing operations are beyond comparison in our industry. The investment in technology and commitment to leading manufacturing practices & innovation has resulted in higher quality and lower cost products with meaningful 'Installer / Service Driven' features. This all adds up to better value for our customers."

"My staff of 17 Professional Engineers, including 3 PhD's and 2 Masters, are some of the brightest minds in the industry. I am excited to lead Hydrotech's Global Engineering and Operations and raise the bar beyond industry standards and our customers expectations."

A handwritten signature of Toby Hughes in black ink.

Toby Hughes, P.Eng., Chief Operations Officer

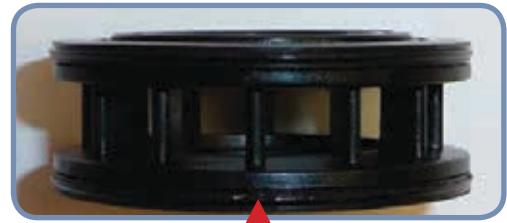


Capabilities

Control Valves

Hydrotech NSF Certified control valves meet or exceed the most vigorous industry performance and reliability standards. Familiar piston, seal and spacer design has been enhanced to improve performance and product life. The addition of a piston stabilizer reduces the side load force between the piston rod and end plug seal as it firmly guides the piston while it travels up and down. An added rib on the seal improves the sealing pressure so that the valve can withstand over 700 psi! These are just a few of the design features that make Hydrotech valves more reliable and better performing.

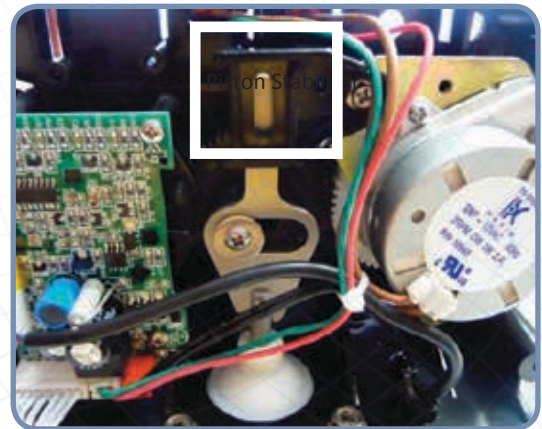
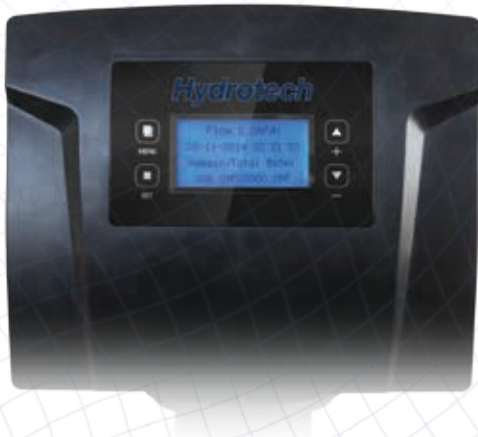
NSF Certified chloramine resistant rubber seals



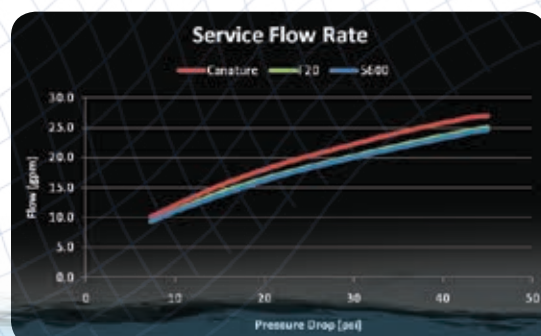
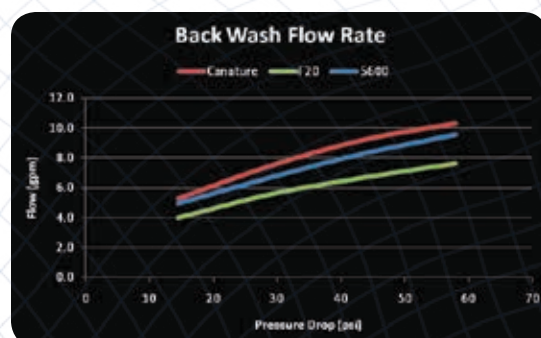
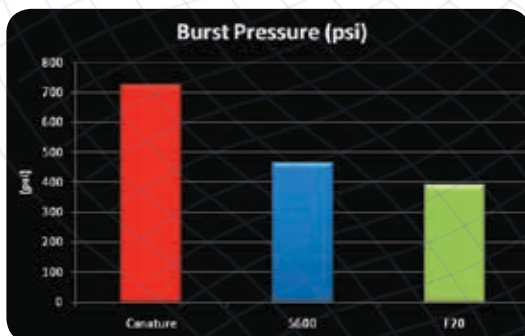
Added Rib Improves Seal



Hydrotech NSF/ANSI 44 Certified control valves meet or exceed competitive equivalents in all four key measures:
1) Service Flow Rate, 2) Back Wash Flow Rate, 3) Burst Pressure and 4) Cycle Testing.



Piston Stabilizer



Capabilities

Fiberglass Tanks

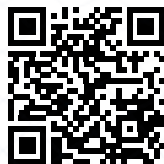


Hydrotech NSF Certified filament wound tanks are not only strong and reliable but the finish is unparalleled in the industry. No need for a tank jacket (although we offer those too) with the neatly wound, high gloss finish. Strict tank height control measures mean no surprises when installing a duplex system.

Tanks ordered as a component can come filled with high quality WQA approved resin, saving you money on freight.

Watch the video >>

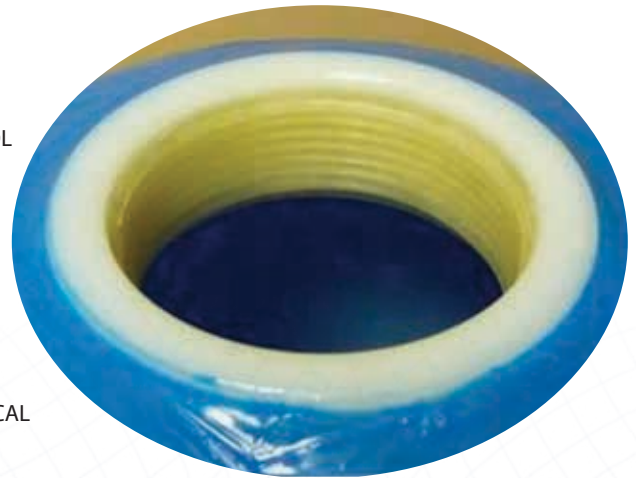
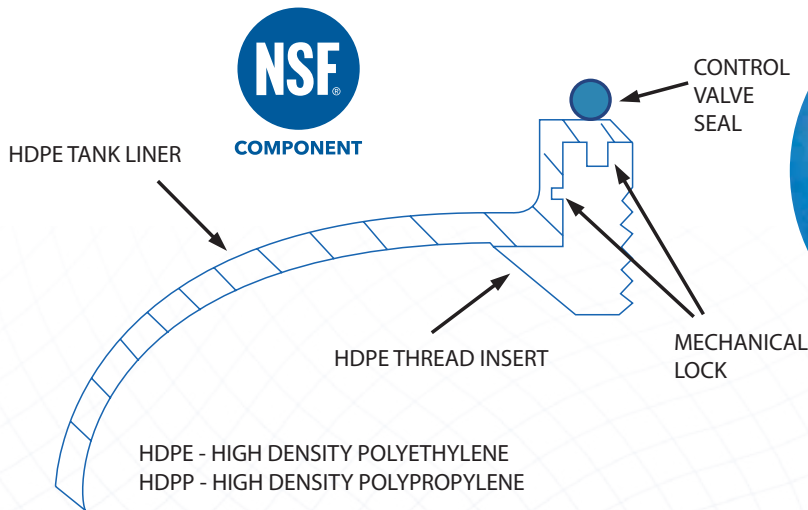
www.hydrotechwater.com/tank-manufacturing.asp



Capabilities

The Industries Most Impressive Pressure Tank

The Hydrotech NSF Certified fiberglass reinforced pressure tank is designed to eliminate any potential leaks since there are no welds, joints, or seams in the tank liner.

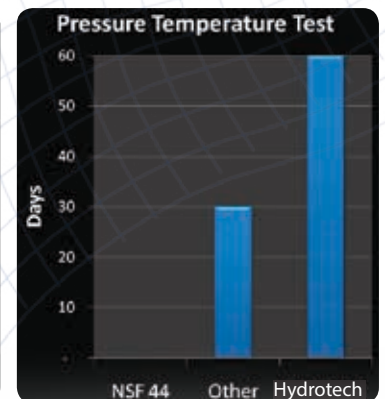
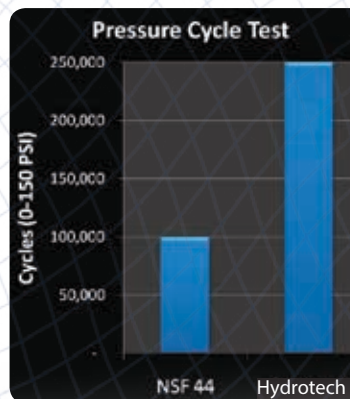
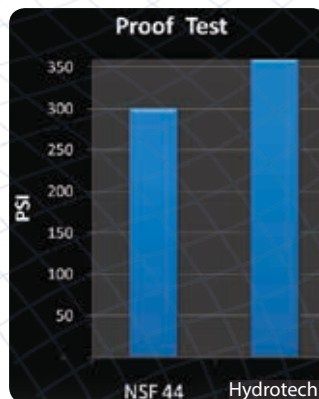
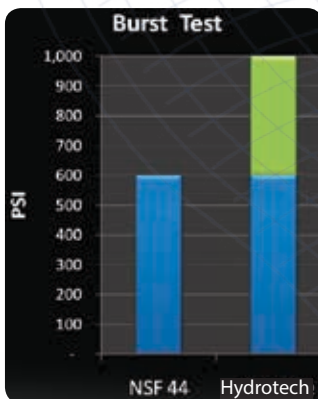


With over 1,000,000 tanks without a failure we know that our tanks perform in the field! Imagine never having to deal with another leaky tank! Tank liners are blow-molded from high quality, high strength engineering materials.



Each tank is wrapped with miles of continuous high strength glass rovings with the most advanced computer aided winding equipment in the world! Hydrotech tanks offer unmatched strength, durability and resistance to temperature and corrosion.

Our tanks are built to surpass all NSF criteria:

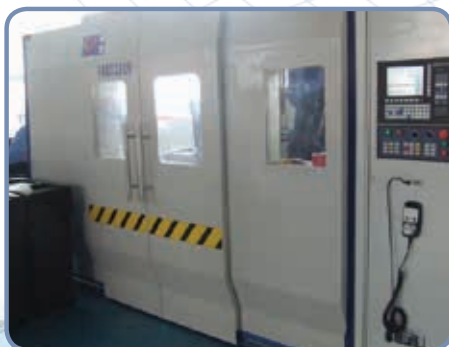


Capabilities

Plastic Department



Blow and injection molding machines produce all brine tanks, cabinets, tank jackets, salt grids, brine wells, safety floats, airchecks, bypass and installation accessories in house. We use NSF Certified high-density polyethylene for exceptional durability and crack resistance.

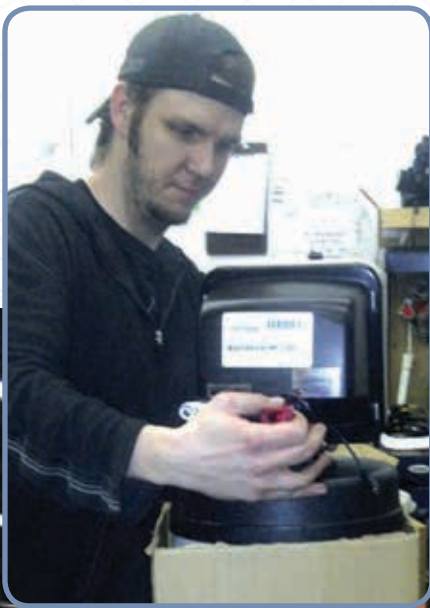


Capabilities

Assembly, Testing & Distribution



All water softeners and whole-house filters are engineered, assembled, tested and distributed from our North American Regional facilities. All control valves are 100% wet tested and air tested before leaving the factory. Control valves are then set up to engineering specifications for the particular unit, air tested a second time and then assembled into the finished product. All assembled products are packaged in durable, double walled high impact cardboard to ensure products arrive undamaged.



Mike Cummings assembling a softener in Regina, SK facility



Capabilities

Quality Assurance Department

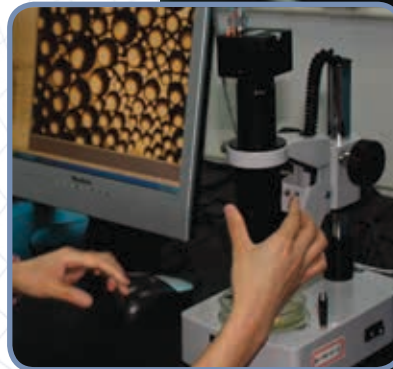
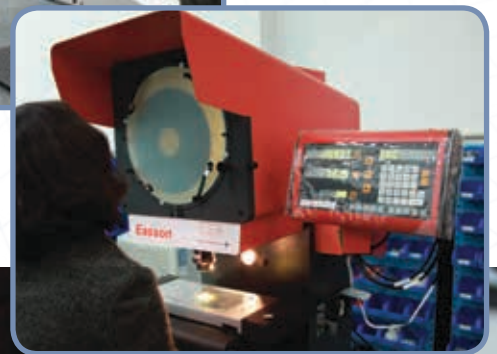
Hydrotech employs a strict and formalized quality control program. The 925,000 sq. ft. Shanghai Manufacturing facility is ISO9001:2008 Quality Assurance and ISO 14001:2004 Environmental Management Systems standards certified.

Quality Control systems:

- ⇒ Document Management
- ⇒ Receiving Inspection
- ⇒ In-process Quality Control
- ⇒ Final Inspection
- ⇒ Engineering Change Orders
- ⇒ First Piece & Production Part Approval
- ⇒ Test Equipment Calibration
- ⇒ Statistical Process Control
- ⇒ Vendor Quality Management
- ⇒ Customer Feedback System

World Class Testing Laboratory

- ⇒ **Burst Testing:** High pressure testing of tanks and valves to determine the maximum burst strength.
- ⇒ **Cycle Pressure Testing:** High pressure cycling testing to simulate the fatigue strength of the tanks and valves over their life.
- ⇒ **Flow Bench:** Precisely measure flow rates and pressure drops.
- ⇒ **Reliability Testing:** Continuously cycling the valve through regeneration while taking flow measurements and counting the number of cycles.
- ⇒ **Computer Aided Optical Comparator:** Used for precise measurement of very small details such as fillets or radius's.
- ⇒ **Coordinate Measuring Machine (Cmm):** Used for precise geometrical x, y, and z measurement coordinates.
- ⇒ **3d Prototype Printer:** Makes 3D models for rapid prototyping.
- ⇒ **Chemical Analysis Laboratory:** Complete chemical analysis of raw materials including metals, plastics and media to ensure quality and integrity.



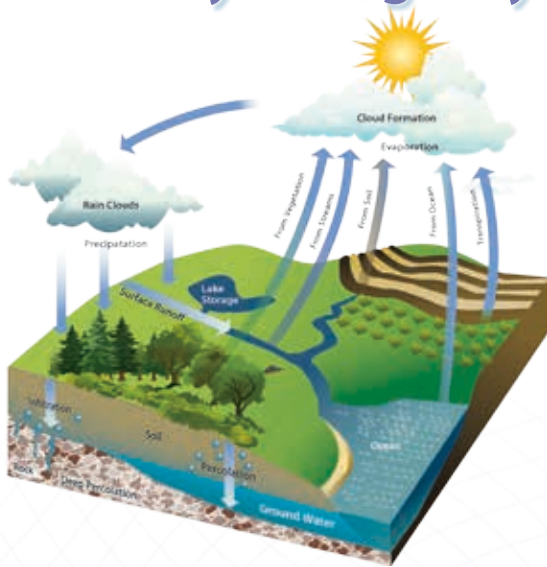
Water Conditioning Basics



*The Hydrologic Cycle
Guidelines for Solving
Water Problems, Terminology,
Water Analysis,
Sizing Parameters*

Water Conditioning Basics

The Hydrologic Cycle



The total area of the earth is composed of 2/3 water, making it one of the most plentiful and most important materials available. Without potable water, mankind cannot survive.

Pure water consists of two parts hydrogen and one part oxygen, chemically combined to form pure water.

The only pure source of water is the earth's atmosphere (sometimes called the hydrological cycle). Impure water from the earth's oceans, lakes, rivers and surface evaporates into the atmosphere, then condenses to form rain droplets which are totally pure. The above process operates basically the same as a man-made still, which evaporates all the impurities from the water, then returns the condensates into pure water. If this process did not exist, there would likely not be enough potable water to support the earth's population.

“The only pure source of water is the earth's atmosphere.”

The pure water vapor, which forms in the earth's atmosphere (clouds), begins to pick up impurities. As it begins to fall to earth in the form of rain, snow, etc., impurities are immediately absorbed. These impurities may be dust, micro-organisms, gases, etc. - at least a little of everything found in the atmosphere on the way to the surface.

The rain or snowfall finds its way to various sources of water supplies on the earth's lakes, rivers, oceans or it may soak into the ground and become a part of an underground stream or lake.

Characteristics of Various Water Sources

Rain Water

After the water picks up impurities in the atmosphere and percolates through the ground, it comes into contact with carbon dioxide and then forms carbonic acid. This dissolves some of the mineral content of the soil or rock it contacts, thus adding these minerals to the water.

Surface Water

Water from streams may be turbid due to the presence of silt, clay, etc. However, in larger surface water, a greater amount of self-purification takes place through aerobic digestion, plant life, fish, etc. and the quality of the water could change to a great degree.

Ground Water

Normally picks up the minerals it flows through. As a general rule, water from deep wells contains a higher mineral content and is less likely to contain organics or turbidity. Water from shallow wells is usually lower in mineral content and may be subjected to pollution or other bacteria which is available from various sources nearby (e.g. spring run-off through forests and hills, plants, industrial wastes, etc. which will all pass various bacteria into the water).

Impurities

Impurities in water are divided into two classifications:

1. Dissolved Solids

Those which naturally dissolve into water. NOTE: Gases may also dissolve into water unless they combine chemically with other impurities. They will be released into the atmosphere upon boiling and are not truly classified as dissolved solids. Upon evaporation, only the dissolved solids would remain in the actual mineral form and then can be analyzed by actual weight of the various elements.

2. Suspended Solids

Consist of clay, mud, silt, etc. and will not dissolve into water naturally but remain as such in their present state.

Water treatment and pollution control is one of the largest and most important industries in the modern day world. As can be seen from the preceding information, water treatment is a very broad and varied field and chemical analysis of certain water supplies is virtually impossible to completely break down. In time, modern man may discover additional information regarding the field of water treatment and the entire cycle of the earth's largest and most important single resource.

The following sections will attempt to clarify some of the more common problems and solutions presently available.

Water Conditioning Basics

Guidelines for Solving Water Problems

PROBLEM	SYMPTOM	CAUSE	CORRECTIVE EQUIPMENT
Hard Water	Spotting on dishes and glassware; scale on inside of water heater, pipes and water-using appliances; soap curd and bathtub ring; clothes look gray and dingy.	Calcium and magnesium in water, measuring 1.0 gpg or more.	Water Softener (Max. Hardness 100 gpg) (Max. Clear Water Iron 1.5 ppm)
Clear Water Iron (Ferrous)	Yellow, brown or rusty stains on plumbing fixtures, water-using appliances and fabrics; metallic taste in foods and beverages; water is clear when drawn from the faucet but oxidizes when exposed to air, then changes color ranging from yellow to brown.	Iron in the water measuring 0.3 ppm or more.	0.3-1.5 ppm Water Softener. 1.5 - 10.0 ppm HIM Specialty System Softener. 1.5-30 ppm Chemical Free Iron Filter (Note 1).
Red Water Iron (Ferric)	Same symptoms as Clear Water Iron but iron has already oxidized and has a yellow to rust color when drawn from the faucet.	Iron in the water measuring 0.3 ppm or more.	0.3-30 ppm Chemical Free Iron Filter (Note 1). 0.3 - 7.0 ppm Iron & Sulfur Filter.
Bacterial Iron	Same symptoms as Clear & Red Water Iron but can have clumps or balls that may foul plumbing lines and other water-using appliances; particularly noticeable as a yellow to reddish slime in toilet flush tanks.	Iron bacteria are a group of bacteria which thrive in ironbearing water, utilizing iron as an energy source. This bacteria is not a health hazard.	Chemical Free Iron Filter (Note 1). Chemical feed pump feeding chlorine followed by a Multimedia Filter (Note 3).
Manganese	Blackish stain on fixtures and laundry; manganese content above 0.05 ppm causes stains.	Interaction of carbon dioxide or organic matter with manganesebearing soils. Usually found in combination with iron.	0.05-1.0 ppm Chemical Free M Iron Filter (Note 1) Iron & Sulfur Filter (Note 2).
Acid Water	Blue/green or rusty stains and corrosion of plumbing fixtures and other water-using appliances; pitting of porcelain and enamel fixtures and dishes. Pin holes in copper plumbing lines.	Generally associated with water with a pH value of less than the neutral 7.0.	pH 6.0-6.9 Neutralizing Filter. pH 4.0-6.9 Chemical Feed Pump feeding soda ash. Consult our Customer Service Dept.
Aggressive/Corrosive Water	Same symptoms as Acid Water but pH is 8.5 or higher.	Alkalinity and carbon dioxide or high dissolved oxygen in water. Electrolysis - two dissimilar metals in plumbing lines.	Consult our Customer Service Dept.
Hydrogen Sulfide	Rotten egg taste and/or odor. Turns copper plumbing lines black. Very corrosive.	Hydrogen sulfide is a dissolved gas found in some water supplies.	Up to 5.0 ppm BIF Chem Free Iron Filter Up to 3.0 ppm use an Iron and Sulphur filter 3.0 - 15.0 ppm Chemical Feed Pump feeding chlorine followed by a Multi Media Filter (Note 3)
Marshy, metallic or chlorine taste and/or odors	Objectionable tastes and/or odors other than hydrogen sulfide.	Dissolved minerals or gases; organic contamination or chlorination.	Activated Carbon Filter for whole house water supply or Taste & Odor Cartridge Filter for individual faucets.
Turbidity (Sand/ Sediment)	Foreign particles, dirty or cloudy water.	Tiny suspended particles that are the result of water main scale or silt. Private wells often contain sand or clay.	Multimedia Filter for whole house water supply or a Sediment Cartridge Filter for individual faucets.
Tannins	Yellow or brown tint or cast in water supply; tannins measuring 0.5 ppm or higher may cause staining and/or interference with various water treatment processes.	Result of decaying vegetative matter.	Organic Color Removal Filter. Consult our Customer Service Dept.

Note 1 - Water must have a minimum pressure of 20 psi, pumping rate of 5 gpm and a pH of 6.5 or higher for proper operation. Most water supplies contain calcium and magnesium which are not removed by an iron filter. We recommend following an iron filter with a water softener.

Note 2 - Oxidation of manganese is more pH dependent than iron. Therefore a pH of 8.2 or higher must be maintained. If the manganese level is >2.0 ppm or bacterial iron is present, consult our Customer Service Department.

Note 3 - This system also requires a retention tank to allow adequate contact time (minimum 20 minutes). An optional activated carbon filter for the whole house water supply or a taste & odor cartridge filter for individual faucets may be installed to remove any objectionable taste or odor.

Water Conditioning Basics

Terminology

Grains per Gallon - gpg

1/7000 of a pound - normally used in relation to hardness.

Parts per Million - ppm

One part dissolved material in one million parts of water. Used as a measurement for iron, manganese, TDS, hydrogen sulfide, chlorides, sulfates and tannins.

Milligrams per Liter - mg/l

For our purpose, same as ppm. Normally used for a more accurate measurement or where small quantities of certain elements cause big problems in relation to iron, manganese, sulfur, nitrates and silica.

Converting gpg to ppm or mg/l

1 gpg = 17.1 ppm (mg/l)

Total Dissolved Solids - TDS

The weight of solids, per unit volume of water, which are in true solution. Can be determined by the evaporation of a measured volume of filtered water and determination of the residue weight. A common alternative method to determine TDS is to measure the conductivity of water.

Hardness

A characteristic of natural water due to the presence of dissolved calcium and magnesium. Water hardness is responsible for most scale formation in pipes and water heaters and forms insoluble "curd" when it reacts with soaps. Hardness is usually expressed in grains per gallon (gpg), parts per million (ppm) or milligrams per liter (mg/l), all as calcium carbonate equivalent.

Ferric Iron

Iron that is oxidized in water and is visible. Also called red water iron.

Ferrous Iron

Iron that is dissolved in water. Also called clear water iron.

pH

pH is a measure of the intensity of the acidity or alkalinity of water on a scale from 0 to 14, with 7 being neutral. When acidity is increased, the hydrogen ion concentration increases, resulting in a lower pH value. Similarly, when alkalinity is increased, the hydrogen ion concentration decreases, resulting in higher pH.

The pH value is an exponential function so that pH 10 is 10 times more alkaline than pH 9 and 100 times more alkaline than pH 8. Similarly, a pH 4 is 100 times more acid than pH 7.

pH Scale

	14.0	
	13.0	Household Lye
Extremely Alkaline	12.0	Bleach
Extremely Alkaline	11.0	Ammonia
Extremely Alkaline	10.0	Milk of Magnesia
Strongly Alkaline	9.0	Borax
Moderately Alkaline	8.0	Baking Soda
Slightly Alkaline	7.0	Sea Water
Neutral	6.0	Blood
Slightly Acid	5.0	Distilled Water
Moderately Acid	4.0	Milk
Strongly Acid	3.0	Corn
Extremely Acid	2.0	Boric Acid
Extremely Acid	1.0	Orange Juice
Excessively Acid	0.0	Vinegar
Very Extremely Acid		Lemon Juice
		Battery Acid

Note: A complete glossary can be found in the Water Conditioning Glossary section.

Water Conditioning Basics

Water Analysis

For correct sizing and application of water conditioning equipment, a water analysis is required. A basic water analysis includes tests for the following:

- **Hardness**
- **Iron**
- **Manganese**
- **pH**
- **TDS (Total Dissolved Solids)**

Water samples should be taken as near the source as possible and represent the average water condition. Clean containers must be used. When performing the analysis, the test equipment must be clean and rinsed with the test water and the test water should be between 68°F and 77°F (20°C and 25°C). Use rubber stops as supplied. Do not use your fingers as contaminants and acids could affect test results.

Additional tests can be performed for tannins and hydrogen sulfide (H₂S). The test for H₂S must be performed on-site for accurate results. Special tests can be performed for chlorides, sulfates and alkalinity by specified laboratories. If it is suspected the water supply is contaminated with coliform bacteria or nitrates, a sample must be collected in an approved sterilized container and submitted to a government approved laboratory. Iron bacteria will not be detected with the standard iron test and can be tested for by a government approved laboratory.

If the TDS is over 1000 ppm and hardness is less than 30% of the TDS, a complete water analysis should be performed to discover what other contaminants exist in the water.

If a contaminant exceeds the limits detectable by any test method, the raw water sample can be diluted with distilled water until a reading can be taken. A calculation must then be performed to determine the actual degree of contamination. All test chemicals are subject to age and extreme temperatures. Proper storage techniques and expiry dates should be observed.

The Water Analysis Report shown on the next two pages must be completed accurately to determine the correct equipment to recommend for the water problem(s) being experienced.

Hard Water

Water with a total hardness of 1.0 gpg or more as calcium carbonate equivalent.

Less than 1.0 gpg	Soft
1.0 - 3.5 gpg	Slightly hard
3.5 - 7.0 gpg	Moderately hard
7.0 - 10.5 gpg	Hard
More than 10.5 gpg	Very hard

Hardness

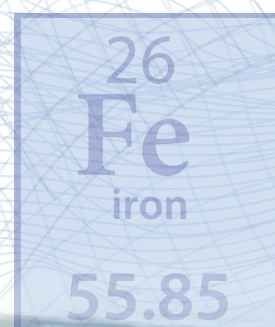
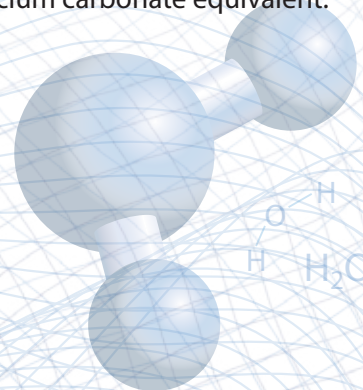
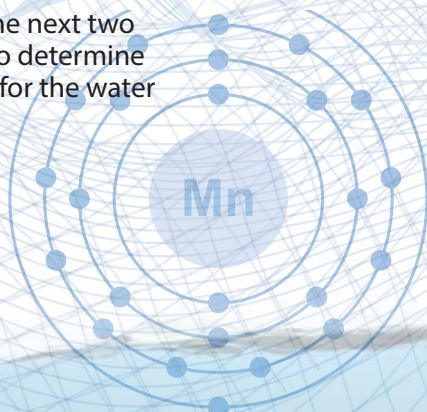
A characteristic of natural water due to the presence of dissolved calcium and magnesium. Water hardness is responsible for most scale formation in pipes and water heaters and forms insoluble "curd" when it reacts with soaps. Hardness is usually expressed in grains per gallon (gpg), parts per million (ppm) or milligrams per liter (mg/l) all as calcium carbonate equivalent.

Soft Water

Any water which contains less than 1.0 gpg (17.1 mg/l) of hardness minerals, expressed as calcium carbonate equivalent.

Softened Water

Any water that is treated to reduce hardness minerals, expressed as calcium carbonate equivalent.





Water Analysis Report

FOR LABORATORY USE ONLY

Date Received _____

Report No. _____

Date Completed _____

NOTE: Please answer ALL appropriate questions to ensure accurate equipment recommendations

CUSTOMER

DEALER

DISTRIBUTOR

Name _____

Name _____

Name _____

Street _____

Street _____

Street _____

Town _____

State/Province _____

Town _____

State/Province _____

Town _____

State/Province _____

Zip Code/P.C. _____

Email _____

Zip Code/P.C. _____

Email _____

Zip Code/P.C. _____

Email _____

Phone _____

Fax _____

Phone _____

Fax _____

Phone _____

Fax _____

Bacterial analysis must be performed by your local health department.

HOW TO DRAW WATER SAMPLE

Use outlet nearest pump (not from bottom of pressure tank).
Run water for five minutes or two pump cycles, then fill clean
bottle to neck and cap immediately. Never use hot water.
Return bottle with this completed form.

HOW TO MEASURE PUMPING RATE OF PUMP

1. Make certain no water is being drawn. Open spigot nearest pressure tank. When pump starts, close tap and measure time (in seconds) to refill pressure tank. This is **cycle time**.
2. Using a container of known volume, draw water and measure volume in gallons until pump starts again. This is **drawdown**.
3. Divide drawdown by cycle time and multiply the result by 60 to arrive at the **pumping rate** in gallons per minute. Insert this figure in #3 Water System.

1. Water Source

- ☐ City or area-wide authority
☐ Community water system (small water system usually supplying 12 homes or fewer)

Water comes from:

- ☐ Well ☐ Lake ☐ Reservoir ☐ River ☐ Unknown
☐ New private well - Approx age _____ months
☐ Old private well - Approx age _____ months
☐ Private lake ☐ Private spring ☐ Private dugout
☐ Private cistern ☐ Other - describe _____

2. Household Information

Do you now have water conditioning equipment?

- ☐ No ☐ Yes Type _____ Size _____
☐ Single family ☐ Multi-family No. of units _____
No. persons _____ No. baths _____
☐ Lawn irrigation on water system?
☐ Indoor pool ☐ Outdoor pool - Capacity _____ gallons
Water line size from source - _____ inches

3. Water System

Type of Pump

- ☐ Constant Pressure ☐ Jet ☐ Submersible ☐ Unknown
Pumping rate of pump _____ gpm

Pressure Tank

- ☐ Air to water ☐ Bladder Capacity _____ gallons
Operating pressure (low/high) _____ / _____ psi

4. Water Problems

When this sample was drawn, it was:

- ☐ Clear ☐ Colored ☐ Cloudy
This water sample is ☐ Untreated ☐ Treated
How is it treated? _____

PROBLEMS

- ☐ Hardness (e.g. high soap usage, bathtub ring, lime deposits, etc.)
☐ Iron Deposits - if so, is iron build-up in flush tank?
☐ Greasy ☐ Gritty ☐ Stringy (iron bacteria?)
Color of Water - ☐ Red ☐ Orange ☐ Black
☐ Greenish or blue stains on sinks, tubs, etc.
☐ Pitting of fixtures and/or pipes
☐ Sand (visible particles) ☐ Sediment or silt (cloudy)
Bad Taste - ☐ Iron ☐ Bitter ☐ Salty
Other - describe _____
Bad Odor - ☐ Rotten Egg ☐ Musty ☐ Iron
Odor is in - ☐ Cold Water ☐ Hot Water ☐ Both
Other Problems - describe _____

5. Standard Laboratory Tests

Total Hardness	_____	gpg
Iron	_____	mg/l
Manganese	_____	mg/l
pH	_____	
Total Dissolved Solids	_____	mg/l

6. Other Tests

Hydrogen Sulfide	_____	mg/l
(test must be performed on-site)		
Tannins	_____	mg/l

7. Special Laboratory Tests

Chlorides	_____	mg/l
Sulfates	_____	mg/l
Alkalinity	_____	mg/l

If TDS is over 1000 ppm and hardness is less than 30% of the TDS, a total water analysis is required.

8. Explanation of Water Analysis

A. Total Hardness

This indicates the efficiency or workability of the water for everyday household use. Water in excess of 3 gpg is generally considered hard and should be softened.

B. Iron

Over 0.3 ppm of iron will cause discoloration of water and staining. Fully automatic water conditioners will correct this problem. Some extreme water situations may require filtration.

C. Manganese

Manganese is frequently encountered in iron-bearing water but to a lesser degree. Manganese is similar to iron in that it stains and clogs pipes and valves. Concentrations as low as 0.05 mg/l of manganese can cause problems.

D. pH

A scale used to measure the acidity or alkalinity of water. A pH reading below 6.5 normally indicates highly corrosive water and neutralizing equipment should be used. A pH reading in excess of 8.5 could indicate contaminated water and generally requires bacteriological and chemical analysis.

E. Hydrogen Sulfide (H₂S)

Testing for hydrogen sulfide should occur on-site. Hydrogen sulfide imparts a rotten egg odor and taste that makes water all but undrinkable and also promotes corrosion. In addition, it can foul the resin bed of a water conditioner. The use of a water conditioner is not recommended unless the water is first treated for the removal of hydrogen sulfide.

F. Total Dissolved Solids (TDS)

A measure of the soluble solids present in the water.

G. Tannins

Tannic acid is formed by decaying organic matter. Tannins alone are not harmful, although they can affect the proper operation of a chemical free iron filter.

H. Chlorides

Over 500 ppm may impart a salty taste to water.

I. Sulfates

Over 500 ppm may impart a bitter taste to water and have a slight laxative effect.

J. Alkalinity

Caused by the presence of bicarbonates, carbonates and hydroxides. Over 500 ppm creates a "soda" taste and makes skin dry.

Recommendations

Recommendations are based entirely on the information supplied and the water sample chemistry results at the time of analysis.

Recommended by _____

Date _____

Return completed form to:

Water Conditioning Basics

Sizing Parameters

Water Softener Sizing is Based On

- ⇒ 60 gallons per person per day - total household use
- ⇒ Three day minimum between regenerations
- ⇒ Capacity between regenerations at factory salt settings or K label capacity
- ⇒ Number of people x 60 gallons per person x gpg of hardness x 3 days = capacity required between regenerations
- ⇒ Consult your factory representative for water that is 75 gpg or harder

Water Softener/Iron Removal Combination Units

- ⇒ This unit should be recommended only when dictated by special circumstances or the needs of the customer.
- ⇒ The customer should be made aware that a separate iron filter and softener is preferred because it is a more efficient way to deal with the water.
- ⇒ When recommending a combination unit, follow the guidelines provided in the specifications.

Water Consumption for Regeneration

The volume of water used during the regeneration process of a water softener will vary depending on:

- ⇒ Amount and type of resin
- ⇒ Cycle time settings
- ⇒ Flow controllers
- ⇒ Salt settings
- ⇒ Tank diameter

Generally, water usage for regeneration is based on the cubic feet of resin per water softener from a low of 30 gallons of water per cubic foot, up to a normal of 75 gallons of water per cubic foot, to a maximum of 100 gallons of water per cubic foot. Manufactur-

ing specs and settings for each model size should be checked to verify exact amounts.

Three Day Sizing Method

The three day sizing method is used for the following reasons:

1. To determine the size of the water conditioner to be used
2. To allow for reserve capacity between regenerations so the customer does not run out of soft water
3. To provide the most economical operation cost

Conversion Factors & Compensated Iron & Manganese

Total Hardness converted from ppm or mg/l to Grains/US Gallon (gpg)

$$\text{ppm (mg/l)} \div 17.1 = \text{gpg}$$

If there is a small amount of Iron or Manganese in the water, add the following compensated values:

Iron - ppm x 4

Manganese - ppm x 8

To arrive at the additional compensated load on the softener

The Total ferrous Iron for the softener to remove should not be greater than 1.5 ppm.

The Total Manganese for the softener to remove should be greater than 0.75 ppm.

If the Total Equivalent Iron is less than 0.5 ppm, a Res-Up Feeder and Pro ResCare can be added as an optional safeguard against fouling or the bed can be cleaned occasionally by adding a small amount to the brine tank manually.

If the Total Iron is 0.5 - 1.5 ppm and or the manganese is 0.1 to 0.75 ppm, the softener can be sized accordingly but a Res-Up Feeder and Pro ResCare is required in addition to the softener to prevent iron fouling of the resin.

If the Total Iron is greater than 1.5 ppm, an Iron Filter is required as pre-treatment prior to the softener.

Assembled Engineered Systems

*Softeners,
Whole House Filters,
Specialty Systems*

Assembled Engineered Systems

Hydrotech offers the widest variety of pre-engineered systems ensuring optimal performance for every type and size as well as appearance to suit your taste.

Every system is available with the following choices where appropriate:

Control Valve - 89 Upflow, 89 Downflow, 785 Upflow, 785 Down Flow, 565, 765

Brine Tank - Round (BTR) or Square (BTS)

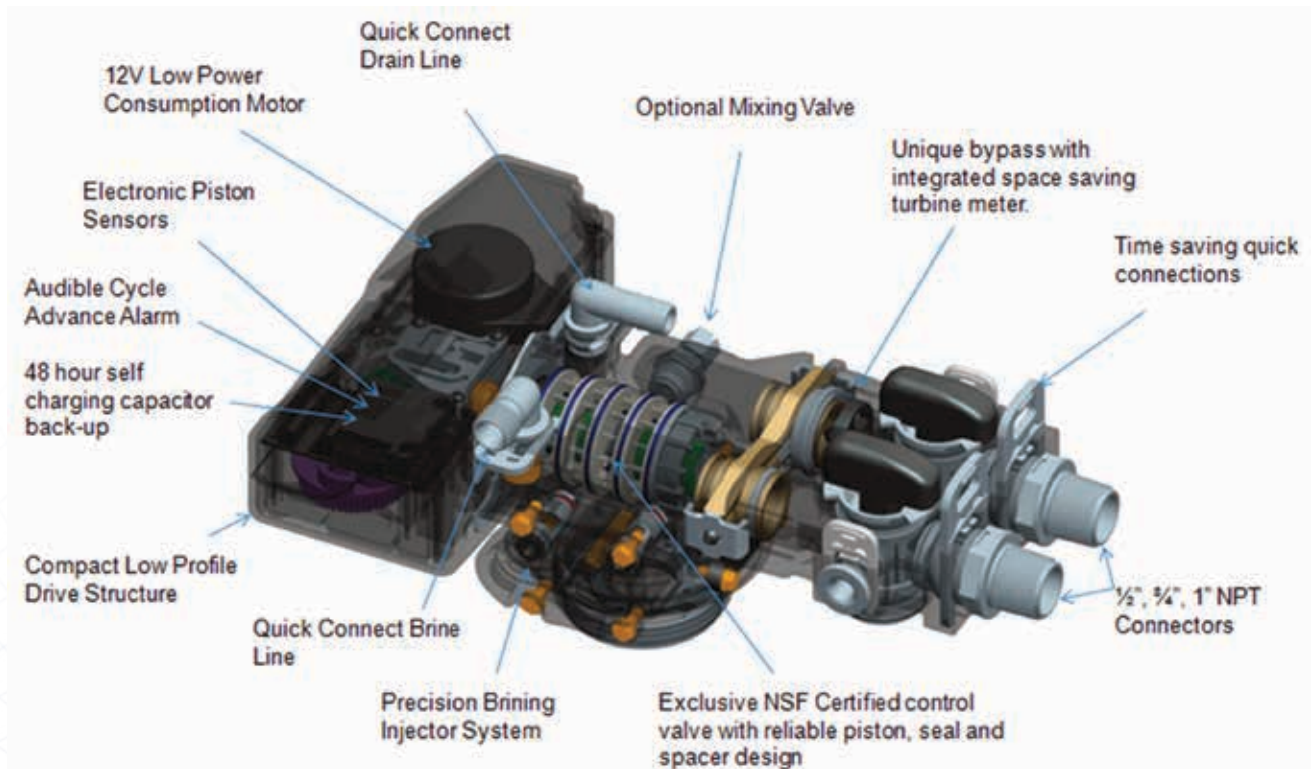
Mineral Tank / Jackets - High gloss non-jacketed, Chrome Jacket with Black Caps, Color Jacket with Black Caps. *Jackets available on .075 to 1.5 cu ft units only. EZ Zip Cloth Jackets (Black) also available up to 14 x 65 as an accessory.

Colors - Black, Blue or Vanilla



Assembled Engineered Systems

Standard Features



Quick Connect Features for Ultimate Convenience

The quick connect bypass comes installed on every unit with both 90° 3/4" elbows and straight 1" NPT connectors. Optional quick connect adaptors include 3/4" straight shark bite and 3/4" straight NPT connectors.



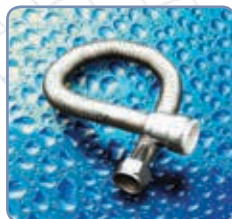
All units include pre-installed bypass



Standard QC Fittings



Optional Fittings



3/4" FiP x 3/4" Jg Flex Connector 18" (item # 80127757)

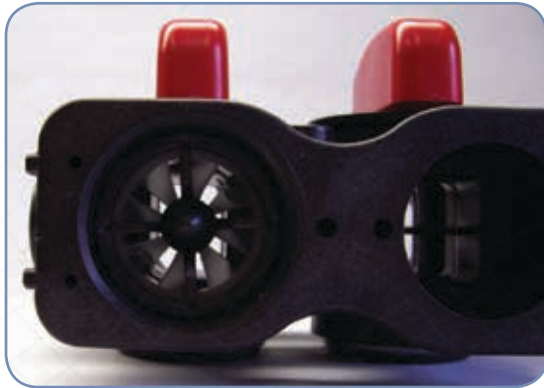
Simply push to connect on to any 3/4" copper, CPVC or PEX piping with no tools!! Brought to you by a collaboration between Falcon Stainless and John Guest USA. Eliminates the need for expensive brass compression fittings or copper male adaptors.

Assembled Engineered Systems

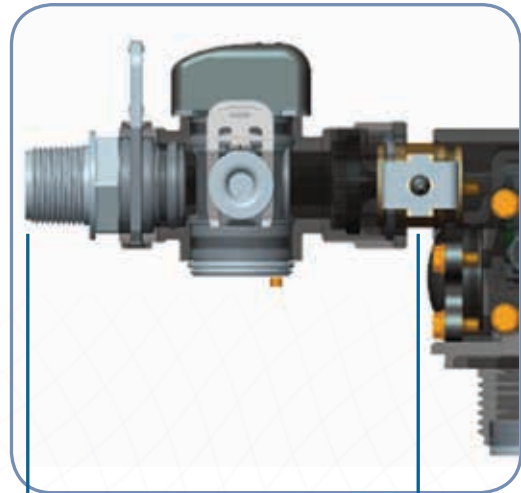
Standard Features

Space Saving Improved Design

Eliminate 4" and unnecessary connections for neat, quick installations. Bypass with integrated meter avoids 'meter jamming' which is caused from weight of pipes creating torque on turbines causing them to bind and stop metering.

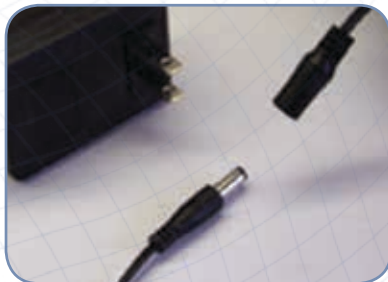


Integrated Meter-in-Bypass Design



5 inches

1 Connection. Comes Pre-Installed



QC Power Cable

- ➔ Simplifies installation or removal of the valve from the tank
- ➔ No tangled or wrapped up power cords!
- ➔ Closed bottom brine well reduced intrusion of unwanted impurities
- ➔ Injection molded brine grids reduce bridging
- ➔ Solvent free distributor tube with spun weld collector avoids glue and solvents
- ➔ Injection molded reliable brine valve

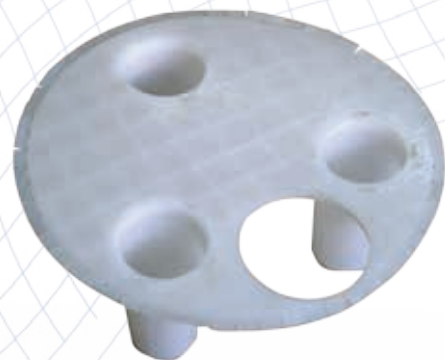


Competitive Valve

9 inches

3 Connections

*High Quality
Brine Components*



Assembled Engineered Systems

Optional Professional Custom Labels



All systems come with high quality Hydrotech branded labels. For those Dealers who want customized labels, the same high gloss 3D style labels are available for purchase based on minimum order quantities.

Valves:



Hydrotech

Brine Tanks:



Hydrotech

Cabinets:



Hydrotech

Program Details:

- ➔ Minimum Order 300 Unit Sets @ \$3.50 per set.
- ➔ Sets include one valve label and one brine tank label. Cabinet models include one valve label and two cabinet labels.
- ➔ 45 day lead-time from date of final artwork approval.

To Order:

Contact Your Hydrotech Sales Representative or Customer Service Team

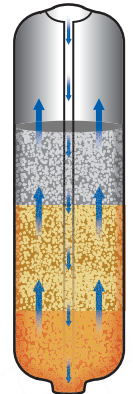
Assembled Engineered Systems

89 Series Water Softener



Features:

- True 1" porting provides high flow rates for larger homes
- Upflow Regeneration with Optimal Precision Brining provides high-efficiency performance and lowest possible salt usage.
- Adjustable backwash frequency saves up to 2,000 gallons of water per year
- Large 4 line Touch Pad LCD display. No confusing symbols or codes
- Automatic reserve – adjusts based on actual usage
- Automatic System Flush refreshes system during periods of non use preventing bacteria growth
- Soft Water Recharge performs quick re generation ensuring you never run out of soft water
- Soft Water Brine Tank Refill conserves capacity and keeps brine tank clean
- Time saving quick connect features on bypass, drain line and powercord
- Upflow - meter delayed; Downflow - meter delayed, days of week, calendar clock, meter immediate, meter override
- Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- Space saving precision turbine meter
- Comes with 1" straight NPT
- Seven Year Control Valve Warranty, Lifetime Warranty on Tanks



Upflow Regeneration
drives the hardness minerals up through the already depleted resin and out to drain - saving both salt and the unused portion of the resin for future use.

Options:

- Traditional twin tank or cabinet style
- Round or square brine tanks in black, blue or vanilla
- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



7 Year Warranty
Control Valve



Lifetime Warranty
Pressure tank



WQA Tested & Certified to NSF/ANSI 44 for effective reduction of hardness as verified & substantiated by test data

C USA

Model	System Capacity Grains			Flow Rate		Regeneration Water Usage (Gallons)		Mineral Tank Size	Resin Cu. Ft.	Brine Tank / Cabinet Size Inches	Salt Capacity (Lbs)	Ship Weight (Lbs)
	@ 10 lbs/ cu ft	@ 6 lbs/cu ft (Factory Setting)	@ 3 lbs/ cu ft	Service USGPM	Backwash USGPM	Clean Water (Factory Setting)	Problem Water					
HT89UF-75	22,500	18,750	11,250	8.0	1.5	34.0	49.6	8 x 44	0.75	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	93
HT89UF-100	30,000	25,000	15,000	10.0	2.0	43.4	64.3	9 x 48	1.00	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	110
HT89UF-150	45,000	37,500	22,500	12.0	2.4	62.7	90.3	10 x 54	1.50	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	141
HT89UF-200	60,000	50,000	30,000	15.0	3.5	87.1	124.6	12 x 52	2.00	20.3 x 37.4	385	158
HT89UF-250	75,000	62,500	37,500	15.0	4.0	108.9	155.8	13 X 54	2.50	20.3 x 37.4	385	198
HT89UF-300	90,000	75,000	45,000	15.0	5.0	139.2	196.2	14 x 65	3.00	23.0 x 40.5	550	244
HT89UF-75C	22,500	18,750	11,250	8.0	2.0	40.5	56.1	9 x 35	0.75	13.8 x 23.6 x 43.3	225	93
HT89UF-100C	30,000	25,000	15,000	10.0	2.4	48.6	69.5	10 x 35	1.00	13.8 x 23.6 x 43.3	225	110

Model	System Capacity Grains			Flow Rate		Regeneration Water Usage (Gallons)		Mineral Tank Size	Resin Cu. Ft.	Brine Tank / Cabinet Size Inches	Salt Capacity (Lbs)	Ship Weight (Lbs)
	@ 10 lbs/ cu ft	@ 6 lbs/cu ft (Factory Setting)	@ 3 lbs/ cu ft	Service USGPM	Backwash USGPM	Clean Water (Factory Setting)	Problem Water					
HT89DF-75	22,500	18,750	11,250	8.0	1.5	34.0	49.6	8 x 44	0.75	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	93
HT89DF-100	30,000	25,000	15,000	10.0	2.0	43.4	64.3	9 x 48	1.00	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	110
HT89DF-150	45,000	37,500	22,500	12.0	2.4	62.7	90.3	10 x 54	1.50	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	141
HT89DF-200	60,000	50,000	30,000	15.0	3.5	87.1	124.6	12 x 52	2.00	20.3 x 37.4	385	158
HT89DF-250	75,000	62,500	37,500	15.0	4.0	108.9	155.8	13 X 54	2.50	20.3 x 37.4	385	198
HT89DF-300	90,000	75,000	45,000	15.0	5.0	139.2	196.2	14 x 65	3.00	23.0 x 40.5	550	244
HT89DF-75C	22,500	18,750	11,250	8.0	2.0	40.5	56.1	9 x 35	0.75	13.8 x 23.6 x 43.3	225	93
HT89DF-100C	30,000	25,000	15,000	10.0	2.4	48.6	69.5	10 x 35	1.00	13.8 x 23.6 x 43.3	225	110

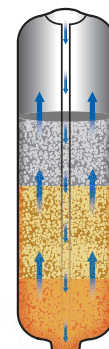


Assembled Engineered Systems

785HE Series Water Softener

Features:

- ➔ NSF Certified electronic control valves with proven piston, seal & spacer technology and rotating 'no touch' diagnostic backlit 16 character LCD display
- ➔ Upflow Regeneration with Optimal Precision Brining provides high-efficiency performance and lowest possible salt usage.
- ➔ Adjustable backwash frequency saves up to 2,000 gallons of water per year
- ➔ Upflow - meter delayed; Downflow - meter delayed; vacation mode
- ➔ Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- ➔ Soft Water Recharge performs quick regeneration ensuring you never run out of soft water
- ➔ NSF Certified high-gloss pressure tank
- ➔ WQA Gold Seal 8% cross-linked cation resin
- ➔ Heavy-duty brine tank / cabinet constructed with NSF Certified high-density polyethylene. Twin tank models include plastic salt grid.
- ➔ Soft water brine tank refill
- ➔ Brine safety valve for added overflow protection
- ➔ Space saving bypass with integrated turbine meter
- ➔ Time saving quick connect fittings on bypass, drain line, brine line and power cord
- ➔ Seven Year Control Valve Warranty, Lifetime Warranty on Tanks



Upflow Regeneration
drives the hardness minerals up through the already depleted resin and out to drain - saving both salt and the unused portion of the resin for future use.

Options:

- ➔ Traditional twin tank or cabinet style
- ➔ Round or square brine tanks in black, blue or vanilla
- ➔ Pressure tanks in black, blue or natural
- ➔ Tank jackets with black caps in chrome, grey, blue or vanilla



7 Year Warranty
Control Valve

Lifetime Warranty
Pressure Tank



WQA Tested & Certified to NSF/ANSI 44 for effective reduction of hardness as verified & substantiated by test data

C USA

Model	System Capacity Grains			Flow Rate		Regeneration Water Usage (Gallons)		Mineral Tank Size	Resin Cu. Ft.	Brine Tank / Cabinet Size Inches	Salt Capacity (Lbs)	Ship Weight (Lbs)
	@ 10 lbs/cu ft	@ 6 lbs/cu ft (Factory Setting)	@ 3 lbs/cu ft	Service USGPM	Backwash USGPM	Clean Water (Factory Setting)	Problem Water					
HT785UF-75	22,500	18,750	11,250	8.0	1.5	34.0	49.6	8 x 44	0.75	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	93
HT785UF-100	30,000	25,000	15,000	10.0	2.0	43.4	64.3	9 x 48	1.00	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	110
HT785UF-150	45,000	37,500	22,500	12.0	2.4	62.7	90.3	10 x 54	1.50	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	141
HT785UF-200	60,000	50,000	30,000	15.0	3.5	87.1	124.6	12 x 52	2.00	20.3 x 37.4	385	158
HT785UF-250	75,000	62,500	37,500	15.0	4.0	108.9	155.8	13 X 54	2.50	20.3 x 37.4	385	198
HT785UF-300	90,000	75,000	45,000	15.0	5.0	139.2	196.2	14 x 65	3.00	23.0 x 40.5	550	244
HT785UF-75C	22,500	18,750	11,250	8.0	2.0	40.5	56.1	9 x 35	0.75	13.8 x 23.6 x 43.3	225	93
HT785UF-100C	30,000	25,000	15,000	10.0	2.4	48.6	69.5	10 x 35	1.00	13.8 x 23.6 x 43.3	225	110

Model	System Capacity Grains			Flow Rate		Regeneration Water Usage (Gallons)		Mineral Tank Size	Resin Cu. Ft.	Brine Tank / Cabinet Size Inches	Salt Capacity (Lbs)	Ship Weight (Lbs)
	@ 10 lbs/cu ft	@ 6 lbs/cu ft (Factory Setting)	@ 3 lbs/cu ft	Service USGPM	Backwash USGPM	Clean Water (Factory Setting)	Problem Water					
HT785DF-75	22,500	18,750	11,250	8.0	1.5	34.0	49.6	8 x 44	0.75	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	93
HT785DF-100	30,000	25,000	15,000	10.0	2.0	43.4	64.3	9 x 48	1.00	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	110
HT785DF-150	45,000	37,500	22,500	12.0	2.4	62.7	90.3	10 x 54	1.50	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	141
HT785DF-200	60,000	50,000	30,000	15.0	3.5	87.1	124.6	12 x 52	2.00	20.3 x 37.4	385	158
HT785DF-250	75,000	62,500	37,500	15.0	4.0	108.9	155.8	13 X 54	2.50	20.3 x 37.4	385	198
HT785DF-300	90,000	75,000	45,000	15.0	5.0	139.2	196.2	14 x 65	3.00	23.0 x 40.5	550	244
HT785DF-75C	22,500	18,750	11,250	8.0	2.0	40.5	56.1	9 x 35	0.75	13.8 x 23.6 x 43.3	225	93
HT785DF-100C	30,000	25,000	15,000	10.0	2.4	48.6	69.5	10 x 35	1.00	13.8 x 23.6 x 43.3	225	110

Hydrotech



Designed, Engineered & Assembled in the U.S.A.

Assembled Engineered Systems

565 Series Water Softener



Features:

- NSF Certified electronic downflow control valves with proven piston, seal & spacer technology and rotating 'no touch' diagnostic backlit 16 character LCD display
- Meter delayed, meter override, meter immediate, calendar clock
- Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- NSF Certified high-gloss pressure tank
- WQA Gold Seal 8% cross-linked cation resin
- Heavy-duty brine tank / cabinet constructed with NSF Certified high-density polyethylene. Twin tank models include plastic salt grid.
- Brine safety valve for added overflow protection
- Space saving bypass with integrated turbine meter
- Time saving quick connect fittings on bypass, drain line, brine line and power cord
- Seven Year Control Valve Warranty, Lifetime Warranty on Tanks

Simple, easy to program electronics.
No confusing codes or symbols.



Just set time, date, hardness, # of people and go!

Options:

- Traditional twin tank or cabinet style
- Round or square brine tanks in black, blue or vanilla
- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



7 Year Warranty
Control Valve



Lifetime Warranty
Pressure tank



C USA

WQA Tested & Certified to NSF/ANSI 44 for effective reduction of hardness as verified & substantiated by test data

Model	System Capacity Grains			Flow Rate		Regeneration Water Usage Factory Setting (Gallons)	Mineral Tank Size	Resin Cu. Ft.	Brine Tank / Cabinet Size Inches	Salt Capacity (Lbs)	Shipping Weight Lbs
	@ 10 lbs/ cu ft	@ 6 lbs/ cu ft (Factory Setting)	@ 3 lbs/ cu ft	Service USGPM	Backwash USGPM						
HT565-75	21,000	18,750	11,550	8.0	1.5	56.7	8 x 44	0.75	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	93
HT565-100	28,000	25,000	15,400	10.0	2.0	67.2	9 x 48	1.00	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	110
HT565-150	42,000	37,500	23,100	12.0	2.4	76.2	10 x 54	1.50	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	141
HT565-200	56,000	50,000	30,800	15.0	3.5	124.4	12 x 52	2.00	20.3 x 37.4	385	158
HT565-250	70,000	62,500	38,500	15.0	4.0	135.4	13 X 54	2.50	20.3 x 37.4	385	198
HT565-300	84,000	75,000	46,200	15.0	5.0	173.2	14 x 65	3.00	23.0 x 40.5	550	244
HT565-75C	21,000	18,750	11,550	8.0	2.0	66.7	9 x 35	0.75	13.8 x 23.6 x 43.3	225	93
HT565-100C	28,000	25,000	15,400	10.0	2.4	75.2	10 x 35	1.00	13.8 x 23.6 x 43.3	225	110

Note: Shipping weights do not include tank jackets. Add approx 10 lbs.



Assembled Engineered Systems

765 Series Water Softener

Features:

- NSF Certified electronic downflow control valve with proven piston, seal & spacer technology
- User friendly LCD display shows time of day, regeneration mode and gallons remaining. Adjustable cycle times.
- Ability to manually index to desired cycle position for faster, easier installation & service
- Meter delayed, meter override, meter immediate, calendar clock
- Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- NSF Certified high-gloss pressure tank
- WQA Gold Seal 8% cross-linked cation resin
- Heavy-duty brine tank / cabinet constructed with NSF Certified high-density polyethylene. Twintank models include plastic salt grid.
- Brine safety valve for added overflow protection
- Space saving bypass with integrated turbine meter
- Time saving quick connect fittings on bypass, drain line, brine line and power cord
- Five Year Control Valve Warranty, Ten Year Warranty on Tanks

Simpler than setting an alarm clock. Just set time, # of people and hardness!

Options:

- Traditional twin tank or cabinet style
- Round or square brine tanks in black, blue or vanilla
- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



WQA Tested & Certified to NSF/ANSI 44 for effective reduction of hardness as verified & substantiated by test data

C USA

Model	Capacity Grains			Flow Rate			Mineral Tank Size	Resin Cu. Ft.	Brine Tank / Cabinet Size Inches	Salt Capacity (Lbs)	Shipping Weight Lbs
	@ 10 lbs/ cu ft	@ 6 lbs/cu ft (Factory Setting)	@ 3 lbs/ cu ft	Service USGPM	Backwash USGPM	Regeneration Water Usage Factory Setting (Gallons)					
HT765-75	19,875	16,500	10,500	8.0	1.5	56.7	8 x 44	0.75	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	93
HT765-100	26,500	22,000	14,000	10.0	2.0	67.2	9 x 48	1.00	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	110
HT765-150	39,750	33,000	21,000	12.0	2.4	76.2	10 x 54	1.50	BTS 15.0"x34.7/BTR 18.1x34.7	BTS 230 /BTR 270	141
HT765-200	53,000	44,000	28,000	15.0	3.0	124.4	12 x 52	2.00	20.3 x 37.4	385	158
HT765-250	66,250	55,000	35,000	15.0	4.0	135.4	13 x 54	2.50	20.3 x 37.4	385	198
HT765-300	79,500	66,000	42,000	15.0	5.0	173.2	14 x 65	3.00	23.0 x 40.5	550	244
HT765-75C	19,875	16,500	10,500	8.0	2.0	66.7	9 x 35	0.75	13.8 x 23.6 x 43.3	225	93
HT765-100C	26,500	22,000	14,000	10.0	2.4	75.2	10 x 35	1.00	13.8 x 23.6 x 43.3	225	110

Note: Shipping weights do not include tank jackets. Add approx 10 lbs.

Hydrotech



Designed, Engineered & Assembled in the U.S.A.

Assembled Engineered Systems

850 Series Compact Water Softener

For when size really does matter! The ideal choice for apartments, condominiums or other installations with space constraints.

Features:

- ➔ WQA Tested & Certified to NSF/ANSI 44 for effective reduction of hardness as verified & substantiated by test data
- ➔ NSF Certified electronic downflow control valve with proven piston, seal & spacer technology, adjustable cycle times and rotating 'no touch' diagnostic backlit 16 character LCD display
- ➔ Meter immediate, meter delayed, meter override, vacation and calendar clock modes
- ➔ Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- ➔ NSF Certified high-gloss pressure tank
- ➔ WQA Gold Seal 8% cross-linked cation resin
- ➔ Heavy-duty cabinet constructed with NSF Certified highdensity polyethylene.
- ➔ Brine safety valve for added overflow protection
- ➔ Space saving bypass with integrated turbine meter
- ➔ Time saving quick connect fittings on bypass, drain line, brine line and power cord
- ➔ 5 year control valve warranty; 10 years on tanks



5 Year Warranty
Control Valve



10 Year Warranty
Pressure tank



Sliding cover design for
easy salt refill



User-friendly electronics

Model	Capacity Grains			Flow Rate		Regeneration Water Usage (Gallons)	Mineral Tank Size (IN)	Resin Cu Ft	Brine Tank / Cabinet Size Inches (WxDxH)	Salt Capacity (Lbs)	Ship Weight (Lbs)
	@ 10 lbs/ cu ft	@ 6 lbs/cu ft (Factory Setting)	@ 3 lbs/ cu ft	Service USGPM	Backwash USGPM						
HT850-45C	12,600	11,250	6,930	10.0	2.0	15.4	10 x 17	0.45	13.1 x 19.9 x 22.6	100	54



Assembled Engineered Systems

Shower Softener



Features:

- Easy installation
- No electricity required
- Waterproof slide cover
- One step regeneration process

Model	Mineral Tank Size (IN)	Resin Cu Ft	Brine Tank / Cabinet Size Inches (WxDxH)	Ship Weight (Lbs)
SHOWER SOFTENER	7 x 13	0.22	8.7 x 14.2 x 19.2	20



Assembled Engineered Systems

Automatic Whole House Water Filter Series

Problem Water Is No Problem! When you install a whole-house automatic water filtration system your water problems will disappear. Rid your water of troublesome iron, sediment, bad tastes, stains, color and odors.

Types of Filters:

Manganese Greensand Plus Filters – Iron, manganese and sulfur are oxidized into solids and trapped in the filter bed where they get flushed to the drain

Birm Filters – Remove soluble or precipitated iron without the use of expensive or messy chemicals

Taste & Odor Filters – Remove bad tastes and odors caused by chlorine & organics

Neutralizing Filters – Raise the pH of acidic water to neutralize corrosiveness and protect fixtures, pipes and appliances

Multi-Media Filters – Eliminate suspended sand and silt that makes water cloudy

Nexsand Turbidity Filters – Remove suspended solids, Ferric Hydroxide (Red Water Iron) or Sediment from your well or water system down to 5 Microns. Nexsand has proven extremely effective and will provide better flow rates than Multi Media or Sand Filters.

Chloramines Removal Filters – This two tank system uses special catalytically enhanced carbon and provides improved bed depth and contact time for more effective reduction of chloramines.

Options:

- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



89 valve

- True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- Seven Year Warranty



785 valve

- High flow rates up to 16" systems.
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty



565 valve

- Simple user friendly 2 line / 32 character display
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty



765 valve

- Simple electronics with index knob to manually initiate regeneration and select cycle position
- Five Year Warranty



*Clean, Clear
and
Odor Free*

Assembled Engineered Systems

89 Filter Specifications

Model	Media Cu Ft	Flow Rate USGPM			Iron Re- moval Capacity (ppm)	KMnO4 Regen (oz)	Micron Rating	Mineral Tank Size	Pipe Size Inches	Ship Weight Lbs
		Service	Peak	Backwash						
Iron Filters - Manganese Greensand Plus										
HT89IF-75	0.75	3.0	4.0	3.5	4,500	4.0	-	8 x 44	1"	113
HT89IF-100	1.00	3.0	5.0	4.0	6,000	4.0	-	9 x 48	1"	129
HT89IF-150	1.50	4.0	8.0	5.0	9,500	4.0	-	10 x 54	1"	179
HT89IF-200	2.00	5.0	10.0	7.0	12,000	8.0	-	12 x 52	1"	233
HT89IF-300	3.00	6.0	12.0	10.0	18,000	8.0	-	14 x 65	1"	352
Maximum Removal Amounts: Combination of Iron x 1, Manganese x 2, H2S x 3 = 10 ppm; Hydrogen Sulphide = 3.0 ppm; Iron (Ferrous) = 7.0 ppm; Manganese = 5.0 ppm; Bacterial Iron = 0.0 ppm; Min pH = 7.0										
Iron Filters - Birm										
HT89BM-75	0.75	3.0	4.0	3.5	-	-	-	8 x 44	1"	67
HT89BM-100	1.00	3.0	5.0	4.0	-	-	-	9 x 48	1"	79
HT89BM-150	1.50	4.0	8.0	5.0	-	-	-	10 x 54	1"	101
HT89BM-200	2.00	5.0	10.0	7.0	-	-	-	12 x 52	1"	121
HT89BM-300	3.00	6.0	12.0	10.0	-	-	-	14 x 65	1"	184
Taste & Odor Filters										
HT89TO-75	0.75	4.0	5.0	3.5	-	-	-	8 x 44	1"	50
HT89TO-100	1.00	5.0	7.0	4.0	-	-	-	9 x 48	1"	60
HT89TO-150	1.50	7.0	10.0	5.0	-	-	-	10 x 54	1"	78
HT89TO-200	2.00	10.0	12.0	7.0	-	-	-	12 x 52	1"	95
HT89TO-300	3.00	12.0	15.0	10.0	-	-	-	14 x 65	1"	138
Neutralizing Filters										
HT89NU-75	0.75	2.0	3.5	3.5	-	-	-	8 x 44	1"	93
HT89NU-100	1.00	3.0	5.0	4.0	-	-	-	9 x 48	1"	120
HT89NU-150	1.50	5.0	8.0	5.0	-	-	-	10 x 54	1"	164
HT89NU-200	2.00	6.0	10.0	7.0	-	-	-	12 x 52	1"	207
HT89NU-300	3.00	7.0	12.0	10.0	-	-	-	14 x 65	1"	330
Sediment Turbidity Multi-Media Filters										
HT89MM-75	0.75	4.0	5.0	4.0	-	-	15 -20 μ	8 x 44	1"	79
HT89MM-100	1.00	5.0	7.0	5.0	-	-	15 -20 μ	9 x 48	1"	118
HT89MM-150	1.50	7.0	10.0	7.0	-	-	15 -20 μ	10 x 54	1"	144
HT89MM-200	2.00	10.0	12.0	10.0	-	-	15 -20 μ	12 x 52	1"	198
HT89MM-300	3.00	12.0	15.0	14.0	-	-	15 -20 μ	14 x 65	1"	342
Nexsand Turbidity Filters										
HT89NEX-75	0.75	4.0	6.0	5.0	-	-	3 - 5 μ	8 x 44	1"	90
HT89NEX-100	1.00	5.0	8.0	7.0	-	-	3 - 5 μ	9 x 48	1"	135
HT89NEX-150	1.50	8.0	10.0	10.0	-	-	3 - 5 μ	10 x 54	1"	205
HT89NEX-200	2.00	10.0	12.0	14.0	-	-	3 - 5 μ	12 x 52	1"	255
Chloramines Reduction Filters (Catalytic Carbon) Dual Tank										
HT89CLA-75	0.75	4.0	7.0	3.5				8 x 44	1"	100
HT89CLA-100	1.00	5.0	8.0	4.0				9 x 48	1"	120
HT89CLA-150	1.50	8.0	10.0	5.0				10 x 54	1"	155
HT89CLA-200	2.00	10.0	12.0	7.0				12 x 52	1"	190

***MEDIA DOES NOT COME LOADED IN 12" FILTERS AND ABOVE**

All Filters	
Connections	89 Control Valve 1" Straight only
Electrical	Input 120V 60 Hz - Output 12V 650mA
Water Temp	Min 39 - Max. 100
Water Pressure	Min. 20 - Max. 125 psi



Assembled Engineered Systems

785 Series Filter Specifications

Model	Media Cu Ft	Flow Rate USGPM			Iron Remov- al Capacity (ppm)	KMnO4 Regen (oz)	Micron Rating	Mineral Tank Size	Pipe Size Inches	Ship Weight Lbs
		Service	Peak	Backwash						
Iron Filters - Manganese Greensand Plus										
HT785IF-75	0.75	3.0	4.0	3.5	4,500	4.0	-	8 x 44	3/4" and 1"	113
HT785IF-100	1.00	3.0	5.0	4.0	6,000	4.0	-	9 x 48	3/4" and 1"	129
HT785IF-150	1.50	4.0	8.0	5.0	9,500	4.0	-	10 x 54	3/4" and 1"	179
HT785IF-200	2.00	5.0	10.0	7.0	12,000	8.0	-	12 x 52	3/4" and 1"	233
HT785IF-300	3.00	6.0	12.0	10.0	18,000	8.0	-	14 x 65	3/4" and 1"	352
Maximum Removal Amounts: Combination of Iron x 1, Manganese x 2, H2S x 3 = 10 ppm; Hydrogen Sulphide = 3.0 ppm; Iron (Ferrous) = 7.0 ppm; Manganese = 5.0 ppm; Bacterial Iron = 0.0 ppm; Min pH = 7.0										
Iron Filters - Birm										
HT785BM-75	0.75	3.0	4.0	3.5	-	-	-	8 x 44	3/4" and 1"	67
HT785BM-100	1.00	3.0	5.0	4.0	-	-	-	9 x 48	3/4" and 1"	79
HT785BM-150	1.50	4.0	8.0	5.0	-	-	-	10 x 54	3/4" and 1"	101
HT785BM-200	2.00	5.0	10.0	7.0	-	-	-	12 x 52	3/4" and 1"	121
HT785BM-300	3.00	6.0	12.0	10.0	-	-	-	14 x 65	3/4" and 1"	184
Taste & Odor Filters										
HT785TO-75	0.75	4.0	5.0	3.5	-	-	-	8 x 44	3/4" and 1"	50
HT785TO-100	1.00	5.0	7.0	4.0	-	-	-	9 x 48	3/4" and 1"	60
HT785TO-150	1.50	7.0	10.0	5.0	-	-	-	10 x 54	3/4" and 1"	78
HT785TO-200	2.00	10.0	12.0	7.0	-	-	-	12 x 52	3/4" and 1"	95
HT785TO-300	3.00	12.0	15.0	10.0	-	-	-	14 x 65	3/4" and 1"	138
Neutralizing Filters										
HT785NU-75	0.75	2.0	3.5	3.5	-	-	-	8 x 44	3/4" and 1"	93
HT785NU-100	1.00	3.0	5.0	4.0	-	-	-	9 x 48	3/4" and 1"	120
HT785NU-150	1.50	5.0	8.0	5.0	-	-	-	10 x 54	3/4" and 1"	164
HT785NU-200	2.00	6.0	10.0	7.0	-	-	-	12 x 52	3/4" and 1"	207
HT785NU-300	3.00	7.0	12.0	10.0	-	-	-	14 x 65	3/4" and 1"	330
Sediment Turbidity Multi-Media Filters										
HT785MM-75	0.75	4.0	5.0	4.0	-	-	15 -20 µ	8 x 44	3/4" and 1"	79
HT785MM-100	1.00	5.0	7.0	5.0	-	-	15 -20 µ	9 x 48	3/4" and 1"	118
HT785MM-150	1.50	7.0	10.0	7.0	-	-	15 -20 µ	10 x 54	3/4" and 1"	144
HT785MM-200	2.00	10.0	12.0	10.0	-	-	15 -20 µ	12 x 52	3/4" and 1"	198
HT785MM-300	3.00	12.0	15.0	14.0	-	-	15 -20 µ	14 x 65	3/4" and 1"	342
Nexsand Turbidity Filters										
HT785NEX-75	0.75	4.0	6.0	5.0	-	-	3 - 5 µ	8 x 44	3/4" and 1"	90
HT785NEX-100	1.00	5.0	8.0	7.0	-	-	3 - 5 µ	9 x 48	3/4" and 1"	135
HT785NEX-150	1.50	8.0	10.0	10.0	-	-	3 - 5 µ	10 x 54	3/4" and 1"	205
HT785NEX-200	2.00	10.0	12.0	14.0	-	-	3 - 5 µ	12 x 52	3/4" and 1"	255
Chloramines Reduction Filters (Catalytic Carbon) Dual Tank										
HT785CLA-75	0.75	4.0	7.0	3.5				8 x 44	3/4" and 1"	100
HT785CLA-100	1.00	5.0	8.0	4.0				9 x 48	3/4" and 1"	120
HT785CLA-150	1.50	8.0	10.0	5.0				10 x 54	3/4" and 1"	155
HT785CLA-200	2.00	10.0	12.0	7.0				12 x 52	3/4" and 1"	190

*MEDIA DOES NOT COME LOADED IN 12" FILTERS AND ABOVE

All Filters	
Plumbing Connections	3/4" 90° Elbows & 1" Straight NPT
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA
Water Temperature	Min 39 - Max. 100 degrees Fahrenheit
Water Pressure	Min. 20 - Max. 125 psi

* See price list for specific item numbers



Designed, Engineered &
Assembled in the U.S.A.

Assembled Engineered Systems

565 Filter Specifications

Model	Media Cu Ft	Flow Rate USGPM			Iron Removal Capacity (ppm)	KMnO4 Regen (oz)	Micron Rating	Mineral Tank Size	Pipe Size Inches	Ship Weight Lbs
		Service	Peak	Backwash						
Iron Filters - Manganese Greensand Plus										
HT 565IF-75	0.75	3.0	4.0	3.5	4,500	2.0		8 x 44	3/4" and 1"	113
HT 565IF-100	1.0	3.0	5.0	4.0	6,000	4.0		9 x 48	3/4" and 1"	129
HT 565IF-150	1.5	4.0	8.0	5.0	9,000	6.0		10 x 54	3/4" and 1"	179
Maximum Removal Amounts: Combination of Iron x 1, Manganese x 2, H2S x 3 = 10 ppm; Hydrogen Sulphide = 3.0 ppm; Iron (Ferrous) = 7.0 ppm; Manganese = 5.0 ppm; Bacterial Iron = 0.0 ppm; Min pH = 7.0										
Iron Filters - Birm										
HT 565BM-75	0.75	3.0	4.0	3.5	-	-		8 x 44	3/4" and 1"	67
HT 565BM-100	1.0	3.0	5.0	4.0	-	-		9 x 48	3/4" and 1"	79
HT 565BM-150	1.5	4.0	8.0	5.0	-	-		10 x 54	3/4" and 1"	101
Taste & Odor Filters										
HT 565TO-75	0.75	4.0	5.0	3.5	-	-		8 x 44	3/4" and 1"	50
HT 565TO-100	1.0	4.0	6.0	4.0	-	-		9 x 48	3/4" and 1"	60
HT 565TO-150	1.5	5.0	7.0	5.0	-	-		10 x 54	3/4" and 1"	78
Neutralizing Filters										
HT 565NU-75	0.75	2.0	4.0	3.5	-	-		8 x 44	3/4" and 1"	93
HT 565NU-100	1.0	3.0	6.0	4.0	-	-		9 x 48	3/4" and 1"	120
HT 565NU-150	1.5	4.0	10.0	5.0	-	-		10 x 54	3/4" and 1"	164
Sediment Turbidity Multi-Media Filters										
HT 565MM-75	0.75	4.0	5.0	4.0	-	-	15 -20 μ	8 x 44	3/4" and 1"	79
HT 565MM-100	1.0	5.0	7.0	5.0	-	-	15 -20 μ	9 x 48	3/4" and 1"	118
HT 565MM-150	1.5	7.0	10.0	7.0	-	-	15 -20 μ	10 x 54	3/4" and 1"	144
Nexsand Turbidity Filters										
HT 565NEX-75	0.75	4.0	6.0	5.0	-	-	3 - 5 μ	8 x 44	3/4" and 1"	90
HT 565NEX-100	1.00	5.0	8.0	7.0	-	-	3 - 5 μ	9 x 48	3/4" and 1"	135
Chloramines Reduction Filters (Catalytic Carbon) Dual Tank										
HT 565CLA-75	0.75	4.0	6.0	3.5	-	-		8 x 44	3/4" and 1"	100
HT 565CLA-100	1.00	5.0	8.0	4.0	-	-		9 x 48	3/4" and 1"	120
HT 565CLA-150	1.50	8.0	10.0	5.0	-	-		10 x 54	3/4" and 1"	155

All Filters	
Plumbing Connections	3/4" 90° Elbows & 1" Straight NPT
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA
Water Temperature	Min 39 - Max. 100 degrees Fahrenheit
Water Pressure	Min. 20 - Max. 125 psi



Designed, Engineered &
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Assembled Engineered Systems

765 Filter Specifications

Model	Media Cu Ft	Flow Rate USGPM			Iron Remov- al Capacity (ppm)	KMnO4 Regen (oz)	Micron Rating	Mineral Tank Size	Pipe Size Inches	Ship Weight Lbs
		Service	Peak	Backwash						
Iron Filters - Manganese Greensand Plus										
HT 765IF-75	0.75	3.0	4.0	3.5	4,500	2.0	-	8 x 44	3/4" and 1"	113
HT 765IF-100	1.0	3.0	5.0	4.0	6,000	4.0	-	9 x 48	3/4" and 1"	129
HT 765IF-150	1.5	4.0	8.0	5.0	9,000	6.0	-	10 x 54	3/4" and 1"	179
Maximum Removal Amounts: Combination of Iron x 1, Manganese x 2, H2S x 3 = 10 ppm; Hydrogen Sulphide = 3.0 ppm; Iron (Ferrous) = 7.0 ppm; Manganese = 5.0 ppm; Bacterial Iron = 0.0 ppm; Min pH = 7.0										
Iron Filters - Birm										
HT 765BM-75	0.75	3.0	4.0	3.5	-	-		8 x 44	3/4" and 1"	67
HT 765BM-100	1.0	3.0	5.0	4.0	-	-		9 x 48	3/4" and 1"	79
HT 765BM-150	1.5	4.0	8.0	5.0	-	-		10 x 54	3/4" and 1"	101
Taste & Odor Filters										
HT 765TO-75	0.75	4.0	5.0	3.5	-	-		8 x 44	3/4" and 1"	50
HT 765TO-100	1.0	4.0	6.0	4.0	-	-		9 x 48	3/4" and 1"	60
HT 765TO-150	1.5	5.0	7.0	5.0	-	-		10 x 54	3/4" and 1"	78
Neutralizing Filters										
HT 765NU-75	0.75	2.0	4.0	3.5	-	-		8 x 44	3/4" and 1"	93
HT 765NU-100	1.0	3.0	6.0	4.0	-	-		9 x 48	3/4" and 1"	120
HT 765NU-150	1.5	4.0	10.0	5.0	-	-		10 x 54	3/4" and 1"	164
Sediment Turbidity Multi-Media Filters										
HT 765MM-75	0.75	4.0	5.0	4.0	-	-	15 -20 μ	8 x 44	3/4" and 1"	79
HT 765MM-100	1.0	5.0	7.0	5.0	-	-	15 -20 μ	9 x 48	3/4" and 1"	118
HT 765MM-150	1.5	7.0	10.0	7.0	-	-	15 -20 μ	10 x 54	3/4" and 1"	144
Nexsand Turbidity Filters										
HT 765NEX-75	0.75	4.0	6.0	5.0	-	-	3 - 5 μ	8 x 44	3/4" and 1"	90
HT 765NEX-100	1.00	5.0	8.0	7.0	-	-	3 - 5 μ	9 x 48	3/4" and 1"	135
Chloramines Reduction Filters (Catalytic Carbon) Dual Tank										
HT 765CLA-75	0.75	4.0	6.0	3.5	-	-		8 x 44	3/4" and 1"	100
HT 765CLA-100	1.00	5.0	8.0	4.0	-	-		9 x 48	3/4" and 1"	120
HT 765CLA-150	1.50	8.0	10.0	5.0	-	-		10 x 54	3/4" and 1"	155

All Filters	
Plumbing Connections	3/4" 90° Elbows & 1" Straight NPT
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA
Water Temperature	Min 39 - Max. 100 degrees Fahrenheit
Water Pressure	Min. 20 - Max. 125 psi



Designed, Engineered &
Assembled in the U.S.A.

Hydrotech



Assembled Engineered Systems

BAF Birm Series Iron Filter

Remove Stubborn Iron Without Chemicals

Incoming water passes through a compressed pocket of air contained in the tank. The oxygen precipitates the iron into solid form and is removed when it passes through the filters media bed. Birm acts as a catalyst in the reaction between iron and oxygen that also causes the iron to precipitate into a solid.

As more water passes through the unit the air becomes depleted and the birm becomes overloaded with the iron. Periodic automatic regeneration replenishes the supply of air and cleans the media of filtered iron. Birm is not consumed in the iron removal process and therefore is much more economical than many other iron removal processes.



*Clean, Clear
Iron-Free
Water*



Assembled Engineered Systems

BAF Birm Specifications

Features:

- ➔ Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89 and 565 control valves)
- ➔ Natural oxidation removes iron without chemicals, air pumps or a venturi
- ➔ Low maintenance two tank system
- ➔ Regenerate less frequently than traditional iron filters using up to 50% less water than manganese greensand filters
- ➔ Lifetime Warranty on NSF Certified tank; 7 years on NSF Certified control valve
- ➔ Meter Immediate, Meter Delayed, Meter with Day Override, Calendar Clock mode
- ➔ Adjustable cycle times
- ➔ Audible Cycle Advance Alarm sounds if the valve is stuck in any position for more than 2 minutes
- ➔ Use less power than an alarm clock (approx. \$1.19 annually)
- ➔ Unique bypass with an integrated space saving turbine meter. One-piece design avoids meter jamming
- ➔ Time saving quick connect fittings on bypass and brine line. Power cord even has quick connect for easy valve spin on.
- ➔ Drain line o-ring eliminates need for Teflon
- ➔ Optional flexible stainless steel connectors are also available
- ➔ NSF Certified pressure tanks available in natural or black

Specifications	BAF-100	BAF-150	BAF-200	BAF-300	BAF-400	BAF-500
Typical Service Flow Rate	3.0 gpm	4.0 gpm	5.0 gpm	6.0 gpm	7.0 gpm	9.0 gpm
Peak Flow Rate	6.0 gpm	10.0 gpm	12.0 gpm	14.0 gpm	16.0 gpm	18.0 gpm
Backwash Flow Rate	5.0 gpm	5.0 gpm	7.0 gpm	10.0 gpm	14.0 gpm	21.0 gpm
Filter Media Volume (ft3)	1.0 ft	1.5 ft	2.0ft	3.0 ft	4.0 ft	5.0 ft
Filter Tank Size	10x44	10x54	12x52	14x65	16x65	18x65
Air Contact Tank Size	8x44	10x54	12x52	14x65	14x65	14x65
Shipping Weight	150 lbs	188 lbs	248 lbs	368 lbs	443 lbs	518 lbs
Media Loaded	Yes	Yes	No	No	No	No
Maximum Iron	30.0 ppm					
Hydrogen Sulfide	Trace					
Manganese	0.0 ppm					
Iron Bacteria Removal	No					
pH	7.0 - 8.5					
Plumbing Connections	3/4" 90° elbow and 1" Straight NPT Adaptors (89 Control Valve 1" Straight only)					
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA					
Water Temperature	Min 39 - Max. 100° F					
Water Pressure	Min. 20 - Max. 125 psi					

Note: BAF systems using 565 Controls only available on 1.0 and 1.5 cubic foot units



Assembled Engineered Systems

BIF Series Chemical Free Iron Filter

Remove Stubborn Iron Without Chemicals

Incoming water passes through a compressed pocket of air contained in the tank. The oxygen precipitates the iron, manganese and hydrogen sulphide into solid form and is removed when it passes through the filter's media bed. Chem free media acts as a catalyst in the reaction between iron and oxygen that also causes the iron to precipitate into a solid.

As more water passes through the unit the air becomes depleted and the chem free media becomes overloaded with the iron. Periodic automatic regeneration replenishes the supply of air and cleans the media of filtered iron. Chem free media is not consumed in the iron removal process and therefore is much more economical than many other iron removal processes.



*Clean, Clear
Iron-Free
Water*



Assembled Engineered Systems

BIF Specifications

Features:

- ➔ Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89 and 565 control valves)
- ➔ Natural oxidation removes iron, sulfur and manganese without chemicals, air pumps or a venturi
- ➔ Low maintenance two tank system
- ➔ Regenerate less frequently than traditional iron filters using up to 50% less water than manganese greensand filters
- ➔ Lifetime Warranty on NSF Certified fibreglass tanks
- ➔ Seven Year Warranty on NSF Certified control valve
- ➔ Meter Immediate, Meter Delayed, Meter with Day Override, Calendar Clock mode
- ➔ Adjustable cycle times
- ➔ Unique bypass with an integrated space saving turbine meter and sample port on the inlet. One-piece design avoids meter jamming
- ➔ Time saving quick connect fittings on bypass
- ➔ Quick connect drain line o-ring eliminates need for Teflon
- ➔ Power cord even has quick connect for easy valve spin on
- ➔ Hose clamp and 10' of drain tubing included
- ➔ NSF Certified pressure tanks available in natural or black



89 valve

- ➔ True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- ➔ Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- ➔ Seven Year Warranty



565 valve

- ➔ Simple user friendly 2 line / 32 character display
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty
- ➔ Voltage 12V/60Hz (120V to 12V wall mount transformer included)
- ➔ Pipe Size 3/4" & 1"
- ➔ Max Water Temp = 110oF (43oC)
- ➔ Max Operating Pressure = 100 PSIG (689 kPa)
- ➔ At stated service flow rates the pressure drop through these devices will not exceed 15 PSIG
- ➔ Do not use where microbiologically unsafe

Specifications	BIF-100	BIF-150	BIF-200	BIF-300	BIF-400	BIF-500
	BIFMN-100	BIFMN-150	BIFMN-200	BIFMN-300	BIFMN-400	BIFMN-500
Typical Service Flow Rate	3.0 gpm	4.0 gpm	5.0 gpm	6.0 gpm	7.0 gpm	9.0 gpm
Peak Flow Rate	6.0 gpm	10.0 gpm	12.0 gpm	14.0 gpm	16.0 gpm	18.0 gpm
Backwash Flow Rate	5.0 gpm	5.0 gpm	7.0 gpm	10.0 gpm	14.0 gpm	21.0 gpm
Filter Media Volume (ft3)	1.0 ft	1.5 ft	2.0ft	3.0 ft	4.0 ft	5.0 ft
Filter Tank Size	10x44	10x54	12x52	14x65	16x65	18x65
Air Contact Tank Size	8x44	10x54	12x52	14x65	14x65	14x65
Shipping Weight	150 lbs	188 lbs	248 lbs	368 lbs	443 lbs	518 lbs
Media Loaded	Yes	Yes	No	No	No	No
Maximum Iron	30.0 ppm					
Hydrogen Sulfide	5.0 ppm					
Manganese	BIF Model 0.0 ppm / BIFMN Models up to 1.0 ppm					
Iron Bacteria Removal	Yes					
pH	BIF Models pH 7.0 - 8.5 / BIFMN Models pH 6.0 -6.9					
Plumbing Connections	3/4" 90° elbow and 1" Straight NPT Adaptors (89 Control Valve 1" Straight only)					
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA					
Water Temperature	Min 39 - Max. 100° F					
Water Pressure	Min. 20 - Max. 125 psi					

*MN Models for low pH 6.0 - 6.9 & Manganese up to 1.0 ppm

Note: BIF/BIFMN systems using 565 Controls only available on 1.0 and 1.5 cubic foot units



Designed, Engineered & Assembled in the U.S.A.

Assembled Engineered Systems

AIO Series Chemical Free Iron Filter

The AIO Chemical Free Iron filter is intended to be an effective and economical way to remove iron from water without the use of messy and dangerous chemicals or expensive pumps or an external venturi. The AIO valve uses a unique process to create an air bubble at the upper portion of the tank to oxidize any ferrous iron prior to being filtered by the media. It can also be used to remove low concentrations of dissolved hydrogen sulfide and manganese from water.

How does the AIO (Air Induction Oxidization) filter work?

This filter works by adding oxygen to the incoming water by passing it through a bubble of compressed air. The water is then passed through a special filter bed. The special media not only increases the pH of the water to enhance iron removal but also acts as a physical barrier to trap iron precipitate. As more water passes through this iron filter, the oxygen in the unit is used up, and the media gets loaded with iron. The regeneration process then begins in order to replenish the supply of oxygen, and to backwash the precipitated iron trapped in the media bed. The iron removal efficiency will be more effective with high pH water. The filter is fitted with an inlet check valve to prevent any air from flowing backwards out of the filter tank.



Model	Media Cu Ft	Flow Rate USGPM			Mineral Tank Size	Pipe Size Inches	Ship Weight Lbs
		Service	Peak	Backwash			
AIO (Air Induction Oxidizer) Chemical Free Iron Filter (Single Tank)							
AIO75	0.75	2	4	3.5	8 x 44	3/4" - 1"	93
AIO10	1.0	3	6	4	9 x 48	3/4" - 1"	120
AIO15	1.5	4	10	5	10 x 54	3/4" - 1"	164
AIO20	2.00	5	12	7	1252	3/4" - 1"	207
AIO30	3.00	6	14	10	1465	3/4" - 1"	330
AIO75M	0.75	2	4	3.5	8 x 44	3/4" - 1"	93
AIO10M	1.0	3	6	4	9 x 48	3/4" - 1"	120
AIO15M	1.5	4	10	5	10 x 54	3/4" - 1"	164
AIO20M	2.00	5	12	7	1252	3/4" - 1"	207
AIO30M	3.00	6	14	10	1465	3/4" - 1"	330
AIOC (Air Induction Oxidizer) Filter For Hydrogen Sulfide Reduction (Single Tank)							
AIOC75	0.75	2	4	3.5	8 x 44	3/4" - 1"	50
AIOC10	1.0	3	6	4	9 x 48	3/4" - 1"	60
AIOC15	1.5	4	10	5	10 x 54	3/4" - 1"	78
AIOC20	2.00	5	12	7	1252	3/4" - 1"	95
AIOC30	3.00	6	14	10	1465	3/4" - 1"	138
AIOB (Air Induction Oxidizer) Birm Iron Filter							
AIOB75	0.75	2	4	3.5	8 x 44	3/4" - 1"	67
AIOB10	1.0	3	6	4	9 x 48	3/4" - 1"	79
AIOB15	1.5	4	10	5	10 x 54	3/4" - 1"	101
AIOB20	2.00	5	12	7	1252	3/4" - 1"	121
AIOB30	3.00	6	14	10	1465	3/4" - 1"	184

Options:

- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



765 valve

- Simple electronics with index knob to manually initiate regeneration and select cycle position
- Five Year Warranty



89 valve

- True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- Seven Year Warranty



565 valve

- Simple user friendly 2 line / 32 character display
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty



Designed, Engineered & Assembled in the U.S.A.

Hydrotech



Assembled Engineered Systems

NRV (Non-Regenerating Valve)

Whole House Carbon Filter

Economical Reduction of Chlorine, Chloramines and Other Bad Taste & Odors

Once water arrives safely at your home there is no further need for disinfectants. In fact they are undesirable! Disinfectants cause taste and bad odor, dry skin, damage plumbing, and can produce potentially harmful by-products.



*Clean, Clear
Odor Free
Water*



Assembled Engineered Systems

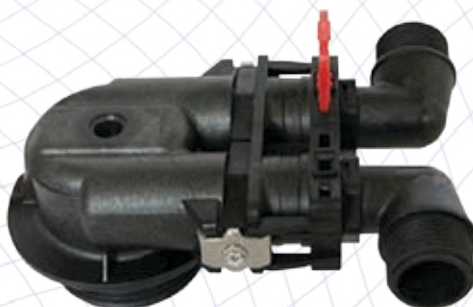
NRV Specifications

Features:

- ⇒ Economical whole-house carbon filtration solution for reducing chlorine and other bad tastes and odors. TOK models reduce chlorine plus hydrogen sulfide (H₂S) caused by sulphate reducing bacteria common in warmer climates.
- ⇒ Includes factory installed one-piece bypass
- ⇒ Time saving quick connect fittings (90° ¾" NPT Elbows and 1" Straight NPT) included for faster, easier installation. Optional quick connect SharkBite® fittings also available.
- ⇒ Five year warranty on Distribution Head
- ⇒ Ten Year Warranty on NSF Certified tank
- ⇒ New bullet: NSF Certified pressure tank available in natural, black or blue



Specifications	NRV TO-100	NRV TO-150	NRV TOK-100	NRV TOK-150
Service Flow Rates				
Normal	5.0 gpm	7.0 gpm	5.0 gpm	7.0 gpm
Peak	7.0 gpm	10.0 gpm	7.0 gpm	10.0 gpm
Filter Media Volume - Cubic Feet	1.0 ft	1.5 ft	1.0 ft	1.5 ft
Filter Tank Size	9x48	10x54	9x48	10x54
Media Type	Coconut Carbon	Coconut Carbon	Coconut Carbon	Coconut Carbon
Media Loaded	Yes	Yes	Yes	Yes
KDF Protector	No	No	Yes	Yes
Tank Jacket	No	No	No	No
Shipping Weight	60 lbs	78 lbs	60 lbs	78 lbs
Plumbing Connections	Includes 3/4" 90° Elbows & 1" Straight NPT. Bypass Included.			
Electrical Requirements	None			
Water Temperature	Min 39 - Max. 100 degrees Fahrenheit			
Water Pressure	Max. 125 psi			



Economical non-back-washing distribution head with convenient quick connect fittings



Designed, Engineered & Assembled in the U.S.A.

Assembled Engineered Systems

785/89HTO UpFlow Series Whole House Water Refining System

A Complete Water Refining System For Your Home

Rid your water of hardness minerals (calcium and magnesium) plus filter out bad tastes and odor caused by chlorine, chloramines or organic matter.

The unique two tank system keeps the two media beds separate, allowing for more carbon contact which greatly improves the removal of chlorine, chloramines and organics. Because the carbon typically needs to be replaced before the softening resin, the two tank system allows for easy cost effective replacement. You get the same benefit as a separate water softener and whole-house carbon filter for a much lower price as the single control valve operates both systems.

Now you can enjoy truly refined water throughout your home!

- ➔ Great tasting water
- ➔ Odor-free. No chlorine!
- ➔ Soft skin & silky hair
- ➔ Spot free dishes
- ➔ Brighter laundry
- ➔ Easier cleaning
- ➔ Protect plumbing & water-using appliances from scale build-up

*Soft, Clean
Truly Refined
Water*

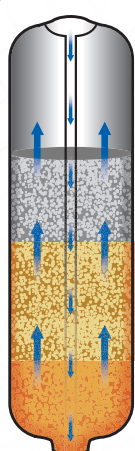


Assembled Engineered Systems

785/89HTO Upflow Specifications



785 valve



Upflow Regeneration drives the hardness minerals up through the already depleted resin and out to drain - saving both salt and the unused portion of the resin for future use.

Features:

- Two tank carbon system keeps media beds separate, allowing for more carbon contact for improved chlorine, chloramines and organic removal
- Carbon can be replaced without replacing the resin bed
- Same benefit as separate systems but with cost of only one control valve
- Salt-efficient upflow regeneration
- Exclusive NSF Certified electronic control valve with seven year warranty featuring proven piston, seal & spacer technology
- Fully adjustable cycles allow customization to the most efficient settings based on specific water quality requirements
- Backlit LCD display screen with no confusing codes or symbols. The 89 Control features a large 4 line / 80 character touch pad screen. The 785 control features a 2 line / 32 character display with rotating information display (i.e. date last regenerated, volume remaining).
- NSF Certified fibreglass pressure tank with lifetime warranty
- High density polyethylene salt tank with lifetime warranty
- Brine safety valve for added overflow protection
- Plastic salt grid prevents salt bridging
- Space saving precision turbine meter
- Time saving quick connect fittings on brine line, drain line (with O-ring seal) and power cord for fast and easy installations

Options:

- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla

Specifications	HTO-100	HTO-150	HTO-200	HTO-250	HTO-300
Salt Used - Per Regeneration	6.0 lbs	9.0 lbs	12.0 lbs	15.0 lbs	18.0 lbs
Water Used - Regeneration	86.4 gal	148 gal	162.4 gal	216.0 gal	224.8 gal
Hardness Removal - Grains	25,000	37,500	50,000	67,500	75,000
Tank #1 Carbon Quantity (ft3)	1.0 ft	1.50 ft	2.0 ft	2.5 ft	3.0 ft
Tank #2 Resin Quantity (ft3)	1.0 ft	1.50 ft	2.0 ft	2.5 ft	3.0 ft
Tank Size	9x48	10x54	12x52	13x54	14x65
Tank Jacket / Media Loaded	Yes	Yes	No	No	No
Brine Tank (Inches)	BTR 18.1 x 34.5 BTS 15.0"x34.7	BTR 18.1 x 34.5 BTS 15.0"x34.7	20.3 x 37.4	20.3 x 37.4	23.0 x 40.5
Salt Storage Capacity	BTS 240 lbs BTR 270 lbs	BTS 240 lbs BTR 270 lbs	350 lbs	350 lbs	420 lbs
Flow Rate @ 15 psi Pressure Drop	7.2 gpm	7.4 gpm	9.0 gpm	9.2 gpm	9.2 gpm
Flow Rate @ 25 psi Pressure Drop	10.0 gpm	10.1 gpm	11.9 gpm	12.1 gpm	12.1 gpm
Back Wash Flow Rate	4.0 gpm	5.0 gpm	7.0 gpm	8.0 gpm	10.0 gpm
Shipping Weight	154 lbs	171 lbs	214 lbs	225 lbs	232 lbs
Regeneration Type	Up Flow				
Plumbing Connections	89 Model 1" Straight NPT. 785 Model 3/4" 90° Elbows & 1" Straight NPT				
Resin Type	Aquafine 8% cation exchange resin				
Carbon Type	Catalytic Carbon				
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA				
Water Temperature	Min 39 - Max. 100° F				
Water Pressure	Min. 20 - Max. 125 psi				



Brine Tank Included



Also available with 89 valve



Designed, Engineered & Assembled in the U.S.A.

Hydrotech



Assembled Engineered Systems

765/565HTO Downflow Series Whole House Water Refining System

A Complete Water Refining System For Your Home

Rid your water of hardness minerals (calcium and magnesium) plus filter out bad tastes and odor caused by chlorine, chloramines or organic matter.

The unique two tank system keeps the two media beds separate, allowing for more carbon contact which greatly improves the removal of chlorine, chloramines and organics. Because the carbon typically needs to be replaced before the softening resin, the two tank system allows for easy cost effective replacement. You get the same benefit as a separate water softener and whole-house carbon filter for a much lower price as the single control valve operates both systems.

Now you can enjoy truly refined water throughout your home!

- ➔ Great tasting water
- ➔ Odor-free. No chlorine!
- ➔ Soft skin & silky hair
- ➔ Spot free dishes
- ➔ Brighter laundry
- ➔ Easier cleaning
- ➔ Protect plumbing & water-using appliances from scale build-up

*Soft, Clean
Truly Refined
Water*



Assembled Engineered Systems

765/565HTO Downflow Specifications



765 valve

Features:

- Two tank carbon system keeps media beds separate, allowing for more carbon contact for improved chlorine, chloramines and organic removal
- Carbon can be replaced without replacing the resin bed
- Same benefit as separate systems but with cost of only one control valve
- Salt-efficient downflow regeneration
- Exclusive NSF Certified electronic control valve featuring proven piston, seal & spacer technology
- Fully adjustable cycles allow customization to the most efficient settings based on specific water quality requirements
- 565 Control comes with 7 Year Warranty / 765 Control comes with 5 Year Warranty
- NSF Certified fibreglass pressure tank with lifetime warranty
- High density polyethylene salt tank
- Brine safety valve for added overflow protection
- Plastic salt grid prevents salt bridging
- Unique precision turbine meter is incorporated in system bypass valve – saving over 4" of floor space
- Time saving quick connect fittings on brine line, drain line (with O-ring seal) and power cord for fast and easy installations

Options:

- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla

Specifications	HTO-100	HTO-150
Salt Used - Per Regeneration	6.0 lbs	9.0 lbs
Water Used - Regeneration	86.4 gal	148 gal
Hardness Removal - Grains	25,000	37,500
Tank #1 Carbon Quantity (ft3)	1.0 ft	1.50 ft
Tank #2 Resin Quantity (ft3)	1.0 ft	1.50 ft
Tank Size	9x48	10x54
Tank Jacket / Media Loaded	Yes	Yes
Brine Tank (Inches)	BTR 18.1 x 34.5 BTS 15.0 ² x34.7	BTR 18.1 x 34.5 BTS 15.0 ² x34.7
Salt Storage Capacity	BTS 240 lbs BTR 270 lbs	BTS 240 lbs BTR 270 lbs
Flow Rate @ 15 psi Pressure Drop	7.2 gpm	7.4 gpm
Flow Rate @ 25 psi Pressure Drop	10.0 gpm	10.1 gpm
Back Wash Flow Rate	2.4 gpm	3.5 gpm
Shipping Weight	154 lbs	171 lbs
Regeneration Type	Downflow	
Plumbing Connections	Includes 3/4" 90° Elbows & 1" Straight NPT	
Resin Type	Aquafine	
Carbon Type	Catalytic Carbon	
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA	
Water Temperature	Min 39 - Max. 100° F	
Water Pressure	Min. 20 - Max. 125 psi	



Brine Tank Included



Also available with 565 valve

Assembled Engineered Systems

Single Solution Systems For Multiple Water Problems

Many ground water supplies often have multiple problems that are not only an issue from an aesthetic standpoint but in terms of cost when pipes become clogged, fixtures stained and laundry discolored. Combination units use mixed beds of a variety of different medias to provide one solution for your water woes.

HEDP Series - High Hardness

Two tank system for high hardness (> 75gpg) water. First tank acts as workhorse significantly reducing hardness while second tank acts as polisher. Prevents hardness leakage common in single tank systems.

The second tank acts as a 'polisher' and reduces slippage as the overpowering high hardness condition has been significantly reduced. This also increases the contact time with the softener resin therefore more consistent soft water.

Salt efficiency is even more important on high hardness situations. The HEDP Series Softener offers salt-efficient upflow regeneration for ultimate salt savings.

*Soft,
Luxurious
Water*



Assembled Engineered Systems

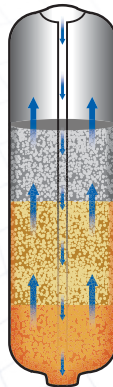
Single Solution Specifications

Features:

- Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89, 785, 565 and 765 control valves)
- Two tank system provides softer, more consistent water quality and reduces hardness slippage or channelling which can occur in single tank systems
- Perfect for high hardness (typically > 75 gpg) residential and light commercial applications such as boiler feed systems
- More cost effective than larger single tank systems
- UpFlow Regeneration for ultimate salt efficiency (89/785 only)
- Soft water brine tank refill keeps system clean (89/785 only)
- NSF Certified control valve & pressure tank
- WQA Gold Seal Certified cation resin
- Brine safety valve provides added overflow protection
- Plastic salt grid prevents bridging
- 48 hour self charging battery back-up
- Includes one-piece bypass integrated meter

Options:

- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



Upflow Regeneration drives the hardness minerals up through the already depleted resin and out to drain - saving both salt and the unused portion of the resin for future use.



89 valve

- True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- Seven Year Warranty



785 valve

- High flow rates up to 16" systems.
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty



565 valve

- Simple user friendly 2 line / 32 character display
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty
- Available in 100 and 150 sizes only



765 valve

- Simple electronics with index knob to manually initiate regeneration and select cycle position
- Five Year Warranty
- Available in 100 and 150 sizes only

Specifications	HEDP-100	HEDP-150	HEDP-200	HEDP-250	HEDP-300
Salt Used - Per Regeneration	12.0 lbs	18.0 lbs	24.0 lbs	30.0 lbs	36.0 lbs
Water Used - Regeneration	86.4 gal	148 gal	162.4 gal	224.8 gal	259.2 gal
Hardness Removal - Grains	50,000	75,000	100,000	125,000	150,000
Tank #1 Resin Quantity (ft3)	1.0 ft	1.50 ft	2.0 ft	2.5 ft	3.0 ft
Tank #2 Resin Quantity (ft3)	1.0 ft	1.50 ft	2.0 ft	2.5 ft	3.0 ft
Tank Size	9x48	10x54	12x52	13x54	14x65
Tank Jacket / Media Loaded	Yes	Yes	No	No	No
Brine Tank Size (Inches)	23.0 x 40.5	23.0 x 40.5	23.0 x 40.5	29.1 x 50.2	29.1 x 50.2
Salt Storage Capacity	350 lbs	420 lbs	420 lbs	420 lbs	420 lbs
Flow Rate @ 15 psi Pressure Drop	7.2 gpm	7.4 gpm	9.0 gpm	9.2 gpm	9.3 gpm
Flow Rate @ 25 psi Pressure Drop	10.0 gpm	10.1 gpm	11.9 gpm	12.1 gpm	11.4 gpm
Back Wash Flow Rate	2.0 gpm	2.4 gpm	3.5 gpm	4.0 gpm	5.0 gpm
Shipping Weight	184 lbs	201 lbs	244 lbs	262 lbs	312 lbs
Regeneration Type	Up Flow (89 / 785 Control); Downflow (565 / 765 Control)				
Plumbing Connections	89 Model 1" Straight NPT. Other Models 3/4" 90° Elbows & 1" Straight NPT				
Resin Type	Aquafine™ 8% High Capacity Ion Exchange Resin				
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA				
Water Temperature	Min 39 - Max. 100° F				
Water Pressure	Min. 20 - Max. 125 psi				



Designed, Engineered & Assembled in the U.S.A.

Assembled Engineered Systems

Single Solution Systems For Multiple Water Problems

Many ground water supplies often have multiple problems that are not only an issue from an aesthetic standpoint but in terms of cost when pipes become clogged, fixtures stained and laundry discolored. Combination units use mixed beds of a variety of different medias to provide one solution for your water woes.

HIM Series - Hardness, Iron and Manganese

Rid your water of hardness minerals (calcium and magnesium) and enjoy soft skin, silky hair, spot free dishes and brighter laundry protecting your plumbing and water using appliances from scale build-up. Removing iron and manganese will keep fixtures from getting stained as well as removing the taste and smell.

*Soft, Clean
Truly Refined
Water*



Assembled Engineered Systems

Single Solution Specifications

Features:

- ➔ Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89, 785, 565 and 765 control valves)
- ➔ User friendly LCD display with 48 hour memory back-up
- ➔ Fully adjustable cycles allow for the most efficient settings based on the specific water quality requirements
- ➔ NSF Certified fibreglass pressure tank
- ➔ High density polyethylene salt tank
- ➔ Brine safety valve for added overflow protection
- ➔ Plastic salt grid prevents salt bridging
- ➔ Unique precision turbine meter
- ➔ Time saving quick connect fittings on brine line, drain line (with O-ring seal) and power cord for fast and easy installations

Options:

- ➔ Pressure tanks in black, blue or natural
- ➔ Tank jackets with black caps in chrome, grey, blue or vanilla

Includes ResCare Feeder
Plus 1 Quart of ResCare



89 valve

- ➔ True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- ➔ Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- ➔ Seven Year Warranty



785 valve

- ➔ High flow rates up to 16" systems.
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty



565 valve

- ➔ Simple user friendly 2 line / 32 character display
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty



765 valve

- ➔ Simple electronics with index knob to manually initiate regeneration and select cycle position
- ➔ Five Year Warranty

Specifications	HIM-100	HIM-150	HIM-200	HIM-250	HIM-300
Factory Settings - Iron & Manganese					
Salt Used - Per Regeneration	12.0 lbs	18.0 lbs	24.0 lbs	30.0 lbs	36.0 lbs
Water Used - Regeneration	52.2 gal	74.4 gal	101.4 gal	130.5 gal	166 gal
Hardness Removal - Grains	30,000	45,000	60,000	75,000	90,000
Resin Quantity - Cubic Feet	1.0 ft	1.5 ft	2.0 ft	2.5 ft	3.0 ft
Tank Size	9x48	10x54	12x52	13x54	14x65
Media Loaded	Yes	Yes	No	No	No
Brine Tank Size (Inches)	BTR 18.1 x 34.5 BTS 15.0 x 34.7	20.3 x 37.4	20.3 x 37.4	20.3 x 37.4	23.0 x 40.5
Salt Storage Capacity	BTS 240 lbs BTR 270 lbs	350 lbs	350 lbs	350 lbs	420 lbs
Flow Rate @ 15 psi Pressure Drop	11.0 gpm	11.2 gpm	12.2 gpm	12.4 gpm	12.6 gpm
Flow Rate @ 25 psi Pressure Drop	15.0 gpm	15.1 gpm	16.2 gpm	16.4 gpm	16.6 gpm
Back Wash Flow Rate	2.0 gpm	2.4 gpm	3.5 gpm	4.0 gpm	5.0 gpm
Shipping Weight	125 lbs	158 lbs	175 lbs	208 lbs	247 lbs
Regeneration Type	Co-Current / Down Flow				
Maximum Hardness	75 Grains Per Gallon				
Maximum Iron (Ferrous)	10 ppm				
Maximum Manganese	5 ppm				
Resin Type	Purolite® SST-60				
Plumbing Connections	Includes 3/4" 90° Elbows & 1" Straight NPT 89 model is 1" straights only				
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA				
Water Temperature	Min 39 - Max. 100° F				
Water Pressure	Min. 20 - Max. 125 psi				



Assembled Engineered Systems

Single Solution Systems For Multiple Water Problems

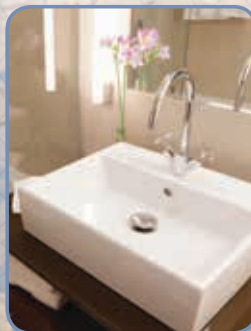
Single Solution Systems For Multiple Water Problems

Many ground water supplies often have multiple problems that are not only an issue from an aesthetic standpoint but in terms of cost when pipes become clogged, fixtures stained and laundry discolored. Combination units use mixed beds of a variety of different medias to provide one solution for your water woes.

TLC Series - *Tannins, Lignin and Color*

Tannins are caused by decaying organic matter which stain most materials it comes into contact with. The system uses anion exchange resin to remove color caused by organic decay - greatly improving aesthetics and preventing costly staining.

*Clean, Clear,
Color-Free
Water*



Assembled Engineered Systems

Single Solution Specifications

Features:

- ➔ Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89, 785, 565 and 765 control valves)
- ➔ User friendly LCD display with 48 hour memory back-up
- ➔ Fully adjustable cycles allow for the most efficient settings based on the specific water quality requirements
- ➔ NSF Certified fibreglass pressure tank
- ➔ High density polyethylene salt tank
- ➔ Brine safety valve for added overflow protection
- ➔ Plastic salt grid prevents salt bridging
- ➔ Unique Precision Turbine Meter
- ➔ Time saving quick connect fittings on brine line, drain line (with O-ring seal) and power cord for fast and easy installations

Options:

- ➔ Pressure tanks in black, blue or natural
- ➔ Tank jackets with black caps in chrome, grey, blue or vanilla



89 valve

- ➔ True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- ➔ Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- ➔ Seven Year Warranty



785 valve

- ➔ High flow rates up to 16" systems.
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty



565 valve

- ➔ Simple user friendly 2 line / 32 character display
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty



765 valve

- ➔ Simple electronics with index knob to manually initiate regeneration and select cycle position
- ➔ Five Year Warranty

Specifications	TLC-100	TLC-150	TLC-200	TLC-250	TLC-300
Factory Settings - High Capacity					
Salt Used - Per Regeneration	12.0 lbs	18.0 lbs	24.0 lbs	30.0 lbs	36.0 lbs
Water Used - Per Regeneration	64.3 gal	90.3 gal	124.6 gal	160.8 gal	196.2 gal
Tannins Removal	2000 ppm	3000 ppm	4000 ppm	5000 ppm	6000 ppm
Resin Quantity - Cubic Feet	1.0 ft	1.5 ft	2.0 ft	2.5 ft	3.0 ft
Tank Size	9x48	10x54	12x52	13x54	14x65
Media Loaded	Yes	Yes	No	No	No
Brine Tank Size (Inches)	BTR 18.1 x 34.5 BTS 15.0" x 34.7	20.3 x 37.4	20.3 x 37.4	20.3 x 37.4	23.0 x 40.5
Salt Storage Capacity	BTS 240 lbs BTR 270 lbs	350 lbs	350 lbs	350 lbs	420 lbs
Recommended Service Flow Rate	3.0 gpm	4.5 gpm	6.0 gpm	7.5 gpm	9.0 gpm
Flow Rate @ 15 psi Pressure Drop	11.0 gpm	11.2 gpm	12.2 gpm	12.4 gpm	12.6 gpm
Flow Rate @ 25 psi Pressure Drop	15.0 gpm	15.1 gpm	16.2 gpm	16.4 gpm	16.6 gpm
Back Wash Flow Rate	2.0 gpm	2.4 gpm	3.5 gpm	4.0 gpm	5.0 gpm
Shipping Weight	122 lbs	155 lbs	158 lbs	208 lbs	244 lbs
Regeneration Type	Counter-Current / Up Flow				
Maximum Tannins	3.0 ppm (Contact Customer Service for higher levels)				
Plumbing Connections	Includes 3/4" 90° Elbows & 1" Straight NPT 89 model is 1" straights only				
Resin Type	850 Anion Resin				
Electrical Requirements	Input 120V 60 Hz - Output 12V 550mA				
Water Temperature	Min 39 - Max. 100 degrees Fahrenheit				
Water Pressure	Min. 20 - Max. 125 psi				

Note: Call Customer Service to determine correct model. Water test results required. An acid neutralizer may be required after this based on water test results.



Assembled Engineered Systems

Single Solution Systems For Multiple Water Problems

Many ground water supplies often have multiple problems that are not only an issue from an aesthetic standpoint but in terms of cost when pipes become clogged, fixtures stained and laundry discolored. Combination units use mixed beds of a variety of different medias to provide one solution for your water woes.

HIMTLC Series - Hardness, Iron, Manganese & Tannins

Rid your water of hardness minerals (calcium and magnesium) and enjoy soft skin, silky hair, spot free dishes and brighter laundry while protecting your plumbing and water using appliances from scale build-up.

Removing iron and manganese will keep fixtures from getting stained as well as removing the taste and smell.

Tannins, caused by decaying organic matter, are normally found in surface water systems and cause a yellow or brown color in the water that does not settle and will stain laundry



*Clean,
Clear
Soft Water*



Assembled Engineered Systems

Single Solution Specifications

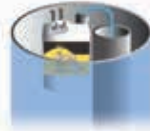
Features:

- ➔ Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89, 785, 565 and 765 control valves)
- ➔ Two tank system uses high quality anion and cation resin to remove hardness, iron, manganese and tannins
- ➔ NSF Certified control valve with simple, backlit electronics. No confusing symbols!
- ➔ NSF Certified pressure tanks
- ➔ Plastic salt grid prevents salt bridging
- ➔ Brine safety valve for added overflow protection
- ➔ Unique space saving bypass valve included
- ➔ Select 860 models for low pH and low TDS

Options:

- ➔ Pressure tanks in black, blue or natural
- ➔ Tank jackets with black caps in chrome, grey, blue or vanilla

Includes ResCare Feeder
Plus 1 Quart of ResCare



89 valve

- ➔ True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- ➔ Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- ➔ Seven Year Warranty



785 valve

- ➔ High flow rates up to 16" systems.
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty



565 valve

- ➔ Simple user friendly 2 line /32 character display
- ➔ Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- ➔ Seven Year Warranty



765 valve

- ➔ Simple electronics with index knob to manually initiate regeneration and select cycle position
- ➔ Five Year Warranty

Specifications	HIMTLC-100 850	HIMTLC-150 850	HIMTLC-200 850	HIMTLC-250 850	HIMTLC-300 850
	HIMTLC-100 860	HIMTLC-150 860	HIMTLC-200 860	HIMTLC-250 860	HIMTLC-300 860
Salt Used - Per Regeneration	12.0 lbs	18.0 lbs	24.0 lbs	30.0 lbs	36.0 lbs
Water Used - Regeneration	64.3 gal	90.3 gal	124.6 gal	160.8 gal	196.2 gal
Hardness Removal - Grains	30,000	45,000	60,000	75,000	90,000
Tannins Removal	2000 ppm	3000 ppm	4000 ppm	5,000 ppm	6000 ppm
Tank #1 Resin Quantity - Cubic Feet	1.0 ft	1.5 ft	2.0 ft	2.5 ft	3.0 ft
Tank #2 Resin Quantity - Cubic Feet	1.0 ft	1.5 ft	2.0 ft	2.5 ft	3.0 ft
Tank Size	9x48	10x54	12x52	13x54	14x65
Media Loaded	Yes	Yes	No	No	No
Brine Tank Size (Inches)	BTR 18.1 x 34.5 BTS 15.0 x 34.7	20.3 x 37.4	20.3 x 37.4	20.3 x 37.4	23.0 x 40.5
Salt Storage Capacity	BTS 240 lbs BTR 270 lbs	350 lbs	350 lbs	350 lbs	420 lbs
Recommended Service Flow Rate	3.0 gpm	4.5 gpm	6.0 gpm	7.5 gpm	9.0 gpm
Flow Rate @ 15 psi Pressure Drop	7.3 gpm	7.5 gpm	8.3 gpm	12.4 gpm	9.3 gpm
Flow Rate @ 25 psi Pressure Drop	10.0 gpm	10.1 gpm	11.1 gpm	16.4 gpm	11.4 gpm
Back Wash Flow Rate	2.0 gpm	2.4 gpm	3.5 gpm	4.0 gpm	5.0 gpm
Shipping Weight	125 lbs	158 lbs	161 lbs	208 lbs	247 lbs
Regeneration Type	Counter-Current / Up Flow				
Maximum Hardness	75 Grains Per Gallon				
Maximum Tannins	3.0 ppm (Contact Customer Service for higher levels)				
Maximum Iron (Ferrous)	1.5 ppm				
Maximum Manganese	.75 ppm				
Resin Type	Purolite® SST-60				
Plumbing Connections	Includes 3/4" 90° Elbows & 1" Straight NPT 89 model is 1" straights only				
Electrical Requirements	Input 120V 60 Hz - Output 12V 550mA				
Water Temperature	Min 39 - Max. 100° F				
Water Pressure	Min. 20 - Max. 125 psi				

*Units come with Easy Feeder and 64 oz bottle or ResCare

Note: Call Customer Service to determine correct model. Water test results required. An acid neutralizer may be required after this based on water test results.

Assembled Engineered Systems

Single Solution Systems For Multiple Water Problems

Many ground water supplies often have multiple problems that are not only an issue from an aesthetic standpoint but in terms of cost when pipes become clogged, fixtures stained and laundry discolored. Combination units use mixed beds of a variety of different medias to provide one solution for your water woes.

MBHTO Series - Hardness, Taste and Odor

Remove unpleasant tastes and odor caused by chlorine and organics while also softening your water with a mixed bed of carbon and cation exchange resin.

*Soft, Clean
Truly Refined
Water*



Assembled Engineered Systems

Single Solution Specifications

Features:

- Exclusive NSF Certified electronic control valve (systems available with Hydrotech 89, 785, 565 and 765 control valves)
- User friendly LCD display with 48 hour memory back-up
- Fully adjustable cycles allow for the most efficient settings based on the specific water quality requirements
- NSF Certified fibreglass pressure tank
- High density polyethylene salt tank
- Brine safety valve for added overflow protection
- Plastic salt grid prevents salt bridging
- Unique precision turbine meter is incorporated in system bypass valve – saving space over 4" of floor space
- Time saving quick connect fittings on brine line, drain line (with O-ring seal) and power cord for fast and easy installations

Options:

- Pressure tanks in black, blue or natural
- Tank jackets with black caps in chrome, grey, blue or vanilla



89 valve

- True 1" porting for high flow rates up to 18" systems. Ideal for larger homes.
- Large Backlit LCD display screen with 4 line / 80 character touch pad screen.
- Seven Year Warranty



785 valve

- High flow rates up to 16" systems.
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty



565 valve

- Simple user friendly 2 line / 32 character display
- Rotating 'No Touch' Information Display (i.e. Date last regenerate, volume remaining)
- Seven Year Warranty



765 valve

- Simple electronics with index knob to manually initiate regeneration and select cycle position
- Five Year Warranty

Specifications	MBHTO-75	MBHTO-100	MBHTO-150
Capacity			
@ 10 LBS	15,900	21,200	31,800
@ 6 LBS (Factory Setting)	13,200	17,600	26,400
@ 3 LBS	8,400	11,200	16,800
Resin (ft3)	0.60	0.80	1.20
Carbon (ft3)	0.15	0.20	0.30
Tank Size	8x44	9x48	10x54
Media Loaded	Yes	Yes	Yes
Brine Tank Size (Inches)	BTR 18.1 x 34.5 BTS 15.0 ² x34.7	BTR 18.1 x 34.5 BTS 15.0 ² x34.7	BTR 18.1 x 34.5 BTS 15.0 ² x34.7
Salt Storage Capacity	BTS 240 lbs BTR 270 lbs	BTS 240 lbs BTR 270 lbs	BTS 240 lbs BTR 270 lbs
Service Flow Rate (USGPM)	8.0	10.0	12.0
Back Wash Flow Rate (USGPM)	1.5	2.0	2.4
Shipping Weight (not incl jacket)	93	110	141
Regeneration Type	Up Flow (89 /785 Control); Downflow (565 / 765 Control)		
Plumbing Connections	Includes 3/4" 90°Elbows & 1" Straight NPT 89 model is 1" straights only		
Resin Type	Aquafine™ 8% High Capacity Ion Exchange Resin		
Carbon Type	Activated Carbon		
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA		
Water Temperature	Min 39 - Max. 100° F		
Water Pressure	Min. 20 - Max. 125 psi		



Components

Control Valves

Fiberglass Pressure Tanks

Brine Tanks

Jackets & Cabinets

Distribution Heads

Tank Connectors

Media



Components

89 Control Valve



Features:

- ➔ True 1" porting for high flow rates. Up to 18" softeners and 18" filters
- ➔ High-efficiency Performance. Upflow Regeneration with Optimal Precision Brining or Downflow Regeneration.
- ➔ Adjustable backwash frequency saves up to 2,000 gallons of water per year
- ➔ Large 4 line Touch Pad LCD display – customizable for dealership
- ➔ Automatic Reserve – adjusts based on actual usage
- ➔ Automatic System Flush refreshes system during periods of non use preventing bacteria growth
- ➔ Soft Water Recharge performs quick regeneration ensuring you never run out of soft water
- ➔ Soft Water Brine Tank Refill conserves capacity and keeps brine tank clean
- ➔ Time saving quick connect features on bypass, drain line and powercord
- ➔ Upflow - meter delayed; Downflow Softener - meter delayed, days of week, calendar clock, meter immediate, meter override
- ➔ Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- ➔ integrated turbine meter
- ➔ Comes with 1" straight NPT
- ➔ Seven Year Control Valve Warranty

Specifications	
Valve Body Material	Noryl (PPO)
Plumbing Connections (NPT)	Straight 1"
Tank Thread	2-1/2" NPSM
Adjustable Cycles	0 - 99 minutes
Regeneration	Up Flow /Down Flow
Meter Accuracy	+/-5%
Maximum Meter Capacity	99,999 GAL
Distributor Pilot	1.05"
Drain Line	3/4"
Brine Line	3/8"
Flow Rates (Valve Only 50 psi inlet)	
Continuous (15 psi drop)	27 GPM
Peak (25 psi drop)	35 GPM
Max. Backwash (25 psi drop)	27 GPM
Cv	7
Typical Applications	
Softeners	up to 18" Diameter
Filters	up to 18" Diameter
Electrical	
Input	110V AC 50/60Hz
Output	12V AC 50/60Hz 650mA
Certification	cUL
Operation Ratings	
Max. Working Pressure	20 - 125 psi
Max. Temperature	34F - 100F
Approvals	
NSF/ANSI 44	Certified
Additional Information	
Shipping Weight	7 pounds



Components

785 Control Valve



Specifications	
Valve Body Material	Noryl (PPO)
Plumbing Connections (NPT)	Straight – ½", ¾", 1" 90 Deg – ¾"
Tank Thread	2-1/2" NPSM
Adjustable Cycles	0 - 99 minutes
Regeneration	Up Flow /Down Flow
Meter Accuracy	+/-5%
Maximum Meter Capacity	99,999 GAL
Distributor Pilot	1.05"
Drain Line	1/2" Quick Connect
Brine Line	3/8" Quick Connect
Flow Rates (Valve Only 50 psi inlet)	
Continuous (15 psi drop)	20 GPM
Peak (25 psi drop)	26 GPM
Max. Backwash (25 psi drop)	17 GPM
Cv	5.2
Typical Applications	
Softeners	up to 16" Diameter
Filters	up to 16" Diameter
Electrical	
Input	110V AC 50/60Hz
Output	12V AC 50/60Hz 410mA
Certification	cUL
Operation Ratings	
Max. Working Pressure	20 - 125 psi
Max. Temperature	34F - 100F
Approvals	
NSF/ANSI 44	Certified
Additional Information	
Shipping Weight	7 pounds

Features:

- ➔ Exclusive NSF Certified electronic control valves with proven piston, seal & spacer technology
- ➔ Choose upflow or downflow regeneration
- ➔ Higher flow rates. Backwash up to 16" filters
- ➔ Simple user-friendly, 2 line / 16 character LCD backlit display
- ➔ Rotating 'no touch' diagnostics shows key data like date last regenerated, volume remaining, current flow rate, peak flow rate, total gallons treated, total regenerations, time & date and capacity
- ➔ Upflow - meter delayed; Downflow Softener - meter delayed; Downflow Filter - meter delayed, days of week, calendar clock, meter override
- ➔ Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- ➔ Adjustable cycle times
- ➔ Precise electronic sensors to determine piston positions
- ➔ Soft water brine tank refill
- ➔ Space saving bypass with integrated turbine meter
- ➔ Time saving quick connect fittings on bypass, drain line, brine line and power cord
- ➔ Seven Year Control Valve Warranty



QC Power Cable



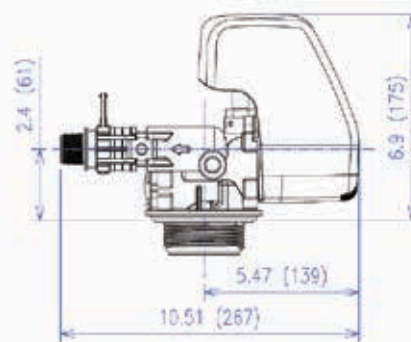
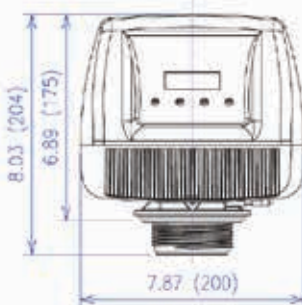
QC Brine Line



QC Drain Line



Integrated Meter



Simple Electronics: Set Date/Time,
#People and Water Hardness
– the 785 does the rest!



Designed, Engineered &
Assembled in the U.S.A.

Hydrotech The Future is Here!

Components

565 Control Valve



Features:

- ➔ Exclusive NSF Certified electronic control valves with proven piston, seal & spacer technology
- ➔ Downflow regeneration
- ➔ Simple user-friendly, 2 line / 16 character LCD backlit display
- ➔ Rotating 'no touch' diagnostics shows key data like date last regenerated, volume remaining, current flow rate, peak flow rate, total gallons treated, total regenerations, time & date and capacity
- ➔ Meter immediate, meter delayed, meter override, vacation and calendar clock modes
- ➔ Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- ➔ Adjustable cycle times
- ➔ Precise electronic sensors to determine piston positions
- ➔ Space saving bypass with integrated turbine meter
- ➔ Time saving quick connect fittings on bypass, drain line, brine line and power cord
- ➔ Seven Year Control Valve warranty

Specifications	
Valve Body Material	Noryl (PPO)
Plumbing Connections (NPT)	Straight – ½", ¾", 1" 90 Deg – ¾"
Tank Thread	2-1/2" NPSM
Adjustable Cycles	0 - 99 minutes
Regeneration	Down Flow
Meter Accuracy	+/-5%
Maximum Meter Capacity	99,999 GAL
Distributor Pilot	1.05"
Drain Line	1/2" Quick Connect
Brine Line	3/8" Quick Connect
Flow Rates (Valve Only 50 psi inlet)	
Continuous (15 psi drop)	20 GPM
Peak (25 psi drop)	26 GPM
Max. Backwash (25 psi drop)	7 GPM
Cv	5.2
Typical Applications	
Softeners	up to 16" Diameter
Filters	up to 10" Diameter
Electrical	
Input	110V AC 50/60Hz
Output	12V AC 50/60Hz 410mA
Certification	cUL
Operation Ratings	
Max. Working Pressure	20 - 125 psi
Max. Temperature	34F - 100F
Approvals	
NSF/ANSI 44	Certified
Additional Information	
Shipping Weight	7 pounds



QC Power Cable



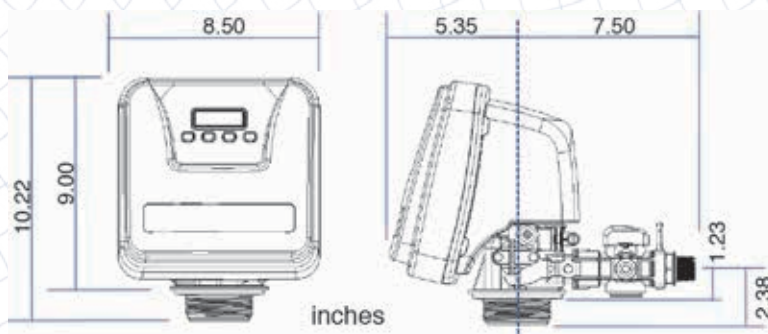
QC Brine Line



QC Drain Line



Integrated Meter



Designed, Engineered & Assembled in the U.S.A.

Hydrotech



Components

765 Control Valve



Features:

- ➔ Exclusive NSF Certified electronic control valve with reliable piston, seal and spacer design
- ➔ Simple user friendly LCD display. Just enter time of day, hardness and number of people.
- ➔ Manually index to cycle position for easier and faster installation and service
- ➔ Reliable and precise electronic sensors to determine piston positions
- ➔ "Totalizer" function tracks total amount of water treated
- ➔ Audible Cycle Advance Alarm sounds if the valve is stuck in any position for more than 2 minutes.
- ➔ Self charging capacitor keeps date / time of day for 48 hours while programming remains in permanent memory
- ➔ No confusing codes or symbols to remember
- ➔ Meter Immediate, Meter Delayed, Meter with Day Override and Calendar Clock modes
- ➔ Fully adjustable cycle times
- ➔ Unique bypass with integrated space saving turbine meter. One piece design avoids meter jamming.
- ➔ Time saving quick connections for easy installation and maintenance
- ➔ Five Year Control Valve Warranty

Specifications	
Valve Body Material	Noryl (PPO)
Plumbing Connections (NPT)	Straight – ½", ¾", 1" 90 Deg – ¾"
Tank Thread	2-1/2" NPSM
Adjustable Cycles	0 - 99 minutes
Regeneration	Down Flow
Meter Accuracy	+/-5%
Maximum Meter Capacity	9,999 GAL
Distributor Pilot	1.05"
Drain Line	1/2" Quick Connect
Brine Line	3/8" Quick Connect
Flow Rates (Valve Only 50 psi inlet)	
Continuous (15 psi drop)	20 GPM
Peak (25 psi drop)	26 GPM
Max. Backwash (25 psi drop)	7 GPM
Cv	5.2
Typical Applications	
Softeners	up to 16" Diameter
Filters	up to 10" Diameter
Electrical	
Input	110V AC 50/60Hz
Output	12V AC 50/60Hz 410mA
Certification	cUL
Operation Ratings	
Max. Working Pressure	20 - 125 psi
Max. Temperature	34F - 100F
Approvals	
NSF/ANSI 44	Certified
Additional Information	
Shipping Weight	7 pounds



QC Power Cable



QC Brine Line



QC Drain Line



Integrated Meter



Designed, Engineered & Assembled in the U.S.A.

Components

Tank Connectors / Adaptors



Manual Filter Valve

- ➔ No electricity required
- ➔ Safe easy operation
- ➔ Child-lock protection
- ➔ Inlet / Outlet 1/2", 3/4" or 1" quick connect fittings
- ➔ 1/2" drain

Tank Quick Connect

- ➔ Remove and reconnect control valve to tank without moving distributor tube
- ➔ Align valve to face where you want it



Distribution Head

Distribution heads with quick connects are made from food-grade NORYL.



Distribution Head III

- ➔ Perfect for single in/out filter applications or D.I.



Distribution Head IV

- ➔ Unique parallel inlet/outlet design
- ➔ Optional bypass



Distribution Head V

- ➔ Upper 360° swivel outlet with elbow adaptor



Designed, Engineered & Assembled in the U.S.A.

Components

Fiberglass Tank Packages



Features:

- Blow-molded polyethylene liner wound with high performance fibreglass/epoxy
- Complete seamless molding technology
- Threaded inlet made from 30% glass filled PP for superior strength
- 1/3 the weight of steel tanks
- Attractive high-gloss finish
- Corrosion resistant
- Strict dimension tolerances
- Tanks 5" to 24" are NSF/ANSI 44 Certified for Materials & Structural Integrity
- Tanks 24" to 63" (>83.5 Gal) are NSF/ANSI 61 Certified for Drinking Water System Components - Health Effects
- 10 Year Warranty Tanks up to 24"
- 5 Year Warranty Tanks 30" and larger
- Solvent free central tube with spun weld collector eliminates use of glue and solvents
- Available in Natural, Black and Blue



Spill Proof Shipping Cap



Tank Packages include tank, gravel underbed, resin and riser tube

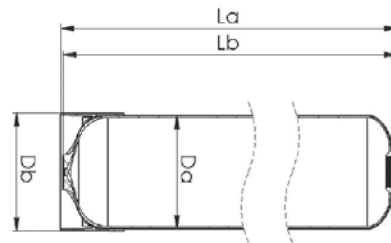
Why ship air? Pre-Engineered tank packages are ready made for softener applications.

MODEL	SIZE	RESIN LOAD		UNDER BEDDING LOAD		WEIGHT (lbs)		TOP OPEN- ING	DIMENSION (in)			
		Cubic ft	Litres	lbs	kg	lbs	kg		La	Lb	Da	Db
TP835	08x35	0.66	18.5	8.0	3.6	48.9	22.1	2.5"	35.3	35.1	8.1	8.5
TP844	08x44	0.75	31.3	8.0	3.6	71.5	32.4	2.5"	44.2	44.0	8.1	8.5
TP948	09x48	1.00	44.6	9.0	4.1	96.0	43.5	2.5"	48.4	48.1	9.1	9.5
TP1044	10x44	1.25	48.8	10.0	4.5	104.5	47.3	2.5"	44.1	44.0	10.0	10.6
TP1054	10x54	1.50	61.0	10.0	4.5	126.0	57.0	2.5"	54.4	54.3	10.0	10.6
TPS844	08x44	0.75	31.3	8.0	3.6	71.5	32.4	2.5"	44.2	44.0	8.1	8.5
TPS948	09x48	1.00	44.6	9.0	4.1	96.0	43.5	2.5"	48.4	48.1	9.1	9.5
TPS1054	10x54	1.50	61.0	10.0	4.5	126.0	57.0	2.5"	54.4	54.3	10.0	10.6

*TPS comes with square black tank jacket

Components

Fiberglass Tanks (Empty)



SIZE	VOLUME			WEIGHT (lbs)	TOP OPENING	BOTTOM OPENING	DIMENSION (in)			
	Litres	Cubic ft	Gallons				LA	LB	DA	DB
05x17*	3.8	0.13	1.01	2.6	2.5"	NA	16.69	16.69	4.80	5.06
05X20*	4.5	0.16	1.19	3.0	2.5"	NA	20.30	20.30	4.80	5.06
07X13*	6.3	0.22	1.67	2.7	2.5"	NA	13.19	13.03	7.17	7.48
07X17*	8.5	0.30	2.25	3.2	2.5"	NA	17.20	17.01	7.17	7.48
07x19*	9.7	0.34	2.57	4.7	2.5"	NA	19.21	19.06	7.17	7.48
07x30*	15.8	0.55	4.18	5.9	2.5"	NA	30.24	30.04	7.17	7.48
07X35*	19.1	0.67	5.05	5.9	2.5"	NA	35.28	35.08	7.17	7.48
07X44*	24.3	0.86	6.43	7.5	2.5"	NA	44.21	44.01	7.17	7.48
08X15*	9.3	0.33	2.46	3.3	2.5"	NA	15.16	15.00	8.07	8.46
08x17*	10.5	0.37	2.78	4.3	2.5"	NA	17.20	17.01	8.07	8.46
08X18*	11.5	0.41	3.04	5.6	2.5"	NA	18.19	18.03	8.07	8.46
08X24*	16.6	0.59	4.39	6.5	2.5"	NA	24.21	24.02	8.07	8.46
08X26*	18.1	0.64	4.79	7.0	2.5"	NA	26.18	26.02	8.07	8.46
08X30*	21.0	0.74	5.56	8.1	2.5"	NA	30.31	30.12	8.07	8.46
08x35	23.6	0.83	6.24	8.2	2.5"	NA	35.31	35.08	8.07	8.46
08x44	31.3	1.11	8.28	9.1	2.5"	NA	44.17	44.02	8.07	8.46
09x35	31.6	1.12	8.36	9.1	2.5"	NA	35.35	35.08	9.13	9.53
09x42*	38.5	1.36	10.19	10.2	2.5"	NA	42.28	42.00	9.13	9.53
09x48	44.6	1.58	11.80	11.7	2.5"	NA	48.35	48.07	9.13	9.53
10x15*	14.0	0.49	3.70	4.4	2.5"	NA	15.12	15.00	10.04	10.55
10x17*	16.5	0.58	4.37	5.4	2.5"	NA	17.09	16.97	10.04	10.55
10X24*	24.8	0.87	6.56	8.6	2.5"	NA	23.98	23.86	10.04	10.55
10X26*	27.3	0.96	7.23	9.0	2.5"	NA	26.14	26.02	10.04	10.55
10X30*	32.3	1.14	8.54	10.4	2.5"	NA	30.12	30.04	10.04	10.55
10x35	38.3	1.35	10.13	9.6	2.5"	NA	35.16	35.08	10.04	10.55
10x44	48.8	1.72	12.91	12.4	2.5"	NA	44.13	44.02	10.04	10.55
10X47	53.2	1.87	14.07	14.5	2.5"	NA	47.17	47.05	10.04	10.55
10x54	61.0	2.16	16.14	15.7	2.5"	NA	54.37	54.25	10.04	10.55
11X35*	46.7	1.65	12.35	12.8	2.5"	NA	35.55	35.08	11.14	11.61
11X44*	59.8	2.11	15.82	15.2	2.5"	NA	44.49	44.02	11.14	11.61
12X48*	78.5	2.77	20.78	17.8	2.5"	NA	48.50	47.95	12.09	12.40
12x52	84.7	2.99	22.41	16.8	2.5"	NA	52.68	52.13	12.09	12.40
11X35*	46.7	1.65	12.35	12.8	2.5"	NA	35.55	35.08	11.14	11.61
11X44*	59.8	2.11	15.82	15.2	2.5"	NA	44.49	44.02	11.14	11.61
13x44*	84.8	3.00	22.43	15.9	2.5"	NA	45.08	44.53	13.19	13.74
13x54	105.7	3.73	27.96	21.0	2.5"	NA	55.04	54.49	13.19	13.74
14X52	115.0	4.06	30.42	24.1	2.5"	NA	52.91	50.94	14.29	14.37
14X52	115.0	4.06	30.42	24.1	4.0"	NA	52.91	50.94	14.29	14.37
14x65	148.0	5.23	39.15	32.7	2.5"	NA	65.90	65.78	14.29	14.37
14x65	148.0	5.23	39.15	32.7	4.0"	NA	65.90	65.78	14.29	14.37
16X24*	57.0	2.01	15.07	25.0	2.5"	NA	24.57	22.52	16.25	16.37
16X24*	57.0	2.01	15.07	25.0	4.0"	NA	24.61	22.56	16.25	16.37
16X36*	98.1	3.46	25.95	29.8	2.5"	NA	38.11	36.14	16.25	16.37
16X36*	98.1	3.46	25.95	29.8	4.0"	NA	38.19	36.22	16.25	16.37
16X44*	131.6	4.65	34.81	36.3	2.5"	NA	48.82	46.93	16.25	16.37
16X44*	131.6	4.65	34.81	36.3	4.0"	NA	48.82	46.85	16.25	16.37
16X52*	148.3	5.24	39.23	43.0	2.5"	NA	54.21	52.24	16.25	16.37
16X52*	148.3	5.24	39.23	43.0	4.0"	NA	54.13	52.17	16.25	16.37
16x65	194.0	6.86	51.32	67.4	4.0"	NA	65.80	65.60	16.25	16.37
18X36*	138.0	4.87	36.51	54.8	4.0"	NA	39.37	36.97	18.03	18.15
18X53*	211.0	7.45	55.82	12.7	4.0"	NA	56.38	53.94	18.03	18.15
18x65	261.0	9.51	69.05	67.4	4.0"	NA	67.80	67.60	18.03	18.15
21x36*	164.0	5.79	43.39	66.5	4.0"	NA	39.45	37.64	20.31	21.85
21x53*	2553.0	8.93	675.40	72.5	4.0"	NA	67.76	65.94	20.31	21.85
21x62	344.0	12.16	91.01	78.5	4.0"	NA	67.80	67.60	20.31	21.85
24x72	473.0	16.71	125.13	119.8	4.0"	NA	75.50	75.30	23.38	24.64
30x72	715.0	25.27	189.15	125.5	4.0"	4.0"	70.47	71.25	30.74	31.00
30x72	717.0	25.34	189.68	150.0	6" FLANGE	6" FLANGE	87.00	75.50	30.74	31.00
36x72	1023.0	36.15	270.63	173.8	4.0"	4.0"	79.90	71.06	36.70	36.95
36x72	1023.0	36.15	270.63	184.8	6" FLANGE	6" FLANGE	87.00	76.00	36.70	36.95
42x72	1530.0	54.06	404.76	210.0	6" FLANGE	6" FLANGE	94.30	82.90	42.91	43.17
48x72	1950.0	68.90	515.87	242.0	6" FLANGE	6" FLANGE	94.50	83.07	48.60	48.90
63x83	2580.0	91.25	682.54	480.0	6" FLANGE	6" FLANGE	94.50	83.07	63.80	64.00

* Non-Stocking Items

Components

Brine Tanks & Cabinets



Features:

- ⇒ Blow-molded from high quality NSF approved high density polyethylene providing exceptional crack resistance
- ⇒ Seamless one-piece construction with molded handles for easy handling and tight fit lid for security
- ⇒ Stackable, lightweight design
- ⇒ Brine valve with Safety (standard) or optional air-check
- ⇒ Salt grid with removable legs for compact shipment
- ⇒ 10 Year Guarantee
- ⇒ 5 pieces/package
- ⇒ Brine tanks available in Black, Vanilla or Blue
- ⇒ Cabinet available with grey body / Black lid only
- ⇒ 18.6 gal (70L) and 26.5 gal (100L) available in square and round
- ⇒ 38.4 gal (145L) and 53 gal (200L) available in round only. 53 gal available in grey only.



Components

High Quality Tank Components

Salt Grids

Durable, injection-molded salt grids available for both square and round brine tanks. Snap-on legs for compact shipping. Brine tanks assemble in seconds.



High Quality Brine Components

- Closed bottom brine well reduces intrusion of unwanted impurities
- Injection molded brine grids reduce bridging
- Injection molded reliable brine valve



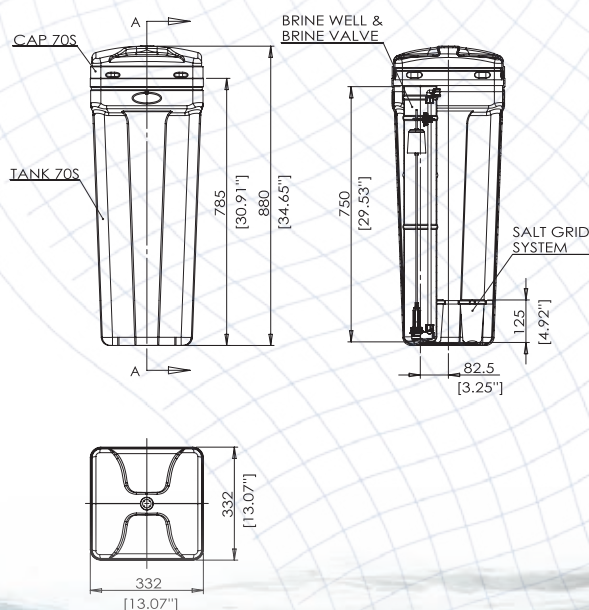
Components

Specifications

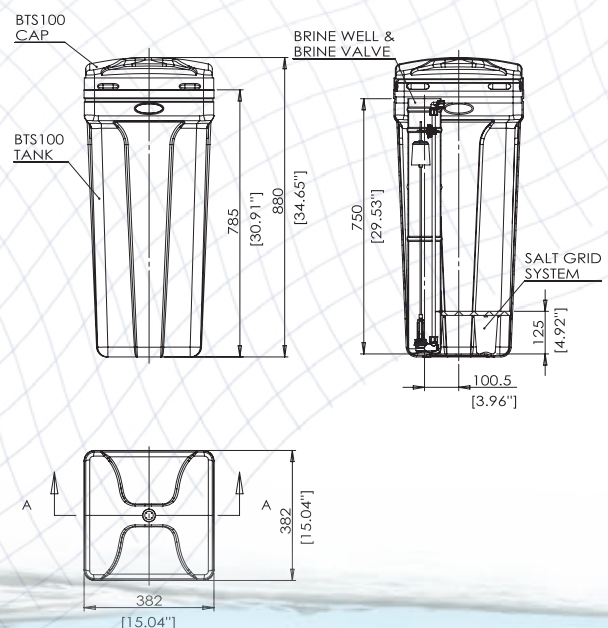
Model	Color	Liquid Volume		Tank Dimensions (inches)	5 Pack Carton Dimensions (inches)	Salt Capacity		5 Pack Carton Shipping Weight	
		US Gal	Liters	L x W x H	L x W x H	Lbs	Kg	Lbs	Kg
Brine Tanks									
BTR-70	Black	20.3	76.5	15.8 x 32.1	16.7 x 16.7 x 61.0	185.0	92.8	41.6	18.9
BTR-70	Blue	20.3	76.7	15.8 x 32.1	16.7 x 16.7 x 61.0	185.0	92.8	41.6	18.9
BTR-100	Vanilla	29.5	111.5	18.1 x 34.7	18.9 x 18.9 x 65.6	270.0	122.2	52.8	23.9
BTR-100	Black	29.5	111.5	18.1 x 34.7	18.9 x 18.9 x 65.6	270.0	122.2	52.8	23.9
BTR-100	Blue	29.5	111.5	18.1 x 34.7	18.9 x 18.9 x 65.6	270.0	122.2	52.8	23.9
BTR-145	Black	42.3	159.7	20.3 x 37.4	21.9 x 21.9 x 72.2	385.0	174.2	65.6	29.8
BTR-200	Grey	53.0	200.3	23.0 x 40.5	24.6 x 24.6 x 84	700.0	316.7	125.0	56.6
BTS-70	Black	19.0	71.8	13.1 x 13.1 x 34.7	14.4 x 14.4 x 62	175.0	92.8	48.8	22.1
BTS-70	Blue	19.0	71.8	13.1 x 13.1 x 34.7	14.4 x 14.4 x 62	175.0	92.8	48.8	22.1
BTS-100	Vanilla	25.0	94.5	15.0 x 15.0 x 34.7	16.6 x 16.7 x 61	230.0	104.1	54.4	24.7
BTS-100	Black	25.0	94.5	15.0 x 15.0 x 34.7	16.6 x 16.7 x 61	230.0	104.1	54.4	24.7
BTS-100	Blue	25.0	94.5	15.0 x 15.0 x 34.7	16.6 x 16.7 x 61	230.0	104.1	54.4	24.7
* All brine tanks come with salt grid, safety float and brine well									
Cabinets									
CS1-935	Grey / Black	36.2	136.7	13.8 x 23.6 x 34.5	15.6 x 25.2 x 46.5	225.0	101.8	88.0	39.9
CS1-1035	Grey / Black	36.2	136.7	13.8 x 23.6 x 34.5	15.6 x 25.2 x 46.5	225.0	101.8	108.0	49.0

* Cabinets shipped in single quantities with NSF Approved fiberglass tank & WQA Gold Seal Approved 8% cross-linked Aquafine cation resin, fine gravel underbedding and distributor. Cabinets comes with brine well and safety float.

Dimensions BTS70

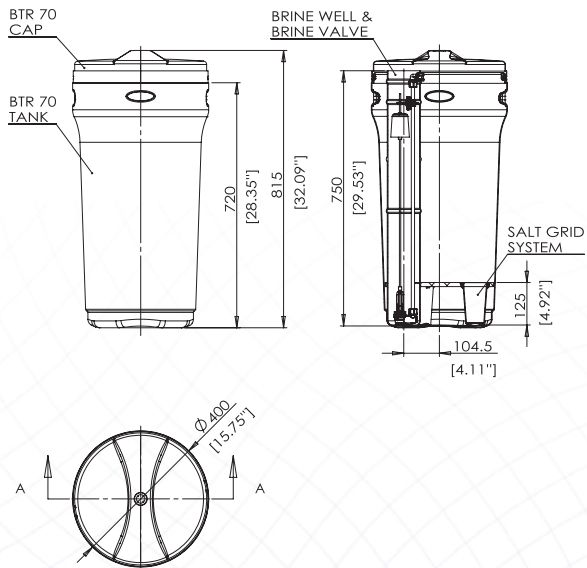


BTS100

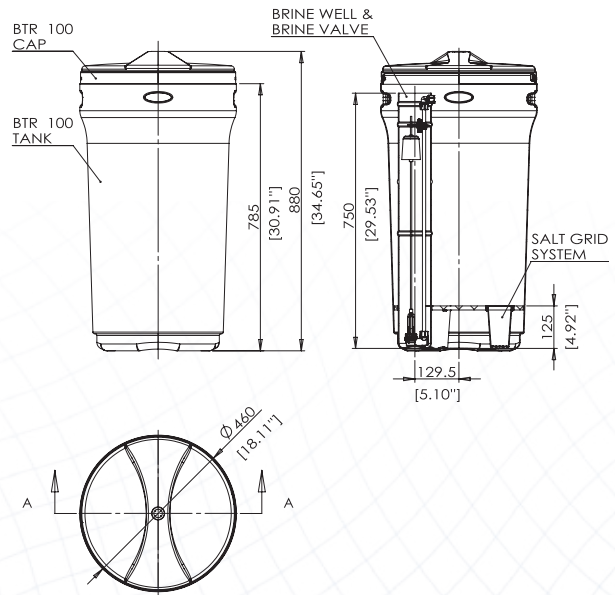


Components

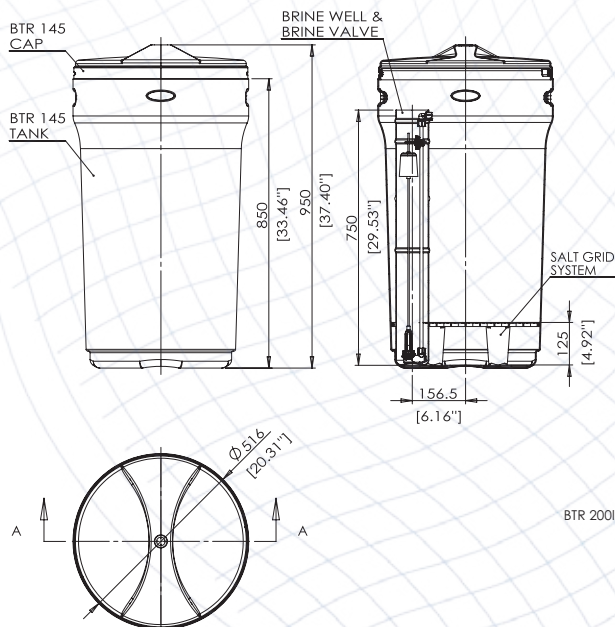
BTR70



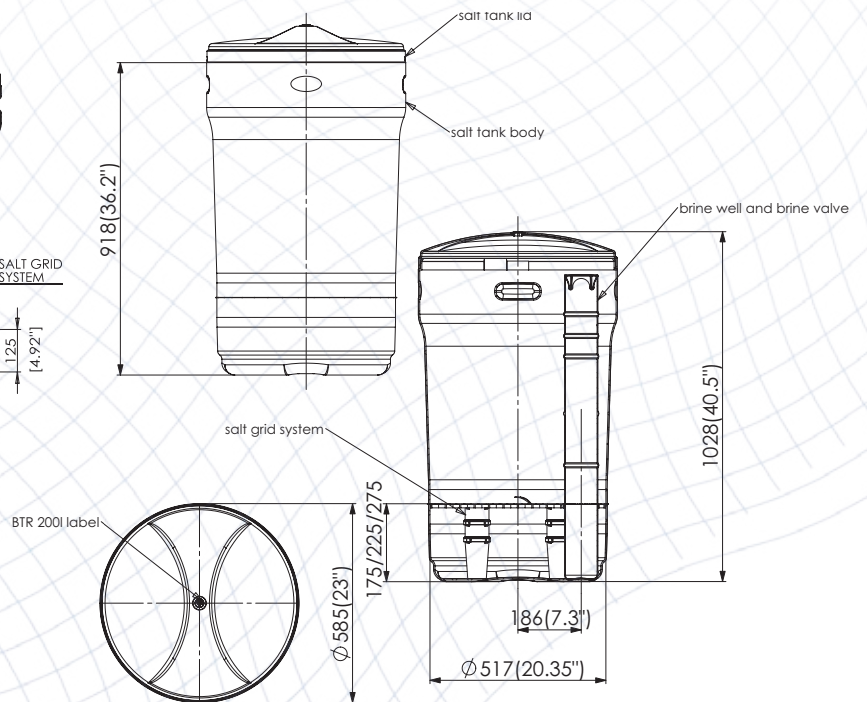
BTR100



BTR145



BTR200



Components: Media

Media properties

Activated Carbon

A porous solid in powder, extrudate or granular form, produced from any base material which has a high percentage of carbonaceous content, ie: wood, nut pits or shell, animal bone, hydrocarbon sludge, peat, lignite, bituminous coal and anthracite coal.

Advantages: The porosity of activated carbon offers an extremely high surface area to volume mass ratio. 2.2 pounds at 1,000 square meters per gram, a good typical carbon, has about the same surface as 100 miles of two lane highway. Carbon absorbs organic compounds which produce taste, odor, color or toxicity. Reduces free chlorine.

Anthracite

Anthracite is low in ash and friability. The coal is cleaned (reduction in ash content), screened and classified to the proper sizes for water filtration purposes.

Advantages: Versus silica and quartz sands and gravels are: longer runs between backwashes, higher flow rates without headloss, lower backwash water pressures and/or quantities, a greater utilization of the bed mass for filtration, and a volumetric higher surface area.

Garnet

A naturally hard, durable, high specific gravity mineral. Resistance to attrition means less loss of media and shutdown time. High specific gravity means more control during backwash and lower losses to drain. The angular shape provides more ability to filter and longer production runs.

Manganese Greensand

Black nodular granules of manganese-coated natural greensands - used for removing soluble iron and/or manganese as well as hydrogen sulfide. It must be either continuously or periodically regenerated with potassium permanganate.

Magnesium Oxide

Has a high degree of activity and speed of pH correction, allowing high flow.

Gravel

Gravel is used as a support to keep smaller media out of the distribution system and to stop channeling of water. Minimum layers of 3" per size is suggested. A high proportion are rounded and tend toward a spherical shape.

Sand

99% of the water purified in the world today is accomplished by passing the water through "Rapid Sand Filters". Theoretically the upper layer of the bed performs the filtration, while the lower layers provide the necessary support and assist in the hydraulics involved during the backwash cycle. The chemical and physical properties are important. The media must be hard, not smooth, and free of soluble particles.

Birm®

Under the proper conditions, no chemicals to purchase for maintenance. Regeneration not required. Iron removal efficiency is extremely high. Only periodic backwashing is required. Durable material with a long life and wide temperature range. Weighs only 45-60 lbs/cubic foot. Manganese removal pH is 8-9.

Calcium Carbonate (also known as Calcite)

(Slow dissolve, crushed marble)

Acidic waters on contact slowly dissolve the calcium carbonate media to raise the pH which reduces the potential leaching of copper, lead and other metals found in typical plumbing systems. Periodic backwashing will prevent packing and maintain high service rates. Depending on pH and service flow, the bed will have to be periodically added to as the dissolved calcium carbonate depletes. As the calcium carbonate neutralizes the water, it will increase hardness and a softener may become necessary after the neutralizing filter.

Filter Ag®

Advantages: Less pressure loss than through most other media. Light weight requires lower backwash rates. High service rates. High dirt removal capacity. Reduced shipping cost due to light weight/cu.ft.

Note: Birm, Corosex and Filter Ag are registered trademarks of the Clack Corporation.

***Specifications for our most popular resins and filter media are included on the following pages.
Please call if specifications for any other media are required.***

Components: Media

MEDIA

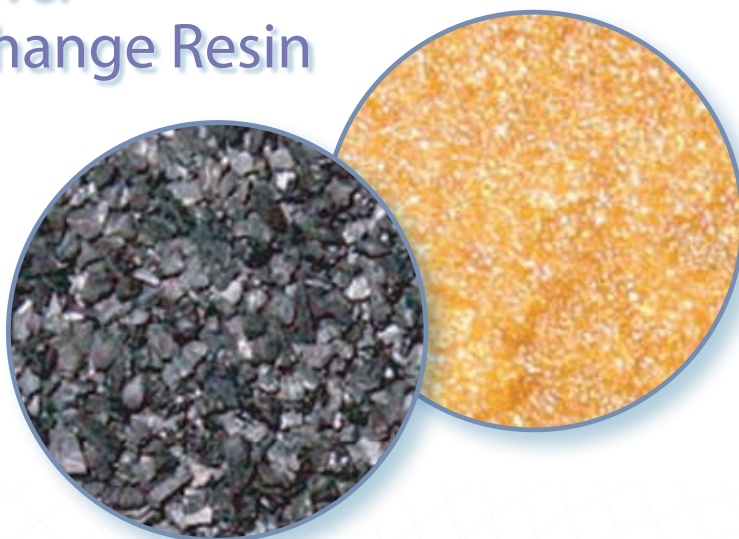
PART #	DESCRIPTION	PALLET QTY (3% Discount on Pallet Orders)	WEIGHT (LBS)
CATION EXCHANGE RESIN (CUBIC FOOT BAGS)			
21502	AQUAFINE® CATION RESIN AQ100-NA	42	53
21495	C-100x-NA, 10% CROSS-LINKED	42	53
35010004	C-150E PUROLITE-(HIGH CHLORINE)	42	53
21501	C-100E PUROLITE CATION RESIN	42	53
21499	C-100E FM PUROLITE FINE MESH	42	53
21512	SSTC-60 PUROLITE	42	50
ANION EXCHANGE RESIN (CUBIC FOOT BAGS)			
21494	A-850 ANION PUROLITE	42	43
21491	A-860 ANION PUROLITE	42	43
21480	TANEX RESIN	42	45
21497	A-520E ANION PUROLITE	42	43
21493	A-500P ANION PUROLITE	42	43
21484	A-300 ANION PUROLITE	42	43
21486	A-400 ANION PUROLITE	42	43
RESIN OTHER (CUBIC FOOT BAGS)			
35010025	FERRIX A33E RESIN	42	57
21492	RESIN UCW3700	42	45
ACTIVATED CARBON			
22022	CALGON - F-200, LOW FINES, BITUMINOUS	40	31
30401C	JACOBI AQUASORB CS LF, 20 X 50, 1 cu ft	40	27.5
22022C	JACOBI AQUASORB CS LF, 12 X 40, 1 cu ft	40	27.5
22023C	JACOBI AQUASORB HS LF, 12 X 40, 1 cu ft	40	27.5
25006	HYDRODARCO CARBON-4000 1.66CF BAG	40	40
CATALYTIC CARBON			
22018	CENTAUR CARBON 12X40 - 1CF BAG	40	33
22018C	JACOBI AQUASORB CX MCA, 12 X 40, 1 cu ft	40	27.5
SAND & GRAVEL			
22001	1/8" X 1/16" FINE GRAVEL, 100LB BAGS	30	100
22002	1/4" X 1/8" MEDIUM GRAVEL, 100LB BAGS	30	100
22003	1/2" X 1/4" COARSE GRAVEL 100LB BAGS	20	100
22004	.45 X .55 FILTER SAND 100LB BAGS	36	100
GARNET			
22502-50	GARNET-30X40 (130 LBS/CU FT) - SOLD IN 50 LB BAGS	NA	50
22503-50	GARNET-8X12 (140 LBS/CU FT) - SOLD IN 50LB BAGS	NA	50
OTHER MEDIA			
33016	BIRM-42 LBS/CU FT	40	36
52000	GREENSAND PLUS- 0.5 CU FT/43 LBS	55	43
35080002	CALCITE-90 LBS/CU FT-SOLD IN 50 B BAGS	25	90
35080001	Magnesium Oxide(MAG OX) -75 LBS/CU FT-SOLD IN 50 LB BAGS	25	75
33013	FILTER AG (1 CF BAG)	25	25
22510	NEXSAND (1 CF BAG)	25	53
22014	PYROLOX - SOLD IN 1/2 CF BAG	20	60
31501	ANTHRACFILT (ANTHRACITE) SOLD IN 1 CF BAG	50	52
33007	KDF 55, DRUM	NA	57
33008	KDF 85, DRUM	NA	57

REPLACEMENT MEDIA BED - SHIPPED IN PAILS

PART #	DESCRIPTION	WEIGHT (LBS)
95401	0.75 CF REPLACEMENT CARBON BED - PREPACKED	33
95402	1.0 CF REPLACEMENT CARBON BED - PREPACKED	44
95403	1.5 CF REPLACEMENT CARBON BED - PREPACKED	65
95404	2.0 CF REPLACEMENT CARBON BED - PREPACKED	76
95418	0.75 CF REPLACEMENT MULTI MEDIA - PREPACKED	71
95415	1.0 CF REPLACEMENT MULTI MEDIA - PREPACKED	94
95416	1.5 CF REPLACEMENT MULTI MEDIA - PREPACKED	138
95417	2.0 CF REPLACEMENT MULTI MEDIA - PREPACKED	188
95632	0.75 CF REPLACEMENT NEXSAND- PREPACKED	60
95633	1.0 CF REPLACEMENT NEXSAND - PREPACKED	90
95644	1.5 CF REPLACEMENT NEXSAND - PREPACKED	120
95411	0.75 CF REPLACEMENT GREENSAND - PREPACKED	75
95412	1.0 CF REPLACEMENT GREENSAND - PREPACKED	107
95413	1.5 CF REPLACEMENT GREENSAND - PREPACKED	160
95414	2.0 CF REPLACEMENT GREENSAND - PREPACKED	200
95431	.75 CF REPLACEMENT CHEMFREE BED CF0847A - PRE- PACKED	76
95432	.75 CF REPLACEMENT CHEMFREE BED CF0847AM - PREPACKED	76
95425	1.0 CF REPLACEMENT CHEMFREE BED CF1047A - PRE- PACKED	107
95426	1.0 CF REPLACEMENT CHEMFREE BED CF1047AM - PREPACKED	107
95551	1.5 CF REPLACEMENT CHEMFREE BED CF1047A - PRE- PACKED	150
95554	1.5 CF REPLACEMENT CHEMFREE BED CF1047AM - PREPACKED	150
95427	2.0 CF REPLACEMENT CHEMFREE BED CF1047A - PRE- PACKED	200
95428	2.0 CF REPLACEMENT CHEMFREE BED CF1047AM - PREPACKED	200
95435	0.75 CF REPLACEMENT BIRM- PREPACKED	33
95436	1.0 CF REPLACEMENT BIRM - PREPACKED	44
95437	1.5 CF REPLACEMENT BIRM - PREPACKED	65
95438	2.0 CF REPLACEMENT BIRM - PREPACKED	76
93500	0.75 CF REPLACEMENT NEUTRALIZING- PREPACKED	75
93501	1.0 CF REPLACEMENT NEUTRALIZING - PREPACKED	107
93502	1.5 CF REPLACEMENT NEUTRALIZING - PREPACKED	150
93503	2.0 CF REPLACEMENT NEUTRALIZING - PREPACKED	200

Components: Media

Aquafine® Ion Exchange Resin



AQ100-Na

AQUAFINE AQ100-Na is a premium high capacity gel polystyrene strong acid cation exchange resin supplied regenerated in the sodium form. It is suitable for use as either residential or commercial water softening equipment.

Physical & Chemical Characteristics

Polymer Matrix Structure Polystyrene 8% cross-linked with Divinylbenzene

Physical Appearance Amber spherical beads

Whole Bead Count 90% minimum

US Standard Mesh Size 16 - 50

Ionic Form as shipped Sodium (Na+)

Approximate Shipping Weight 53 lb / cubic foot
(850 grams / litre)

Total Capacity in the Sodium Form 1.9 meq / ml

pH Range, Stability in the Sodium Form 0 - 14

Conditioning for Operation

Hydrotech recommends AQUAFINE AQ100-Na resin be initially regenerated upon the startup of any water softener system. It is also recommended that the resin be sanitized during the initial regeneration with a small amount of 5.25% sodium hypochlorite solution diluted in the saturated brine mixture.

AQUAFINE is a registered trademark of WaterGroup Inc.

Regulatory Compliance

AQUAFINE AQ100-Na is tested and certified by WQA to NSF / ANSI Standard 61 for material requirements only.

AQUAFINE AQ100-Na is compliant with US FDA Code of Federal Regulations, Section 21, Paragraph 173.25.



This product has been tested and certified to meet the material requirements of NSF/ANSI Standard 61.

C USA

Components: Media

C-100E Strong Acid Cation Exchange Resin

Product Description

Purolite C-100E is a high purity premium grade bead from conventional gel polystyrene sulphonate cation exchange resin designed expressly for the treatment of foodstuffs, beverages, potable waters, and water used in the processing of food. Its specification is such that it will exceed the relevant EEC requirements, and the resin is in compliance with the US Food & Drug Administration Code of Federal Regulations - Section 21, Paragraph 173.25 - for use in the treatment of foods for human consumption. Its high bead integrity, excellent chemical and physical stability and very low extractibles content play a large part in its successful employment in these areas.

Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Crosslinked Polystyrene Divinylbenzene
Physical Form and Appearance	Clear Spherical Beads
Whole Bead Count.....	90% minimum
Functional Groups	R-SO ₃
Ionic Form, as shipped	Na ⁺
Shipping Weight (approx)	850 g/l (53 lb/ft ³)
Screen Size Range:	
US Standard Screen.....	16 - 50 mesh, wet
Particle Size Range.....	+1.2 mm <5%, -0.3 mm <1%
Moisture Retention, Na ⁺ Form.....	46 - 50%
Swelling	
Na ⁺ Û H ⁺	5% maximum
Ca ⁺⁺ Û Na ⁺	8% maximum
Specific Gravity, moist Na ⁺ Form	1.27
Total Exchange Capacity, Na ⁺ Form:	
Wet, volumetric.....	1.9 eq/ml minimum
Dry, weight	4.5 eq/g minimum
Operating Temperature, Na ⁺ Form	150°C (300°F) maximum
pH Range, Stability, Na ⁺ Form	0 - 14
pH Range, Operating, Na ⁺ Form.....	6 - 10

For complete specifications, please contact our Customer Service Department

PUROLITE®
ION EXCHANGE RESINS

Components: Media

C-100 E-FM Fine Mesh Softener Resin

Purolite offers fine mesh strong acid cation resin for many added advantages in water softening applications:

- Higher operating capacities
- Minimal salt requirements
- Faster kinetics
- More effective iron removal
- Shallower bed requirements
- Less rinse water needed
- Best for counter-current regeneration
- Bead size - 40 - 70 US mesh

Below are estimated capacities for a typical Fine Mesh Resin product, based on U.S. gallon measurements.

Lbs. of Salt (NaCl) Per Cu. Ft. of Resin	30 to 70 Mesh Kilograin Capacity	Standard Purolite C-100 Kilograin Capacity
2.0	9.6	9.0
3.0	15.0	14.0
5.0	24.0	21.5
7.5	29.8	25.0
10.0	31.5	28.5
15.0	34.0	32.6
25.0	39.2	35.0

Note: Operating Conditions for the above Fine Mesh Resin

Bed depth - 24 inches, minimum

Service Downflow - 3 gpm/cu. ft.

Brining - Upflow or Downflow - 0.5 gpm/cu. ft.

PUROLITE®
ION EXCHANGE RESINS

Hydrotech



Components: Media

A-500P, A-850 & A-860 Tannin Removal Resins

Ion Exchange Resins for the reversible removal of naturally occurring tannin organics (color bodies) in potable waters.

- Purolite A-500 P, A-850, and A-860 are strong base anion resins for tannin removal from potable waters. All resins are functionally the same. A-850 is a gel resin. A-500 P and A-860 are macroporous resins. Physically, the A-860 is a porous version of the A-850 gel. At times, one resin may be more effective than the others depending on the area of the country.
- The resins are rated for tannin removal at 2000 ppm - gallons per cubic foot. To determine the gallon volume that can be had per cubic foot, divide the figure of 2000 by ppm of tannins in the water. If only a fraction of a cubic foot is used, then the water produced will be this fraction of the volume.
- Service flow rate is 2 - 5 gpm per cubic foot. Pressure drop in psi per foot of resin depth is $0.18 \times \text{gpm per sq. ft.}$
- The resin regenerates with salt. The regenerant level is 8 pounds of salt per cubic foot. The salt regenerant solution to the resin bed should be 8% plus and the contact time 30 minutes.
- Backwash flow rate is 2 - 3 gpm per sq. ft for a minimum backwash time of 20 minutes. An upper basket is recommended. Resin bead size is 16 to 50 US mesh.
- In field installations, the tannin removal resin can be put in as the top portion of the softener resin bed. In this type of installation, all backwash and regeneration conditions would be those specified for the tannin resin. This means modifying softener system by cutting backwash flow in half and doubling backwash time. Use smallest brine injector.
- Avoid overrunning the resin as it is sometimes difficult to clean up. Regenerate as needed and on the conservative side. Never exceed three days without a regeneration. All standard available resin cleaners will help and not harm the tannin removal resins. Iron should first be removed from water when it is present and over 0.3 mg/l.

PUROLITE®
ION EXCHANGE RESINS

Hydrotech



Components: Media

A-520E Macroporous Strong Base Anion Exchange Resin

Product Description

Purolite A-520E is a macroporous strong base anion resin which is specially designed for the removal of nitrates from water for potable processes. The macroporous matrix and special ion exchange group functionality imparts ideal nitrate selectivity to Purolite A-520E, making this resin particularly suitable for nitrate removal even when moderate to high concentrations of sulfate are present. Hence this resin gives superior performance in nitrate removal applications when compared with standard exchange resins.

A requirement of the nitrate removal process is to produce potable water meeting the quality standard defined by the European Economic Community in the Directive No. 80/778 of July 1980. This directive limits the nitrates to a maximum admissible concentration (M.A.C.) of 50 mg NO₃/l. The USA drinking water regulations limit nitrates to 45 mg NO₃/l.

Regeneration

Sodium chloride is generally preferred for regeneration for reasons of cost and efficiency. When available, sea water can be used quite effectively. The use of softened water for make up of regenerant and rinse is often recommended to avoid the precipitation of calcium carbonate in and around the Purolite A-520E (or any other resin used in this application). Although the precipitation is not particularly detrimental in the short term, the long term effects may include increased resin attrition and leakage of nitrates.

Preconditioning Procedure

Purolite A-520E is processed to ensure that it meets the requirements for use in the treatment of potable water. On installation, it is recommended that the resin be regenerated with two bed volumes of 6% NaCl followed by a rinse of four bed volumes of potable water, prior to use.

Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Macroporous Styrene-Divinylbenzene
Physical Form and Appearance	Opaque Cream Spherical Beads
Whole Bead Count.....	95% minimum
Functional Groups	Quaternary Ammonium
Ionic Form, as shipped	Cl ⁻
Shipping Weight (approx)	680 g/l (42.5 lb/ft ³)
Screen Size Range:	
US Standard Screen	16 - 50 mesh, wet
Particle Size Range.....	+1200 mm <5%, -300 mm <1%
Moisture Retention, Cl ⁻ Form	50 - 56%
Reversible Swelling CL ⁻ SO ₄ /NO ₃	negligible
Total Exchange Capacity, Cl ⁻ Form:.....	
Wet, volumetric.....	0.9 meq/ml minimum
Dry, weight.....	2.8 meq/g minimum
Operating Temperature, Cl ⁻ Form	100°C (212°F) maximum
pH Range, Stability	0 - 14
pH Range, Operating	4.5 - 8.5

A-520E is manufactured by: Purolite Company (The) - Bala Cynwyd, PA

**For complete specifications, please contact
our Customer Service Department**

PUROLITE®
ION EXCHANGE RESINS

Components: Media

Tanex

Purolite Ion Exchange Resin for the removal of a wide range of organics, metal hydrides, metal oxides and colloidal matter from water; while operating on a chloride cycle.

Typical Characteristics

- Capacity: 2100 ppm - GALLONS per cu. ft.
Divide the 2110 figure by ppm of organics for gallons treated per cu. ft.
- Service Flow Rate: 1 to 4 gpm/cu. ft.
- Influent water filtered to 5 microns
- Regenerant level 8 lbs. NaCl/cu. ft.
- Backwash Flow Rates
@ 55°F 1.2 GPM/sq. ft.
@ 70°F 1.5 GPM/sq. ft.
- Regenerant concentration 8% minimum
30 minute contact time minimum
- Bead Size: 16 to 50 U.S. Mesh
- Pressure Drop: $0.08 \times \text{GPM/sq. ft.} = \text{_____ PSI/ft. depth}$

NOTE: If the TANEX resin is used in a softener system either as the top portion of the resin bed or making up the whole bed; then reduce the backwash flow rate by at least half, double the backwash time and, use a small brine injector and put in top screen.

PUROLITE®
ION EXCHANGE RESINS

Hydrotech



Components Media

RED FLINT - Filter Sand & Gravel Industrial and Municipal

For over 60 years, Red Flint sand and gravel has been satisfying the requirements of industrial and municipal users. Red Flint products have been specified and used nationally and internationally because of their high quality, desirable chemical properties and wide range of precision sizing. These factors, combined with prompt, reliable service by people who care, are key reasons why so many of our customers state "If you want the very best, use Red Flint."

There are important reasons for specifying and using Red Flint industrial sand and gravel:

- Meets AWWA specifications
- Red Flint is a "natural state" glacial deposit product
- Precision sizing and uniform grading with close limits
- Red Flint filter sand and gravel meets strictest effective size and uniformity coefficients
- All product is processed to exacting specifications

Average Screen Analysis of Red Flint Sand Standard Grades - Effective Sizes - MM Uniformity Coefficient - 1.35 - 1.70 Range

Opening mm	Sieve No.	0.35-0.45		0.45-0.55		0.50-0.60		0.60-0.65		0.70-0.80		0.80-1.20		1.65-2.00	
		% Ref	% Pass	% Ref	% Pass	% Ref	% Pass	% Ref	% Pass	% Ref	% Pass	% Ref	% Pass	% Ref	% Pass
3.327	6													0.5	99.5
2.794	7													1.0	98.5
2.362	8													58.0	40.5
1.981	9									0.0	100.0	0.0	100.00		
1.651	10									14.0	86.0	28.0	72.0	38.0	2.5
1.397	12					0.0	100.0	0.0	100.0	11.0	75.0	30.0	42.0		
1.168	14			0.0	100.0	8.0	92.0	8.5	91.5	20.0	55.0	32.0	10.0	2.5	0.0
.991	16		100.0	1.0	99.0	24.0	68.0	16.0	75.5	22.0	33.0	9.5	0.5		
.883	20	1.0	99.0	10.0	89.0	32.0	36.0	25.0	50.5	18.0	15.0	0.5	0.0		
.701	24	8.0	91.0	27.0	62.0	24.0	12.0	26.0	24.5	11.0	4.0				
.589	28	24.0	67.0	29.0	33.0	8.0	4.0	20.5	4.0	4.0	0.0				
.495	32	29.0	38.0	25.0	8.0	4.0	0.0	4.0	0.0						
.417	35	23.0	15.0	6.0	2.0										
.351	42	12.0	3.0	2.0	0.0										
.295	48	3.0	0.0												
.208	65														
.147	100														

Uniformity coefficient can be controlled at points between limits shown above.

Average Screen Analysis for Standard Grades of Red Flint Filter Gravel Percent Retained

Filter Gravel Sizes	3	2 1/2	2	1 1/2	1 1/4	1	7/8	3/4	5/8	1/2	3/8	1/4	No. 4	No. 6	1/8"	No. 8
2 1/2x1 1/2	0	0-5	40-60	30-40	0-5											
1 1/2x1				0-5	40-65	45-60	0-5									
1 1/2x3/4				0-5	38-52	30-55		45-60	0-5							
1x3/4						0-5	50-70	30-50	0-5							
1x5/8						0-5	25-40	30-45	25-40	0-5						
1x1/2							0-5	35-50		15-65	0-5					
3/4x1/2								0-5	50-70	30-50	0-5					
5/8x5/8									0-5	35-48	45-65	0-5				
1/2x1/4										0-5	45-60	40-60	0-5			
3/8x3/4											0-5	45-65	35-60	0-5		
1/4x1/8												0-5	15-35	50-70	10-20	0-8

Red Flint and Red Flint Filter Sand is tested and certified by UL under ANSI/NSF 61 for materials only.

Red Flint and Red Flint Filter Sand is manufactured by: American Materials Corp. - Eau Claire, WI

Components Media

GreensandPlus™

GreensandPlus™ is a black filter media used for removing soluble iron, manganese, hydrogen sulfide, arsenic and radium from water supplies.

The manganese dioxide coated surface of GreensandPlus acts as a catalyst in the oxidation reduction reaction of iron and manganese.

The silica sand core of GreensandPlus allows it to withstand operating conditions in waters that are low in silica, TDS and hardness. When using GreensandPlus, you can eliminate the aluminate feed.

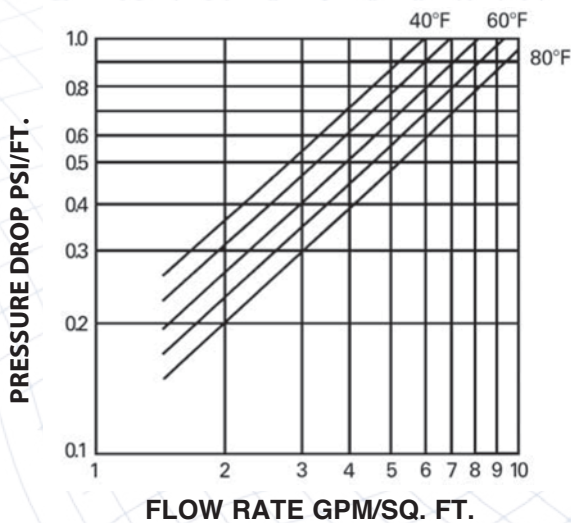
GreensandPlus is effective at higher operating temperatures and higher differential pressures than ordinary manganese greensand. Tolerance to higher differential pressure can provide for longer run times between backwashes and a greater margin of safety. Systems may be designed using either vertical or horizontal pressure filters, as well as open gravity filters.

GreensandPlus is a proven technology for iron, manganese, arsenic, radium and hydrogen sulfide removal. Unlike in-situ treated media, there is no need for extensive preconditioning of filter media or lengthy startup periods, during which required water quality may not be met.

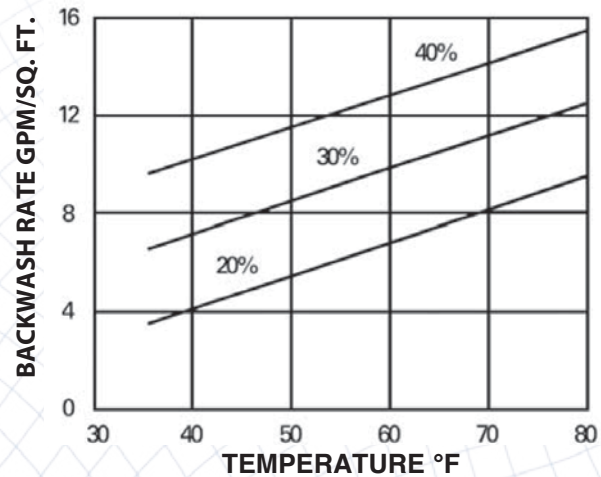
GreensandPlus is an exact replacement for manganese greensand. It can be used in CR or IR applications and requires no changes in backwash rate or times or chemical feeds.

GreensandPlus has the WQA Gold Seal Certification for compliance with NSF/ANSI 61. Packaging is available in 1/2 cubic foot bags or 1 metric ton (2,205 lbs) bulk sacks.

PRESSURE DROP (CLEAN BED)



BED EXPANSION DURING BACKWASHING



Components: Media

GreensandPlus™

Physical Characteristics

Physical Form

Black, nodular granules, shipped in a dry form

Apparent Density

85 pounds per cubic foot net

Shipping Weight

89 pounds per cubic foot gross

Specific Gravity

Approximately 2.4

Porosity

Approximately 0.45

Screen grading (dry)

18 X 60 mesh

Effective size

0.30 to 0.35 mm

Uniformity coefficient

Less than 1.60

pH range

6.2 to 8.5 (see General Notes)

Maximum temperature

No limit

Backwash rate

Minimum 12 gpm/sq.ft. at 55°F

Service flow rate

2 - 5 gpm/sq.ft.

Minimum bed depth

24 inches (15-18" of each media or dual media beds)

Suggested Operating Conditions:

Bed Type

Dual media: anthracite (15-36 in.) and GreensandPlus (15-24 in.)

Capacity

700-1200 grains of oxidized iron and manganese/sq.ft. of bed area based on potassium permanganate demand and operation to iron break through.

Backwash

Sufficient rate using treated water to produce 40% bed expansion.

Air/Water Scour

Optional using 0.8-2.0 cfm/sq. ft. with a simultaneous treated water backwash at 4.0-4.5 gpm/sq. ft.

Raw Water Rinse

At normal service flow rate for 3-5 minutes or until effluent is acceptable.

Flow Rate

Recommended flow rates with CR operation are 2-5 gpm/sq. ft. Extremely high concentrations of iron and manganese usually require lower flow rates for equivalent run lengths. Higher flow rates can be considered with very low concentrations of iron and manganese. For optimum design parameters, pilot plant testing is recommended. The run length between backwashes can be estimated as follows:

What is the run length for a water containing 1.7 mg/L iron and 0.3 mg/L manganese at a 4 gpm/sq. ft. operating rate?

$$\text{KMnO}_4 \text{ demand} = (1 \times \text{mg/L Fe}) + (2 \times \text{mg/L Mn}) \\ = (1 \times 1.7) + (2 \times 0.3)$$

$$= (2.3 \text{ mg/L or } 2.3/17.1 = 0.13 \text{ grains/gal. gpg})$$

$$\text{At } 1,000 \text{ grains/sq. ft. loading } \div 0.13 \text{ gpg} = 7,692 \text{ gal./sq.ft.}$$

$$\text{At } 4 \text{ gpm/sq. ft. service rate } 7,692/4 = 1,923 \text{ min.}$$

The backwash frequency is approximately every 30-36 hours of actual operation.

The Intermittent regeneration (IR) operation is available for certain applications. Contact your Inversand representative for additional information.

Components: Media

GreensandPlus™

General Notes

pH

Raw waters having natural pH of 6.2 or above can be filtered through GreensandPlus without pH correction. Raw waters with a pH lower than 6.2 should be pH-corrected to 6.5-6.8 before filtration. Additional alkali should be added following the filters if a pH higher than 6.5-6.8 is desired in the treated water. This prevents the possible adverse reaction and formation of a colloidal precipitate that sometimes occurs with iron and alkali at a pH above 6.8.

Removing Fines and Initial Conditioning

Prior to placing the anthracite in the filter or placing the filter into service, GreensandPlus should be thoroughly backwashed and the top layer of fine material removed by undercutting in accordance with AWWA B 100, paragraph 4.5.2. This is especially important if anthracite is placed on top of the GreensandPlus bed. Each cubic foot of GreensandPlus shipped contains sufficient material to compensate for the removal of this final material.

GreensandPlus is NOT shipped in a regenerated form; therefore it is necessary, prior to use, to regenerate it with a solution of potassium permanganate contacting the bed for a minimum of 4 hours. A regeneration level of 4 ounces of KMnO_4 or chlorine per cubic foot of GreensandPlus is recommended. Before placing into service, the filter must be rinsed of all remaining traces of potassium permanganate.

Radium and Arsenic Removal Using GreensandPlus

The GreensandPlus CR process has been found to be successful in removing radium and arsenic from well water. This occurs via adsorption onto the manganese and/or iron precipitates that are formed. For radium removal, soluble manganese must be present in or added to the raw water for removal to occur. Arsenic removal requires iron to be present in or added to the raw water to accomplish removal. Pilot plant testing is recommended in either case.

Methods of Operation Continuous Regeneration (CR)

Continuous regeneration (CR) operation is recommended in applications where iron removal is the main objective in well waters with or without the presence of manganese. This method involves the feeding of a predetermined amount of chlorine (Cl_2) and /or potassium permanganate (KMnO_4), directly to the raw water before the GreensandPlus Filter.

Chlorine should be fed at least 10-20 seconds upstream of the KMnO_4 , or as far upstream as possible to insure adequate contact time. KMnO_4 , if required, should be fed to produce a "just pink" color in the filter inlet. This slight excess of KMnO_4 or a Cl_2 residual carried through the filter will maintain GreensandPlus in a continuously regenerated condition.

The dosage of Cl_2 and KMnO_4 may be estimated as follows:

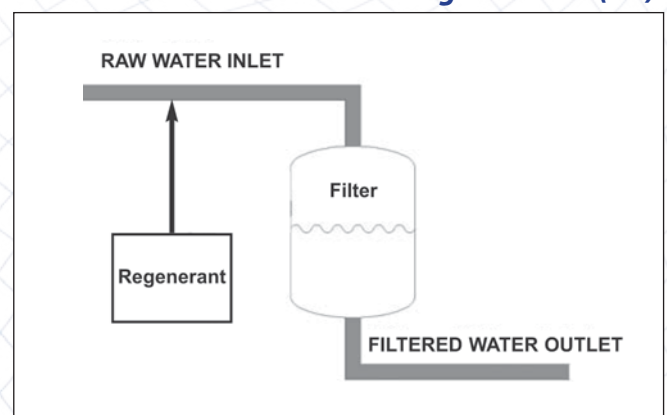
$$\text{mg/L Cl}_2 = \text{mg/L Fe}$$

$$\text{mg/L KMnO}_4 = (0.2 \times \text{mg/L Fe}) + (2 \times \text{mg/L Mn})$$

Without Cl_2 the KMnO_4 demand may be estimated by:

$$\text{mg/L KMnO}_4 = (1 \times \text{mg/L Fe}) + (2 \times \text{mg/L Mn})$$

GreensandPlus: Continuous Regeneration (CR)



Components: Media

Magnesium Oxide & Calcium Carbonate

Magnesium Oxide

Magnesium oxide is a specially processed hard, bead-like magnesia, adapted for use in filters to neutralize acidity by increasing the pH value. By neutralizing the free carbon-dioxide in water, magnesium oxide can correct red water conditions and render them to a non-corrosive condition. Magnesium oxide is used most effectively where pH correction is substantial or high flow conditions are in use. Magnesium oxide, being soluble to acidity, will have to be replenished periodically. Please note - under certain low flow conditions, magnesium oxide may over-correct and create a basic condition.

Magnesium oxide can be effectively combined with calcium carbonate to combine the high flow neutralization properties of magnesium oxide along with the slow reacting low flow properties of calcium carbonate without getting potentially high basic properties due to over correction.

Advantages

- High degree of activity
- Speed of correction, allowing high flow

Physical Properties

Color..... greyish white
Density 90 lbs./cu. ft.
Effective Size 1.27 mm
Uniformity Coefficient..... 1.48
Active Material 84% - 90%
Composition..... MgO 97+%

Conditioning for Operation

1. Downflow service is satisfactory on waters with a hardness of less than 5 gpg or where it is combined with calcium carbonate at least 50/50. Upflow service is generally recommended with hardness exceeding 5 gpg to prevent "cementing of the mineral bed."
2. A gravel support bed is recommended.
3. pH - 4 to 6.
4. Bed depth - 24" to 30".
5. Backwash frequently to prevent cementing.
6. Backwash bed expansion - 35%.
7. Service rate - 5 to 6 gpm but may be modified to adapt to local conditions.

Calcium Carbonate (pH Neutralizer)

Calcium carbonate is a crushed and screened white marble material which can neutralize acidic or low pH waters to a neutral non-corrosive affluent, inexpensively. Acidic waters, on contact, slowly dissolve the calcium carbonate media to raise the pH, which effectively neutralizes the potential leaching of copper and other metals found in typical plumbing systems. Periodic backwashing will prevent packing and maintain high service rates. Depending on pH and service flow, the media bed will have to be periodically added to as the dissolved media depletes. As the calcium carbonate neutralizes the water, it will increase hardness and a softener may become necessary after the neutralizing filter.

Advantages

- High uniformity coefficient for maximum contact for controlled pH correction
- Slower reacting
- Inexpensive

Physical Properties

Color..... near white
Composition..... CaCO₃ - 95% minimum
..... MgCO₃ - 3% maximum
Weight..... 100 lbs.
Screen..... #16, #20, #30, #50
Percent retained..... 1%, 15%, 25%, 84%
Percent passed..... --, --, --, 15%

Conditions of Operation

1. pH - 5 to 6
2. Bed depth - 24" to 30"
3. Backwash rate - 8 to 12 gpm/sq. ft.
4. Backwash bed expansion - 35% of bed depth
5. Service flow rates - 5 to 6 gpm/sq. ft. invariably gives satisfactory results, but may be modified in view of local conditions.

Components: Media

AquaSorb® CS granular coconut shell based activated carbon

AquaSorb® CS is a high activity granular activated carbon manufactured by steam activation from select coconut shell charcoal. Its enhanced microporosity makes it particularly well suited for the removal of low molecular weight organic compounds and their chlorinated by-products such as chloroform and other trihalomethanes (THM's). It is also ideally suited for the removal of oxidizing agents such as chlorine and ozone from process water. An important feature of this material is its superior mechanical hardness and the extensive dedusting during its manufacture that ensures an exceptionally clean activated carbon product.



Soft drink manufacturers and breweries rely upon AquaSorb® CS activated carbon for dechlorination and dissolved organic removal.

Typical Applications:

- ⇒ Municipal drinking water treatment
- ⇒ Residential water treatment systems Point of Entry (POE)/ Point of Use (POU)
- ⇒ Beverage production
- ⇒ Protection of ion exchange resins from chlorine and organic fouling

Available Particle Sizes:

- ⇒ 20x50 mesh (0.30 - 0.85 mm)
- ⇒ 12x40 mesh (0.425 - 1.70 mm)
- ⇒ 8x30 mesh (0.60 - 2.36 mm)
- ⇒ 8x16 mesh (1.18 - 2.36 mm)
- ⇒ Other granulations available upon request

Certifications and Approvals:

- ⇒ NSF / ANSI Standard 61
- ⇒ AWWA B604-96
- ⇒ EN12915
- ⇒ Halal certified

Features and Benefits:

- ⇒ Extensive internal structure
- ⇒ Optimized density
- ⇒ Highly microporous structure
- ⇒ Maximum hardness
- ⇒ Low dust and turbidity
- ⇒ Optimized density
- ⇒ Excellent adsorption capacity
- ⇒ High volume activity
- ⇒ Rapid dechlorination
- ⇒ Effective removal of ozone
- ⇒ Low filtered water turbidity

Standard Packaging:

- ⇒ 25 kg bag (55 lb)
- ⇒ 500 kg bulk bag (1100 lb)

The polyethylene valve bag from Jacobi sets the standard in the industry for clean, durable and safe handling.

Specification*

Iodine number	min. 1000 mg/g
CTC activity	min. 50%
Moisture content (as packed)	max. 5%
Total ash content	max. 4%
Ball-pan hardness	min. 98%

Typical Properties*

Surface area (BET)	1050 m ² /g
Chlorine half length value (12x40 mesh)	1.8 cm
Apparent density	510 kg/m ³
Bed density, backwash and drained	440 kg/m ³
pH	10

*Specifications and typical properties are produced using Jacobi Carbons' test methods. They are listed for informational purposes only and not to be used as purchase specifications. Sales specifications can be obtained from your Jacobi Carbons Technical Sales Representative and should be reviewed before placing an order.



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THE CARBON COMPANY

Hydrotech



Components: Media

AquaSorb® CX-MCA catalytic granular coconut shell based activated carbon

AquaSorb® CX-MCA is a catalytic, high activity granular activated carbon manufactured by steam activation of select coconut shell charcoal. The catalytic activity of this activated carbon makes it highly effective for the removal of chloramines and hydrogen sulfide from potable water. Its large micropore volume makes it particularly well suited for the removal of low molecular weight organic compounds and their chlorinated by-products such as chloroform and other trihalomethanes (THMs). An important feature of this material is its superior mechanical hardness and the extensive dedusting during its manufacture ensures an exceptionally clean activated carbon product.



AquaSorb® CX-MCA is an activated carbon with a catalytic activity that is required for liquid phase application involving oxidation, reduction, and decomposition.

Features and Benefits:

- ➔ Catalytic activity
- ➔ Large and extensive internal pore structure
- ➔ Highly microporous structure
- ➔ Optimized density
- ➔ Maximum hardness
- ➔ Low dust and turbidity
- ➔ Excellent adsorption capacity
- ➔ High volume activity
- ➔ Rapid dechlorination
- ➔ Low filtered water turbidity

Standard Packaging:

- ➔ 25 kg bag (55 lb)
- ➔ 500 kg bulk bag (1100 lb)

The polyethylene valve bag from Jacobi sets the standard in the industry for clean, durable and safe handling.

Typical Applications:

- ➔ Residential water treatment systems Point of Entry (POE)/ Point of Use (POU)
- ➔ Beverage production
- ➔ Protection of ion exchange resins from chloramines

Available Particle Sizes:

- ➔ 12x40 mesh (0.425 - 1.70 mm)
- ➔ Other granulations available upon request

Certifications and Approvals:

- ➔ AWWA B604-96
- ➔ EN12915
- ➔ NSF Std. 61
- ➔ Halal certified

Specification*

Iodine number	min. 1000 mg/g
Moisture content (as packed)	max. 5%
Total ash content	max. 4%
Ball-pan hardness	min. 98%
Catalytic activity	min. 20°C

Typical Properties*

Surface area (BET)	1050 m ² /g
Apparent density	514 kg/m ³
Apparent density	510 kg/m ³
Bed density, backwash and drained	437 kg/m ³
pH	10

*Specifications and typical properties are produced using Jacobi Carbons' test methods. They are listed for informational purposes only and not to be used as purchase specifications. Sales specifications can be obtained from your Jacobi Carbons Technical Sales Representative and should be reviewed before placing an order.



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THE CARBON COMPANY

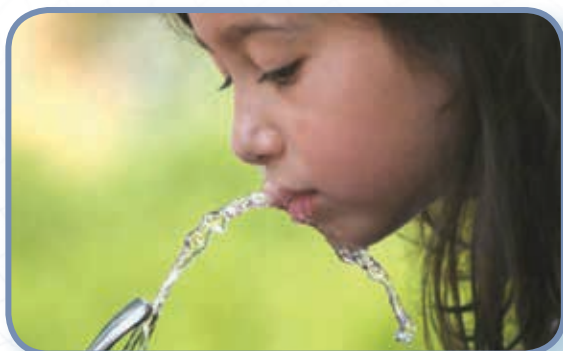
Hydrotech



Components: Media

AquaSorb® HS acid washed coconut based activated carbon

AquaSorb® HS is an acid washed high purity high activity granular activated carbon manufactured by steam activation from carefully select coconut shells. This activated carbon is produced for use in ultra-pure water treatment systems requiring low conductivity and exceptionally high purity. This activated carbon is also specifically designed for the removal of heavy hydrocarbons from recovered condensate. The acid washing process removes soluble silica from the matrix of the activated carbon to prevent leaching into the condensate.



Manufacturers rely upon AquaSorb® HS activated carbons for applications that require exceptional pure water without compromising performance.

Typical Applications:

- ⇒ Condensate de-oiling
- ⇒ Semiconductor process water
- ⇒ Dialysis treatment
- ⇒ POE treatment units
- ⇒ Protection of RO membranes

Available Particle Sizes:

- ⇒ 12x40 mesh (0.425 - 1.70 mm)
- ⇒ 8x30 mesh (0.60 - 2.36 mm)
- ⇒ Other mesh sizes available

Certifications and Approvals:

- ⇒ NSF / ANSI Standard 61

Features and Benefits:

- ⇒ Extensive internal structure
- ⇒ Optimized density
- ⇒ Neutral surface
- ⇒ Maximum hardness
- ⇒ Extended operational life
- ⇒ High volume activity
- ⇒ Rapid pH-stabilization, quick start-up
- ⇒ Minimized operational losses

Standard Packaging:

- ⇒ 25 kg bag (55 lb)
- ⇒ 500 kg bulk bag (1100 lb)

The polyethylene valve bag from Jacobi sets the standard in the industry for clean, durable and safe handling.



Specification*

Iodine number	min. 1000 mg/g
Moisture content (as packed)	max. 5%
Total ash content	max. 1%
pH	5 - 7
Hardness	min. 98%

Typical Properties*

Surface area	1050 m ² /g
CTC activity	55%

*Specifications and typical properties are produced using Jacobi Carbons' test methods. They are listed for informational purposes only and not to be used as purchase specifications. Sales specifications can be obtained from your Jacobi Carbons Technical Sales Representative and should be reviewed before placing an order.



Jacobi
THE CARBON COMPANY

Hydrotech

The
Future
is Here!

Drinking Water

*Reverse Osmosis
Ultraviolet Sterilizers
POU Filters & Housings
Designer Faucets
Booster / Demand Pumps*

Drinking Water

Aqua Flo Platinum QCRO & QCUF Drinking Water Systems

Customized Drinking Water

Water conditions can vary even in the same community. The Aqua Flo Platinum QCRO System can be configured to meet your specific requirements. There are ten interchangeable filters with a variety of treatment options that can be tailored to local water conditions, so your water is the best it can be.

If you're concerned about RO reject water or RO drain line makes installation difficult, we offer UltraFiltration (UF).^{*} The UF does not have a drain line to run, your cost is less than RO and there is no waste.

The innovative QC twist and lock design makes service simple. Twist off the old cartridge and twist on the new. No messy sump removal. Aqua Flo Platinum QC systems make drinking water better and life easier.

^{*} Check with water treatment specialist to recommend you an RO or UF system depending on your untreated water quality.



QCRO



QCUF

"The innovative QC twist and lock design makes service simple."



AQUA FLO[®]
PLATINUM

Hydrotech

The
Future
is Here!

Drinking Water

Aqua Flo Platinum QCRO & QCUF

Drinking Water Systems

Product Specifications

Sediment Filters. Screens out sediments and particles. Various micron size filters are available.

Carbon Filters. Reduces elements that cause water to taste and smell unpleasant, including chlorine taste and odor.

Reverse Osmosis Filters. Reduces dissolved substances. Various capacity membranes are available.

Specialty Filters. Optimize drinking water taste and adjust to local water supply with a wide array of custom filter options.



Manifold Assembly. The single manifold ensures reliability. Houses four separate filter technologies in a unique space saving design.

Automatic Shutoff Valve. Shuts off the system when reservoir tank is full.

Reservoir Tank. Durable, high quality, powder coated, steel tank ensures you'll have a plentiful supply of refreshing water. Various size tanks are available.

Designer Faucet. Multiple styles and colors are available. (Standard faucet shown)

Filter Cartridge and Single Stage Standalone System Specifications

	Sediment Filter	Carbon Block Filter	Carbon Block Filter	GAC Carbon Filter	pH Booster Filter Cartridge	UF (Hollow Fiber) Membrane	Carbon Block - 1 Mic Filter	Scale Reduction
Purpose	Sediment Removal	Chlorine Taste and Odor	Chlorine Taste and Odor	Polishing - Taste and Odor	Raise pH of water and removal of chlorine, taste and odor	Ultra Fine Filtration	Chlorine Taste and Odor, Particulate Reduction	Scale Inhibitor
Type	Polypropylene	Carbon Block	Carbon Block	Granular Activated Carbon Filter	pH Booster and Remineralizer	Hollow Fiber Mechanical Filtration	Carbon Block	Scale Reduction
Micron	5	5	50	—	—	0.1	1	
Capacity*	2000 gallons	2000 gallons	2000 gallons	2000 gallons	To be changed every 6 months	To be changed every 12 months	750 Gallons	1500 gallons
Minimum Flow Rate @ 60psi	0.5 gal/min	0.5 gal/min	0.5 gal/min	0.5 gal/min	0.5 gal/min	0.5 gal/min	0.5 gal/min	0.5 gal/min
Single Stage System Model ***	SEDQC1/4	CBQC1/4	CB50QC1/4	GACQC1/4	PHQC1/4	UFQC1/4	CB1QC1/4	SCALEQC1/4

* May vary depending on water quality

** Single Stage Standalone System Port Connection Size - 1/4" Quick Connect

Standard System Specifications*

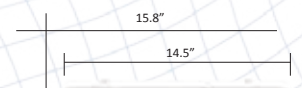
Model	QCRO4V-50	QCRO4V-75	QCUF
Number of Stages	4	4	4
Stage 1 (Pre-Filter)	Sediment Filter	Sediment Filter	Sediment Filter
Stage 2 (Pre-Filter)	Activated Carbon Filter	Activated Carbon Filter	Sediment Filter
Stage 3 (Membrane)	Thin Film Composite Membrane	Thin Film Composite Membrane	Thin Film Composite Membrane
Stage 4 (Post-Filter)	Activated Carbon Filter	Activated Carbon Filter	Activated Carbon Filter
Output (GPD)†	50	75	720

Feed Water Guidelines	
Maximum TDS	2000 ppm
Hardness	<7gpg
Iron (Fe)	<0.2ppm
Manganese (Mn)	<0.05ppm
Hydrogen Sulfide	0.0ppm
Turbidity	<1.0NTU
Feed Water Pressure	40-100psi
Booster Pump Models	15 – 60 psi
Temperature	40-100°F
pH Range	3.0-11.0

Note: Pretreatment suggested if conditions exceed parameters. Must be installed on potable water.



QCRO4V-50 system certified by WQA to NSF/ANSI 58 and CSA B483.1 for the reduction of the following substances, as verified and substantiated by test data: Arsenic V, Barium, Cadmium, Chromium III and VI, Copper, Fluoride, Lead, Radium 226/228, Selenium, TDS and Turbidity



Drinking Water

Aqua Flo Platinum 1240 Series

Aqua Flo Platinum 1240's advanced reverse osmosis drinking water systems are a natural and economical solution for providing your family with high quality drinking water. With a space-saving ultra slim profile, the system tucks neatly under your kitchen sink providing bottled water quality right from your very own tap.

All systems are backed by a two year limited warranty. The Smartap® water quality monitor found on the Push Button designated models is backed by a five year limited warranty.

All models feature:

- At a touch of the button, the Push Button Monitor option alerts you when it is time to change your filters.
- High quality reverse osmosis membrane
- Choice of 25, 50 and 75 gallons per day membranes
- Sediment pre-filtration
- Pre & Post Carbon block filtration
- 3/8" tubing from RO to tank and faucet for higher flow
- Chrome faucet
- Simple snap fit cover for ease of service
- New slim profile with integrated mounting bracket for easy, space saving installation
- Quick connect fittings
- Color coded tubing for ease of installation
- Metal 3.0 gal Storage Tank



Patented SmartTap® model provides a push button monitor alerting you when it is time to replace your RO membrane

"A natural and economical solution for providing your family with high quality drinking water."

Drinking Water

Aqua Flo Platinum 1240 Series



4VTFC-PB Push Button



4VTFC



3VTFC



NOTE: All units ship with Metal storage tank.

Booster Pump (R/O feed water line booster pump)

Raises the water pressure and maintains it at the ideal level for the system to operate at maximum efficiency. Recommended for use on supplies with low pressure or high concentrations of total dissolved solids (TDS). The pump is self-priming and whisper-quiet. It runs on a 24VAC transformer (included) from a standard 120VAC electrical outlet.

System includes: Flexible mounting plate, quick connect fittings and a pressure shut-off switch.

Item #: 70030001

Model: RO Booster with Pressure Switch and Transformer for 25 to 75 Gallon per day Systems



Model Description	Vessels	Sediment Filter	Pre-Filter	Membrane	Post-Filter	Rating GPD	Monitor	Dimensions H x W x D (in)
3VTFC25G	3	None	Dual-Purpose	TFC	Activated Carbon	25	None	11 x 15 x 3.75
3VTFC50G	3	None	Dual-Purpose	TFC	Activated Carbon	50	None	11 x 15 x 3.75
4VTFC25G	4	String Wound Polypropylene	Activated Carbon	TFC	Activated Carbon	25	None	14 x 15 x 3.75
4VTFC50G	4	String Wound Polypropylene	Activated Carbon	TFC	Activated Carbon	50	None	14 x 15 x 3.75
4VTFC75G	4	String Wound Polypropylene	Activated Carbon	TFC	Activated Carbon	75	None	14 x 15 x 3.75
4VTFC25G-PB	4	String Wound Polypropylene	Activated Carbon	TFC	Activated Carbon	25	Push Button	14 x 15 x 3.75
4VTFC50G-PB	4	String Wound Polypropylene	Activated Carbon	TFC	Activated Carbon	50	Push Button	14 x 15 x 3.75
4VTFC75G-PB	4	String Wound Polypropylene	Activated Carbon	TFC	Activated Carbon	75	Push Button	14 x 15 x 3.75

Feed Water Guidelines	
Maximum TDS	2000 ppm
Hardness	<7gpg
Iron (Fe)	<0.2ppm
Manganese (Mn)	<0.05ppm
Hydrogen Sulfide	0.0ppm
Turbidity	<1.0NTU
Feed Water Pressure	40-100psi
Booster Pump Models	15 - 60 psi
Temperature	40-100°F
pH Range	3.0-11.0
Note: Pretreatment suggested if conditions exceed parameters. Must be installed on potable water.	



Drinking Water

Aqua Flo Reverse Osmosis System



Fast, Simple & Sanitary Maintenance!

Quick connect disposable cartridges and membrane make for easy 'Do-It-Yourself' maintenance. With built in auto water shut-offs there is no need to turn off the water supply prior to maintenance.

Because traditional systems require the disinfection of the permanent housing canisters and involve more direct human contact, maintenance can take as much as an hour and if not done properly can result in a contaminated system.

Disposable cartridges change in seconds and reduce contamination risk!

Features:

- Four stage filtration: 5 micron sediment pre-filter, 10 micron coconut carbon pre & post filters, quick connect 75 GPD NSF Certified TFC membrane
- Bayonet-style 1/4 turn quick connect disposable cartridges with auto water shut-off
- Includes non air-gap faucet and 3.0 gallon NSF Certified storage tank. (Air Gap & Designer Faucets Available)
- 3/8" tubing for high product flow rate from tank to faucet
- Quick connect fittings, inlet saddle and drain saddle, labelled tubing for easy installation
- Booster pump model with inlet solenoid raises water pressure to ideal level for maximum efficiency. Recommended on rural supplies with low pressure or high TDS
- Optional 10 micron carbon block and granular activated carbon filters available.
- Two year warranty (excluding consumable filter cartridges and RO membrane)
- Dimensions:
13"w x 14 1/2"h x 4 1/2" d No Pump
14 1/4"w x 16 1/2"h x 6 1/4" d Pump Model

Model Description	Stages	Sediment Filter	Pre-Filter	Membrane	Post-Filter	Rating GPD	Dimensions H x W x D (in)
Aqua Flo 475 PRO	4	5 Micron	10 Micron Coconut Carbon	TFC	10 Micron Coconut Carbon	75	14.5 x 13 x 4.5
Aqua Flo 475 PRO BP	4	5 Micron	10 Micron Coconut Carbon	TFC	10 Micron Coconut Carbon	75	16.5 x 14.5 x 6.25

Feed Water Guidelines	
Maximum TDS	2000 ppm
Hardness	<7gpg
Iron (Fe)	<0.2ppm
Manganese (Mn)	<0.05ppm
Hydrogen Sulfide	0.0ppm
Turbidity	<1.0NTU
Feed Water Pressure	40-100psi
Booster Pump Models	15 - 60 psi
Temperature	40-100°F
pH Range	3.0-11.0
Note: Pretreatment suggested if conditions exceed parameters. Must be installed on potable water.	



Change filters in seconds without turning off water! No tools required!



Booster Pump Model

Drinking Water

Aqua Flo Under Sink Filtration Systems

475QC Filters

The 475 Quick Change Filter Series offers 3, 2 & Single Stage options to provide solutions for a variety of water problems including sediment, rust, bad taste & odor.

Features & Benefits:

- ➔ Low cost alternative to RO
- ➔ No reject water (100% water used)
- ➔ Leaves nutrients in water
- ➔ Ultra Filtration on system removes lead, VOC (pesticides, herbicides, chemicals), THM, chlorine, taste and odor and sediment down to 0.2 microns.
- ➔ Installation is quick and easy
- ➔ Quick change bayonet-style disposable cartridges are more sterile and can be changed in seconds
- ➔ Includes standard chrome faucet, inlet saddle valve, and 5ft ¼" tubing
- ➔ No storage tank required
- ➔ Dimensions:
 - 3 stage - 11.8" w x 14.3" h x 4.5" d
 - 2 stage - 6.3" w x 13.4" h x 3.9" d
 - 1 stage - 2.8" w x 12.4" h x 3.2" d



**Change filters in seconds
without turning off water!
No tools required!**

475 QC Series Filter Systems

Description	Filter 1	Filter 2	Filter 3
475QC-3 TRIPLE STAGE ULTRA FILTER	SED	UF	COC
475QC-2 DOUBLE STAGE DUAL FILTER	SED	COC	
475QC-1C SINGLE STAGE COCONUT CARBON FILTER	COC		
475QC-1S SINGLE STAGE SEDIMENT FILTER	SED		
475QC-1G SINGLE STAGE GAC FILTER	GAC		

475 QC Series Filters

Description	MICRON	FLOW RATE	CAPACITY (GALLONS)
SEDIMENT FILTER SED-10 BLUE (475 Q SERIES)	5	1 GPM	900
CARBON FILTER COC-10 PURPLE (475 Q SERIES)	10	1 GPM	1,500
CARBON FILTER GAC-10 YELLOW (475 Q SERIES)	-	0.7 GPM	1,500
ULTRA FILTER UF-10 BLACK (475 Q SERIES)	0.2	0.7 GPM	1,500

Drinking Water

Aqua Flo Economy Reverse Osmosis System



Features:

- ➔ Heavy duty glass filled polypropylene construction provides double the strength, toughness & durability compared to most other RO's which are typically constructed with ABS.
- ➔ TFC 75 GPD reverse osmosis membrane provides up to 99% Total Dissolved Solids (TDS) rejection

- ➔ Pre-filters 10" five (5) micron Spun Polypropylene Sediment Cartridge and 10" Activated Carbon Cartridge
- ➔ Post filter: 10" Activated Carbon Cartridge
- ➔ Choose from air gap or non-air gap chrome plated faucets
- ➔ 3.0 Gallon NSF Certified plastic storage tank
- ➔ 3/8" outlet tubing for higher flows
- ➔ Automatic shut-off valve
- ➔ Exclusive serviceable check valve eliminates spring 'chatter' noise common in other RO's
- ➔ Quick connect fittings for ease of installation
- ➔ Powder coated bracket
- ➔ Dual purpose wrench for use on membrane cap and filter housing
- ➔ Dimensions:
 - ➔ 15.0"w x 14.5"h x 6.1"d No Pump
 - ➔ 15.0"w x 17.7"h x 6.9"d Pump Model

Model Description	Stages	Sediment Filter	Pre-Filter & Post Filter	Membrane	Rating GPD	Dimensions H x W x D (in)
Aqua Flo Economy 75	4	5 Micron Spun Poly	10 Micron Granular Activated Carbon	TFC	75	14.5 x 15 x 6.1
Aqua Flo Economy 75 BP	4	5 Micron Spun Poly	10 Micron Granular Activated Carbon	TFC	75	17.7 x 15 x 6.9

Booster Pump Model also includes:

- ➔ Pump mounted on RO to maintain constant water pressure
- ➔ Raises water pressure to ideal level for maximum efficiency
- ➔ Use on rural supplies with low pressure or high TDS
- ➔ Exclusive Auto Flush feature extends membrane life
- ➔ Self-priming and whisper quiet
- ➔ 24VAC transformer (included) from a standard 120VAC electrical outlet
- ➔ Flexible mounting plate, quick connect fittings and pressure shut-off switch



JG Undersink 3/8" connection angle stop / shut off
JG Undersink 1/4" connection angle stop / shut off

Feed Water Guidelines	
Maximum TDS	2000 ppm
Hardness	<7gpg
Iron (Fe)	<0.2ppm
Manganese (Mn)	<0.05ppm
Hydrogen Sulfide	0.0ppm
Turbidity	<1.0NTU
Feed Water Pressure	40-100psi
Booster Pump Models	15 - 60 psi
Temperature	40-100°F
pH Range	3.0-11.0
Note: Pretreatment suggested if conditions exceed parameters. Must be installed on potable water.	

Drinking Water

Designer RO Faucets

Designer RO faucets are a stylish addition to any kitchen. The NSF Certified lead-free ceramic disk faucets are available in many attractive finishes to coordinate with any decor. The faucets feature lead-free plastic water passages and lead-free brass gooseneck spouts that swivel 360 degrees for ease of use.



VS905

VS888

Color Sample Display
#87591



Specifications	VS888	VS905
Height	11.5" (292mm)	11.075" (281.32mm)
Spout Reach	5.7" (146mm)	4.75" (120mm)
Mounting Hole Diameter	1/2" (12.5mm)	1/2" (12.5mm)
Base Diameter	1.73" (44mm)	1.76" (44.8mm)
Connection	1/4" compression nut fitting	1/4" compression nut fitting
Operating Pressure	125 PSI/8.3BAR	125 PSI/8.3BAR
Flow Rate	1.0 gpm/3.785lpm @35 PSI/2.32BAR	1.0 gpm/3.785lpm @35 PSI/2.32BAR
Temp Rating	4°C/40°F to 70°C/158°F	4°C/40°F to 70°C/158°F
Warranty	2 Years	2 Years

* All mounting hardware included. A 3/8" quick connect faucet adapter fitting (#PP3212U7W) can be purchased separately.

Drinking Water

RO Booster Pumps

PAB8800 Series High Flow Booster Pump

Key Operational Benefits:

- ➔ Boosts pressure 40 to 120 psi (adjustable)
- ➔ Used with membranes 50 to 120 GPD
- ➔ 15,000+ operating hours (estimated)
- ➔ Quiet – less than 52 DBA
- ➔ Can run dry without damage



Features:

- ➔ Toughest, most durable pump on the market
- ➔ Adjustable max. outlet psi (regardless of feed pressure)
- ➔ Expels trapped air (no more air locks)
- ➔ Can be mounted with pump head up or horizontal
- ➔ More flow at extremely low inlet pressures
- ➔ New motor venting system to remove moisture
- ➔ EMI/RFI electronic noise suppression
- ➔ 100% final performance tested
- ➔ Available in 12VDC and 24VDC

Aquatec 5800 Demand Pump

OPERATION: The 5800 pump can draw water from a holding tank and pressurize it, or boost the pressure from a low pressure source. They are designed to operate intermittently, but most versions can run continuously for several hour intervals. The pumps can be operated in demand mode controlled by an integral pressure switch, or in delivery mode controlled by an external power switching device. An integral bypass may be used to limit pressure.

POWER: 115V PSI: 60 GPM: 0.9

MOUNTING: A steel mounting base with four hollow rubber grommets is standard and included at no extra cost. The pump may be mounted in any position.

FITTINGS: The 5800 pump is offered with integral John Guest style quick connect fitting for 3/8" OD semi rigid tubing.



KemFlo MD1050 Booster Pump

DESCRIPTION: 110/230 VAC, 75 GPD Booster pump 1.0 L/min, suitable for applications with 24VDC transformer

SPECIFICATIONS: Kemflo MD Series booster pump with 3/8" FNPT, made from NSF grade material high power flow rate and quality. Meet ROHS standard.



Drinking Water

Reverse Osmosis Storage Tanks

Flexwave is a line of RO accumulators and storage tanks for residential and light commercial applications.

Flexwave tanks are made in the USA and built to comply with NSF/ANSI Std 61. All Flexwave tanks have a 5 year warranty.



70031000 Quick Connect Ball Valve Assembly reduces 1" tank connection to John Guest Quick Connect RO ball valve 3/8" tubing.

Larger sizes available. Please contact Customer Service for details.

Tank precharge 20 PSI

Maximum Pressure 125 PSI

Maximum working temperature, internal & external 120F

Materials of Construction

Tank top and bottom domes injection molded copolymer polypropylene. Shell extruded Polypropylene. Outer shell composite construction with fiberglass coated with epoxy resin. Base is injection molded high-impact ABS. 100% butyl diaphragm connected to a copolymer polypropylene bottom water chamber which allows for complete evacuation of the water chamber.

Dimensions & Capacities

Model	Item #	Total Tank Volume		Height		Diameter		Connection	Total Weight	
		Gallons	Litres	In	Cm	In	Cm		Lbs	Kilos
FWRO15	33335	15 Gal	56.8	25.6	65	16.5	42	1" NPT	19	8.6
FWRO22	33336	22 Gal	83.3	34.1	87	16.5	42	1" NPT	25	11.3

Quick Sizing Chart

Model	Item #	Total Tank Volume		Total Drawdown			
				10/50		10/60	
		Gallons	Litres	Gallons	Litres	Gallons	Litres
FWRO15	33335	15 Gal	56.8	9.3	35.2	10	37.9
FWRO22	33336	22 Gal	83.3	13.6	51.5	14.7	55.6

Drinking Water

Aqua Flo Gen 5 Residential Systems: Genesis H2O: Ultraviolet Disinfection System

A Security System For Your Water

UV technology provides additional security for your water supply. It is proven to control microbiological (bacteria & virus) issues in water including E.coli, Cryptosporidium, and Giardia Lamblia without the use of chemicals.

Gen 5 Residential Systems

Features:

- Five models available (Gen5-3, 6 , 10, 15 & 20)
- Colour user interface with full diagnostics and warnings including QR codes
- "Future-proof" expandability port for future upgrades and options
- Designed & manufactured to ASME pressure vessel standards
- Axial flow, 316L stainless steel reactor, polished reactors with integral sensor port to allow for sensor upgradeability in the future (comes standard with visual glow plug)
- Flow rates stated at 95% UVT at a dose of 30mJ/cm2
- User friendly bayonet style lamp connector (Quick ¼ turn removal. No extra tools required.)
- Reliable, industry proven low pressure (LP) coated UV lamps with ceramic bases for durability and a 9000 hour life (1 year)
- Constant current electronic controller (one controller for all systems) in a splash-proof case
- Warranty (refer to Owner's Manual for complete details including conditions & exclusions):
 - Reactor Chamber – Ten (10) Year Limited
 - Electronics – Three (3) Year Limited
 - UV Lamps – One (1) Year Limited
 - Quartz Sleeves – One (1) Year Limited



Guidelines for Use

Parameter	Level
Hardness	< 7 gpg (120 mg/L)
Iron (Fe)	< 0.3ppm (mg/L)
Manganese (Mn)	< 0.05ppm (mg/L)
Tannins	< 0.1ppm (mg/L)
Turbidity	< 1 NTU
Transmittance (UVT)	> 75%

AQUA FLO

AQUA FLO GEN-5, Residential UV systems

MODEL	GEN5-3	GEN5-6	GEN5-10	GEN5-15	GEN5-20
Flow Rate (@ 16 mJ/cm² @ 95% UVT)	6 GPM 23 lpm 1.4 m³/hr.	11 GPM 41 lpm 2.5 m³/hr.	20 GPM ¹ 77 lpm ¹ 4.6 m³/hr. ¹	30 GPM ² 113.6 lpm ² 6.8 m³/hr. ²	39.2 GPM ² 150 lpm ² 8.9 m³/hr. ²
Flow Rate (@ 30 mJ/cm² @ 95% UVT)	3 GPM 11.4 lpm 0.7 m³/hr.	6 GPM 22.7 lpm 1.4 m³/hr.	11 GPM 41 lpm 2.5 m³/hr.	15 GPM 56.8 lpm 3.4 m³/hr.	21 GPM 79 lpm 4.8 m³/hr.
Flow Rate (@ 40 mJ/cm² @ 95% UVT)	2.4 GPM 9.1 lpm 0.5 m³/hr.	4.4 GPM 17 lpm 1.0 m³/hr.	8.3 GPM 31 lpm 1.9 m³/hr.	12 GPM 45.4 lpm 2.7 m³/hr.	16 GPM 59 lpm 3.6 m³/hr.
Port Size	½” MNPT	¾” MNPT	¾” MNPT	1” MNPT	1” MNPT
Electrical	90-265V/50-60Hz.				
Plug Type	North American, NEMA 5-15, 3-wire for all 110V				
Lamp Watts	15	22	39	50	42
Power (watts)	20	30	49	62	51
Replacement Lamp	RL-290	RL-470	RL-820	RL-999	RL-850
Replacement Sleeve	RQ-290	RQ-470	RQ-820	RQ-999	RQ-850
Reactor Dimensions	2.5 x 14.3” (6.4 x 36.4 cm)	2.5 x 21.3” (6.4 x 54.2 cm)	2.5 x 35.2” (6.4 x 89.5 cm)	2.5 x 40.0” (6.4 x 101.6 cm)	3.5 x 36.1” (8.9 x 91.7 cm)
Chamber Material	Polished 304 Stainless Steel, A249 Pressure Rated Tubing				
Controller Dimensions	6.8 x 3.6 x 3” (171.5 x 92.1 x 76.2 mm)				
Operating Pressure	0.7-10.3 bar (10-150 psi)				
Operating Water Temperature	2-40° C (36-104° F)				
UV Monitor Port (upgradeability)	No	Yes			
Solenoid Output	Yes, but requires optional solenoid module				
4-20 mA Output	Yes, but requires optional 4-20 mA module				
Lamp Change Reminder (audible & visual)	Yes				
Lamp-Out Indicator (audible & visual)	Yes				
Shipping Weight	3.3 kg. (7.3 lbs.) 3 kg. (7 lbs.) cubed	4.2 kg. (9.3 lbs.) 5 kg. (9 lbs.) cubed	6.8 kg. (15.0 lbs.) 7 kg. (15 lbs.) cubed	8.0 kg. (17.6 lbs.) 8 kg. (17 lbs.) cubed	7.5 kg. (16.5 lbs.) 10 kg. (22 lbs.) cubed
Note: 1. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 13.6 gpm (50 lpm) (3.1 m³/hr.) for ¾” port 2. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 22.1 gpm (84 lpm) (5.0 m³/hr.) for 1” port					

Sample Screens



NSF Certified Models Available. Contact Customer Service For Details.

Options



UV Sensor Module Allows the 254nm UV wavelength to be measured and displayed via the GEN-5 controller. The sensor plugs directly into the controller and is mounted in the sensor port located on all GEN-5 units.



Solenoid Module Used to power a remote normally closed solenoid valve (not included). Solenoid valve will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V MODSOL1 (Item # 40040006)

REPLACEMENT PARTS

System	Lamps	Sleeves	Controller
Pura Gen 5-3	RL-290 #40040013	RQ-290 #40040040	RC-B56.01 #40040066
Pura Gen 5-6	RL-470 #40040014	RQ-470 #40040043	RC-B56.01 #40040066
Pura Gen 5-10	RL-820 #40040015	RQ-820 #40040045	RC-B56.01 #40040066
Pura Gen 5-15	RL-999 #40040017	RQ-999 #40040048	RC-B56.01 #40040066
Pura Gen 5-20	RL-850 #40040016	RQ-850 #40040046	RC-B56.01 #40040066

Drinking Water

Aqua Flo Gen 6 Residential Systems

A Security System For Your Water

UV technology provides additional security for your water supply. It is proven to control microbiological (bacteria & virus) issues in water including *E.coli*, *Cryptosporidium*, and *Giardia Lamblia* without the use of chemicals.

Gen 6 Residential Systems

Features:

- ➔ Four models available (Gen 6-6 , 10, 15 & 20)
- ➔ True 254nm Teflon® based UV sensor continuously measures UV output and visually displays output via controller
- ➔ Colour user interface with full diagnostics and warnings including QR codes
- ➔ "Future-proof" expandability port for future upgrades and options
- ➔ Axial flow, 304 stainless reactors
- ➔ Designed & manufactured to ASME pressure vessel standards
- ➔ Flow rates stated at 95% UVT at a dose of 30mJ/cm²
- ➔ User friendly bayonet style lamp connector (Quick ¼ turn removal. No extra tools required.)
- ➔ True gland seal retaining nut with positive stop
- ➔ Reliable, industry proven low pressure (LP) coated UV lamps with ceramic bases for durability and a 9000 hour life (1 year)
- ➔ Constant current electronic controller (one controller for all systems) in a splash-proof case
- ➔ Warranty (refer to Owner's Manual for complete details including conditions & exclusions):
 - Reactor Chamber - Ten (10) Year Limited
 - Electronics – Three (3) Year Limited
 - UV Lamps – One (1) Year Limited
 - Quartz Sleeves – One (1) Year Limited
 - UV Sensors – One (1) Year Limited



Guidelines for Use

Parameter	Level
Hardness	< 7 gpg (120 mg/L)
Iron (Fe)	< 0.3ppm (mg/L)
Manganese (Mn)	< 0.05ppm (mg/L)
Tannins	< 0.1ppm (mg/L)
Turbidity	< 1 NTU
Transmittance (UVT)	> 75%

AQUA FLO

Hydrotech

The
Future
is Here!

MODEL	GEN6-6	GEN6-10	GEN6-15	GEN6-20
UV Flow Rate (@ 16 mJ/cm ² @ 95% UVT)	11 GPM 41 lpm 2.5 m ³ /hr.	20 GPM ¹ 77 lpm ¹ 4.6 m ³ /hr. ¹	30 GPM ² 113.6 lpm ² 6.8 m ³ /hr. ²	39.2 GPM ² 150 lpm ² 8.9 m ³ /hr. ²
UV Flow Rate (@ 30 mJ/cm ² @ 95% UVT)	6 GPM 22.7 lpm 1.4 m ³ /hr.	11 GPM 41 lpm 2.5 m ³ /hr.	15 GPM 56.8 lpm 3.4 m ³ /hr.	21 GPM 79 lpm 4.8 m ³ /hr.
UV Flow Rate (@ 40 mJ/cm ² @ 95% UVT)	4.4 GPM 17 lpm 1.0 m ³ /hr.	8.3 GPM 31 lpm 1.9 m ³ /hr.	12 GPM 45.4 lpm 2.7 m ³ /hr.	16 GPM 59 lpm 3.6 m ³ /hr.
Port Size	¾" MNPT	¾" MNPT	1" MNPT	1" MNPT
Electrical	90-265V/50-60Hz.			
Plug Type	North American, NEMA 5-15, 3-wire for all 110V			
Lamp Watts	22	39	50	42
Power (watts)	30	49	62	51
Replacement Lamp	RL-470	RL-820	RL-999	RL-850
Replacement Sleeve	RQ-470	RQ-820	RQ-999	RQ-850
Reactor Dimensions	2.5 x 21.3" (6.4 x 54.2 cm)	2.5 x 35.2" (6.4 x 89.5 cm)	2.5 x 40.0" (6.4 x 101.6 cm)	3.5 x 36.1" (8.9 x 91.7 cm)
Chamber Material	Polished 304 Stainless Steel, A249 Pressure Rated Tubing			
Controller Dimensions	6.8 x 3.6 x 3" (171.5 x 92.1 x 76.2 mm)			
Operating Pressure	0.7-10.3 bar (10-150 psi)			
Operating Water Temperature	2-40° C (36-104° F)			
UV Intensity Monitor	Yes			
Solenoid Output	Yes, but requires optional solenoid module			
4-20 mA Output	Yes, but requires optional 4-20 mA module			
Lamp Change Reminder (audible & visual)	Yes			
Lamp-Out Indicator (audible & visual)	Yes			
Shipping Weight	4.2 kg. (9.3 lbs.) 5 kg. (9 lbs.) cubed	6.8 kg. (15.0 lbs.) 7 kg. (15 lbs.) cubed	8.0 kg. (17.6 lbs.) 8 kg. (17 lbs.) cubed	7.5 kg. (16.5 lbs.) 10 kg. (22 lbs.) cubed
Note: 1. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 13.6 gpm (50 lpm) (3.1 m ³ /hr.) for ¾" port 2. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 22.1 gpm (84 lpm) (5.0 m ³ /hr.) for 1" port				

Sample Screens



NSF Certified Models Available. Contact Customer Service For Details.

Options



UV Sensor Module Allows the 254nm UV wavelength to be measured and displayed via the GEN-H6 controller. The sensor plugs directly into the controller and is mounted in the sensor port located on all PURA Gen 6 units.



Solenoid Module Used to power a remote normally closed solenoid valve (not included). Solenoid valve will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V MODSOL1 (Item # 40040006)

REPLACEMENT PARTS

System	Lamps	Sleeves	Controller
Pura Gen 6-6	RL-470 #40040014	RQ-470 #40040043	RC-B56.01 #40040066
Pura Gen 6-10	RL-820 #40040015	RQ-820 #40040045	RC-B56.01 #40040066
Pura Gen 6-15	RL-999 #40040017	RQ-999 #40040048	RC-B56.01 #40040066
Pura Gen 6-20	RL-850 #40040016	RQ-850 #40040046	RC-B56.01 #40040066

Drinking Water

Aqua Flo Gen H5 Residential Crossover High Flow Systems

A Security System For Your Water

UV technology provides additional security for your water supply. It is proven to control microbiological (bacteria & virus) issues in water including *E.coli*, *Cryptosporidium*, and *Giardia Lamblia* without the use of chemicals.

Gen H5 Residential Crossover High Flow Systems

Features:

- ➔ Five models available (Gen H5-5, 10, 15, 25 & 40)
- ➔ Colour user interface with full diagnostics and warnings including QR codes
- ➔ "Future-proof" expandability port for future upgrades and options
- ➔ Axial flow, 316L stainless steel reactor, polished reactors with integral sensor port to allow for sensor upgradeability in the future (comes standard with visual glow plug)
- ➔ Designed & manufactured to ASME pressure vessel standards
- ➔ Flow rates stated at 95% UVT at a dose of 30mJ/cm²
- ➔ User friendly bayonet style lamp connector (Quick ¼ turn removal. No extra tools required.)
- ➔ True gland seal retaining nut with positive stop
- ➔ Reliable, industry proven low pressure, high-output (LP-HO) coated UV lamps with ceramic bases for durability and a 10,000 hour life
- ➔ Universal input, constant current electronic controller (one controller for all systems) in a splash-proof case
- ➔ Warranty (refer to Owner's Manual for complete details including conditions & exclusions):
 - Reactor Chamber – Ten (10) Year Limited
 - Electronics – Three (3) Year Limited
 - UV Lamps – One (1) Year Limited
 - Quartz Sleeves – One (1) Year Limited

Guidelines for Use

Parameter	Level
Hardness	< 7 gpg (120 mg/L)
Iron (Fe)	< 0.3ppm (mg/L)
Manganese (Mn)	< 0.05ppm (mg/L)
Tannins	< 0.1ppm (mg/L)
Turbidity	< 1 NTU
Transmittance (UVT)	> 75%

AQUA FLO

Hydrotech



MODEL	GENH5-5	GENH5-10	GENH5-15	GENH5-25	GENH5-40
Flow Rate (Industry Standard)	4 GPM 15.1 lpm 0.9 m ³ /hr.	10 GPM 37.9 lpm 2.3 m ³ /hr.	14 GPM 53 lpm 3.2 m ³ /hr.	25 GPM ² 95 lpm 5.7 m ³ /hr.	40 GPM 151 lpm 9.1 m ³ /hr.
Alternate flow @ 16 mJ/cm² (US Public Health)	8 GPM 30.3 lpm 1.8 m ³ /hr.	19 GPM ¹ 71.9 lpm 4.3 m ³ /hr.	27 GPM ² 102.2 lpm 6.1 m ³ /hr.	47 GPM ² 178 lpm 10.7 m ³ /hr.	78 GPM ³ 295 lpm 17.7 m ³ /hr.
Alternate flow @ 40 mJ/cm² (NSF/EPA)	3 GPM 11.4 lpm 0.7 m ³ /hr.	7 GPM 26.5 lpm 1.6 m ³ /hr.	11 GPM 41 lpm 2.5 m ³ /hr.	19 GPM 72 lpm 4.3 m ³ /hr.	31 GPM 117 lpm 7 m ³ /hr.
Port Size	½" MNPT	¾" MNPT	1" MNPT	1" MNPT	1½" MNPT
Electrical	90-265V/50-60Hz. (IEC power cords required)				
Power Plug	North American, NEMA 5-15, 3-wire for all 110V				
Lamp Watts	18	34	45	67	101
Power (watts)	20 (19 @ 230V.)	38 (36 @ 230V.)	57 (48 @ 230V.)	73 (72 @ 230V.)	115 (108 @ 230V.)
Replacement Lamp	RL-210HO	RL-330HO	RL-420HO	RL-600HO	RL-950HO
Replacement Sleeve	RQ-210	RQ-330	RQ-420	RQ-600	RQ-950
Reactor Dimensions	3.5 x 11.7" (8.9 x 29.8 cm)	3.5 x 16.5" (8.9 x 41.8 cm)	3.5 x 20.0" (8.9 x 50.8 cm)	3.5 x 26.9" (8.9 x 68.3 cm)	3.5 x 40.7" (8.9 x 103.4 cm)
Chamber Material	316L Stainless Steel, A249 Pressure Rated Tubing, Polished & Passivated				
Controller Dimension	8.6 x 4.2 x 3.5" (217.4 x 107.5 x 88.7 mm)				
Operating Pressure	0.7-10.3 bar (10-150 psi)				
Optimum Water Temperature	2-40° C (36-104° F)				
UV Monitor Port (upgradeability)	Yes, includes visual glow plug				
Solenoid Output	Yes, but requires optional solenoid module				
4-20 mA Output	Yes, but requires optional 4-20 mA module				
Lamp Change Reminder (audible & visual)	Yes				
Lamp-Out Indicator (audible & visual)	Yes				
Shipping Weight	4.5 kg. (9.9 lbs.) 4 kg. (8 lbs.) cubed	5.4 kg. (11.9 lbs.) 5 kg. (11 lbs.) cubed	6.0 kg. (13.2 lbs.) 6 kg. (13 lbs.) cubed	7.2 kg. (15.9 lbs.) 8 kg. (16 lbs.) cubed	9.7 kg. (21.4 lbs.) 11 kg. (24 lbs.) cubed
Note: 1. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 13.6 gpm (50 lpm) (3.1 m ³ /hr.) for ¾" port 2. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 22.1 gpm (84 lpm) (5.0 m ³ /hr.) for 1" port 3. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 52 gpm (197 lpm) (11.8 m ³ /hr.) for 1½" port					

Sample Screens



NSF Certified Models Available. Contact Customer Service For Details.

Options



UV Sensor Module Allows the 254nm UV wavelength to be measured and displayed via the GEN-H5 controller. The sensor plugs directly into the controller and is mounted in the sensor port located on all PURA Gen H5 units.



Solenoid Module Used to power a remote normally closed solenoid valve (not included). Solenoid valve will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V MODSOL1 (Item # 40040006)

REPLACEMENT PARTS

System	Lamps	Sleeves	Controller
Pura Gen H5-5	RL-210HO #40040018	RQ-210 #40040039	RCHO-B56.12 #40040074
Pura Gen H5-10	RL-330HO #40040019	RQ-330 #40040041	RCHO-B56.12 #40040074
Pura Gen H5-15	RL-420HO #40040020	RQ-420 #40040042	RCHO-B56.12 #40040074
Pura Gen H5-25	RL-600HO #40040021	RQ-600 #40040044	RCHO-B56.12 #40040074
Pura Gen H5-40	RL-950HO #40040022	RQ-950 #40040047	RCHO-B56.12 #40040074

Drinking Water

Aqua Flo Gen H6 Residential Crossover High Flow Systems

A Security System For Your Water

UV technology provides additional security for your water supply. It is proven to control microbiological (bacteria & virus) issues in water including *E.coli*, *Cryptosporidium*, and *Giardia Lamblia* without the use of chemicals.

Gen H6 Residential Crossover High Flow Systems

Features:

- ➔ Five models available (Gen H6-5, 10, 15, 25 & 40)
- ➔ True 254nm Teflon® based UV sensor continuously measures UV output via the controller
- ➔ Colour user interface with full diagnostics and warnings including QR codes
- ➔ “Future-proof” expandability port for future upgrades and options
- ➔ Axial flow, 316L stainless steel reactor
- ➔ Designed & manufactured to ASME pressure vessel standards
- ➔ Flow rates stated at 95% UVT at a dose of 30mJ/cm²
- ➔ User friendly bayonet style lamp connector (Quick ¼ turn removal. No extra tools required.)
- ➔ True gland seal retaining nut with positive stop
- ➔ Reliable, industry proven low pressure, high-output (LP-HO) coated UV lamps with ceramic bases for durability and a 10,000 hour life
- ➔ Universal input, constant current electronic controller (one controller for all systems) in a splash-proof case
- ➔ Warranty (refer to Owner’s Manual for complete details including conditions & exclusions):
 - Reactor Chamber – Ten (10) Year Limited
 - Electronics – Three (3) Year Limited
 - UV Lamps – One (1) Year Limited
 - Quartz Sleeves – One (1) Year Limited
 - UV Sensors – One (1) Year Limited



AQUA FLO

Guidelines for Use

Parameter	Level
Hardness	< 7 gpg (120 mg/L)
Iron (Fe)	< 0.3ppm (mg/L)
Manganese (Mn)	< 0.05ppm (mg/L)
Tannins	< 0.1ppm (mg/L)
Turbidity	< 1 NTU
Transmittance (UVT)	> 75%

MODEL	GENH6-5	GENH6-10	GENH6-15	GENH6-25	GENH6-40
Flow Rate (Industry Standard)	4 GPM 15.1 lpm 0.9 m ³ /hr.	10 GPM 37.9 lpm 2.3 m ³ /hr.	14 GPM 53 lpm 3.2 m ³ /hr.	25 GPM ² 95 lpm 5.7 m ³ /hr.	40 GPM 151 lpm 9.1 m ³ /hr.
Alternate flow @ 16 mJ/cm ² (US Public Health)	8 GPM 30.3 lpm 1.8 m ³ /hr.	19 GPM ¹ 71.9 lpm 4.3 m ³ /hr.	27 GPM ² 102.2 lpm 6.1 m ³ /hr.	47 GPM ² 178 lpm 10.7 m ³ /hr.	78 GPM ³ 295 lpm 17.7 m ³ /hr.
Alternate flow @ 40 mJ/cm ² (NSF/EPA)	3 GPM 11.4 lpm 0.7 m ³ /hr.	7 GPM 26.5 lpm 1.6 m ³ /hr.	11 GPM 41 lpm 2.5 m ³ /hr.	19 GPM 72 lpm 4.3 m ³ /hr.	31 GPM 117 lpm 7 m ³ /hr.
Port Size	½" MNPT	¾" MNPT	1" MNPT	1" MNPT	1½" MNPT
Electrical	90-265V/50-60Hz. (IEC power cords required)				
Power Plug	North American, NEMA 5-15, 3-wire for all 110V				
Lamp Watts	18	34	45	67	101
Power (watts)	20 (19 @ 230V.)	38 (36 @ 230V.)	57 (48 @ 230V.)	73 (72 @ 230V.)	115 (108 @ 230V.)
Replacement Lamp	RL-210HO	RL-330HO	RL-420HO	RL-600HO	RL-950HO
Replacement Sleeve	RQ-210	RQ-330	RQ-420	RQ-600	RQ-950
Reactor Dimensions	3.5 x 11.7" (8.9 x 29.8 cm)	3.5 x 16.5" (8.9 x 41.8 cm)	3.5 x 20.0" (8.9 x 50.8 cm)	3.5 x 26.9" (8.9 x 68.3 cm)	3.5 x 40.7" (8.9 x 103.4 cm)
Chamber Material	316L Stainless Steel, A249 Pressure Rated Tubing, Polished & Passivated				
Controller Dimension	8.6 x 4.2 x 3.5" (217.4 x 107.5 x 88.7 mm)				
Operating Pressure	0.7-10.3 bar (10-150 psi)				
Optimum Water Temperature	2-40° C (36-104° F)				
UV Intensity Monitor	Yes				
Solenoid Output	Yes, but requires optional solenoid module				
4-20 mA Output	Yes, but requires optional 4-20 mA module				
Lamp Change Reminder (audible & visual)	Yes				
Lamp-Out Indicator (audible & visual)	Yes				
Shipping Weight	4.5 kg. (9.9 lbs.) 4 kg. (8 lbs.) cubed	5.4 kg. (11.9 lbs.) 5 kg. (11 lbs.) cubed	6.0 kg. (13.2 lbs.) 6 kg. (13 lbs.) cubed	7.2 kg. (15.9 lbs.) 8 kg. (16 lbs.) cubed	9.7 kg. (21.4 lbs.) 11 kg. (24 lbs.) cubed
Note: 1. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 13.6 gpm (50 lpm) (3.1 m ³ /hr.) for ¾" port 2. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 22.1 gpm (84 lpm) (5.0 m ³ /hr.) for 1" port 3. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 52 gpm (197 lpm) (11.8 m ³ /hr.) for 1½" port					

Sample Screens



NSF Certified Models Available. Contact Customer Service For Details.

Options



UV Sensor Module Allows the 254nm UV wavelength to be measured and displayed via the GENH-6 controller. The sensor plugs directly into the controller and is mounted in the sensor port located on all GenH6 units.



Solenoid Module Used to power a remote normally closed solenoid valve (not included). Solenoid valve will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V MODSOL1 (Item # 40040006)

REPLACEMENT PARTS

System	Lamps	Sleeves	Controller
Pura Gen H6-5	RL-210HO #40040018	RQ-210 #40040039	RCHO-B56.12 #40040074
Pura Gen H6-10	RL-330HO #40040019	RQ-330 #40040041	RCHO-B56.12 #40040074
Pura Gen H6-15	RL-420HO #40040020	RQ-420 #40040042	RCHO-B56.12 #40040074
Pura Gen H6-25	RL-600HO #40040021	RQ-600 #40040044	RCHO-B56.12 #40040074
Pura Gen H6-40	RL-950HO #40040022	RQ-950 #40040047	RCHO-B56.12 #40040074

Drinking Water

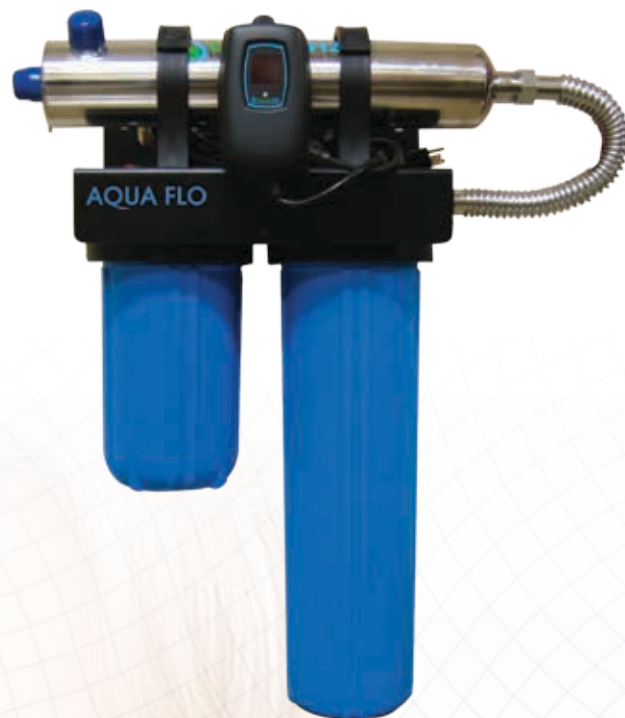
Aqua Flo Gen 5 UV/Filter Rack System

A Combination Water System For Your Entire Home or Cottage

Combining ultraviolet disinfection (UV) with whole-house filtration provides your home or cottage with clean, great-tasting water that you can rely on. UV is proven to control microbiological (bacteria & virus) issues in water including *E.coli*, *Cryptosporidium*, and *Giardia Lamblia* without the use of chemicals. Combining UV disinfection with whole-house sediment and/or carbon pre-treatment filters improves UV performance and the taste, smell and clarity of your water.

Features:

- ➔ Four models provide a range of flow rate and filter combination options suitable for your specific needs
- ➔ Models for 8 & 13 gpm flow rates
- ➔ All systems include 5 micron sediment removal pretreatment required for proper UV performance
- ➔ Optional 'high-flow' carbon filters to treat bad tastes and odors
- ➔ Pressure relief, high-flow polypropylene filter housings
- ➔ Colour user interface with full diagnostics and warnings including QR codes
- ➔ "Future-proof" expandability port for future upgrades and options
- ➔ Designed & manufactured to ASME pressure vessel standards
- ➔ Axial flow, 316L stainless steel polished reactors designed & manufactured to ASME pressure vessel standards
- ➔ Flow rates stated at 95% UVT at a dose of 30mJ/cm²
- ➔ User friendly bayonet style lamp connector (Quick ¼ turn removal. No extra tools required.)
- ➔ Reliable, industry proven low pressure (LP) coated UV lamps with ceramic bases for durability and a 9000 hour life (1 year)
- ➔ Constant current electronic controller in a splash-proof case



Guidelines for Use

Parameter	Level
Hardness	< 7 gpg (120 mg/L)
Iron (Fe)	< 0.3ppm (mg/L)
Manganese (Mn)	< 0.05ppm (mg/L)
Tannins	< 0.1ppm (mg/L)
Turbidity	< 1 NTU
Transmittance (UVT)	> 75%

AQUA FLO

Hydrotech



AQUA FLO GEN-5, UV/Filter Rack System

MODEL	GEN5-8R1	GEN5-8R12	GENH5-13R2	GENH5-13R22
Flow Rate (@ 30 mJ/cm² @ 95% UVT)	8.0 GPM 30 lpm 1.8 m³/hr.	8.0 GPM 30 lpm 1.8 m³/hr.	13.0 GPM ² 49.2 lpm ² 2.95 m³/hr. ²	13 GPM ² 49.2 lpm ² 2.95 m³/hr. ²
1st Filter Housing	10” 5 Micron Sediment	10” 5 Micron Sediment	20” 5 Micron Sediment	20” 5 Micron Sediment
2nd Filter Housing	N/A	20” High Capacity Carbon	N/A	20” High Capacity Carbon
Port Size	1” MNPT			
Electrical	90-265V/50-60Hz.			
Plug Type	North American, NEMA 5-15, 3-wire for all 110V			
Lamp Watts	20 (Standard-Output Lamp)		45 (High-Output Lamp)	
Power (watts)	23	23	57	57
Max Current (amps)	1			
Chamber Dimensions	3.5 x 20.0” (8.9 x 50.8 cm)			
Chamber Material	Polished 316 Stainless Steel, A249 Pressure Rated Tubing			
Controller Dimensions	6.8 x 3.6 x 3” (171.5 x 92.1 x 76.2 mm)		8.6 x 4.2 x 3.5” (21.7 x 10.8 x 8.9 cm)	
Operating Pressure	0.7-10.3 bar (10-150 psi)			
Operating Water Temperature	2-40° C (36-104° F)			
UV Monitor	Optional (Requires additional UV Sensor Module)			
Solenoid Output	Yes, but requires optional solenoid module			
Dry Contacts	Yes, but requires optional remote alarm module			
Lamp Change Reminder (Audible & Visual)	Yes			
Lamp-Out Indicator (Audible & Visual)	Yes			
Shipping Weight	18.5 Lbs (8.4 Kg)	31.5 Lbs (14.3 Kg)	31.5 Lbs (14.3 Kg)	34.2 Lbs (15.5 Kg)
Note: 1. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 13.6 gpm (50 lpm) (3.1 m³/hr.) for 3/4” port 2. based on flow velocity of 8.2 ft/sec (2.5 m/sec.), flow rate limited to 22.1 gpm (84 lpm) (5.0 m³/hr.) for 1” port				

Sample Screens



NSF Certified Models Available. Contact Customer Service For Details.

Options



UV Sensor Module Allows the 254nm UV wavelength to be measured and displayed via the GEN-5 UV controller. The sensor plugs directly into the controller and is mounted in the sensor port located on all GEN-5 units.



Solenoid Module Used to power a remote normally closed solenoid valve (not included). Solenoid valve will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V MODSOL1 (Item # 40040006)



4-20mA Module Used for signal transfer to a remote device such as a data logger or computer)



Remote Alarm (Dry Contact) Module Used for signal transfer to a remote alarm or dry contacts.

Drinking Water

ABUV Series Ultraviolet Disinfection Systems

ABUV Series™

The ABUV Series is an entry level. Ultraviolet Water Disinfection System. The system will provide you with disinfected drinking water for years to come. These systems have been designed with high quality construction and innovative features.

Disinfection of water using ultraviolet light at a wavelength at 254nm is a chemical free way of destroying the DNA of microorganisms rendering them unable to replicate or cause infection. Installation of the system is straight forward and simple. Maintenance includes changing the lamp once a year and cleaning the quartz sleeve periodically.

Features:

- ➔ Lamp Failure Visual and Audible Alarm
- ➔ Lamp Change Reminder
- ➔ Countdown Lamp Timer
- ➔ 115volt/60 hz North American 3-Prong Grounded Plug




Conditions for Use

Depending on the chemistry of the water to be disinfected by a ABUV Series Ultraviolet Water Disinfection System, additional pretreatment may be necessary. The following table outlines the basic parameters that need to be tested and treated should your water fall outside these parameters. An additional 5 micron sediment and housing is recommended as a minimum pretreatment to guard against any large particles that may mask the ultraviolet light and also assist with startup procedures.

Guidelines for Use

Parameter	Level
Hardness	< 7 gpg (120 mg/L)
Iron (Fe)	< 0.3ppm (mg/L)
Manganese (Mn)	< 0.05ppm (mg/L)
Tannins	< 0.1ppm (mg/L)
Turbidity	< 1 NTU
Transmittance (UVT)	> 75%



Specifications			
Model #	Buv-6	Buv-8	Buv-12
Flow Rate @ 16 mJ/cm2 @ 96% UVT - usgpm (l/min)	12 (45.36)	18.8 (71)	26 (98.28)
Flow Rate @ 30 mJ/cm2 @ 96% UVT - usgpm (l/min)	6.4 (24.2)	10 (37.8)	13.9 (52.5)
Flow Rate @ 40 mJ/cm2 @ 96% UVT - usgpm (l/min)	4.8 (18.14)	7.5 (28.35)	10.4 (39.31)
Lamp Power (Watt)	21	29	40
Max. Current (Amp)	0.4	0.4	0.5
Inlet and Outlet Size NPT	1/2"	3/4"	1"
Weight lbs (kg)	6 (2.67)	8 (3.57)	12 (5.36)
Operating Pressure psi (kpa)	10-100 psi (69-689 kPa)		
Operating Temperature Range	36 to 104° F (2 to 40° C)		
Electrical	100-240V - 50/60Hz		
Electrical Plug	North American		

Drinking Water

Aqua Flo Ultraviolet Disinfection Systems

UVB Series™

Aqua Flo Product's patented UVB Series is designed to provide disinfected water at a flow rate of 2 gallons per minute. In addition to disinfection, water is filtered through our 0.5 micron Extended Pass Carbon Block (EPCB) filter. Our double and triple models provide you with additional filtration with sediment and activated carbon filters.

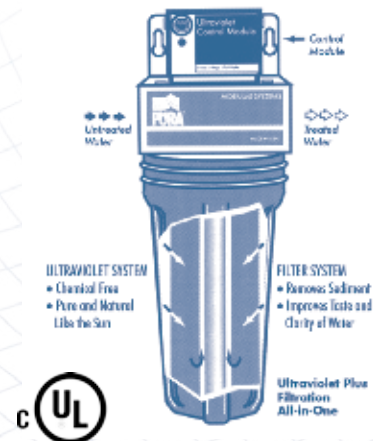
This compact All-in-One system installs with ease and can be used anywhere that clean, clear, good tasting disinfected water is needed. It is ideal for point-of-use applications like under the kitchen sink, office water coolers, water vending machines, boats, recreational vehicles, etc.

Features:

- ➔ Electronic lamp indicator (LED)
- ➔ Standard voltage 115V

Options:

- ➔ 220V/50Hz (2-Prong Euro plug)
- ➔ 12V DC
- ➔ Lamp Out Circuit (LOC) - (normally open) Safety monitor for alarm
- ➔ Lamp Out Circuit (LOC) - (normally closed) Safety monitor for solenoid shut off
- ➔ Three year warranty except on electrical components which are covered for a period of one year.



Specifications & Performance UVB Series

Model Description	# of Sumps	Sump Type	Sump 1	Sump 2	Sump 3	Lamp #	Power Used	Flow Rates ¹ GPM (L/min)	Dimensions HxWxD In. (cm)	Shipping Weight LBS. (kg)	Inlet/ Outlet Size
UVB1-EPCB	1	#10	EPCB Carbon/UV	None	None	# 11	14 Watts	2 (7.6)	15 x 5.5 x 5.5 (38.1 x 14 x 14)	10.0 (4.5)	3/8" NPT
UVB1-EPCB Normally Closed	1	#10	EPCB Carbon/UV	None	None	# 11	14 Watts	2 (7.6)	15 x 5.5 x 5.5 (38.1 x 14 x 14)	10.0 (4.5)	3/8" NPT
UVB1-EPCB Normally Open	1	#10	EPCB Carbon/UV	None	None	# 11	14 Watts	2 (7.6)	15 x 5.5 x 5.5 (38.1 x 14 x 14)	10.0 (4.5)	3/8" NPT
UVB2-EPCB/SD	2	#10	5 Micron Sed Filter	EPCB Carbon/UV	None	# 11	14 Watts	2 (7.6)	15 x 11 x 5.5 (38.1 x 27.9 x 14)	15.0 (6.8)	3/8" NPT
UVB3- EPCB/GC/SD	3	#10	5 Micron Sed Filter	Granular Carbon Filter	EPCB Carbon/UV	# 11	14 Watts	2 (7.6)	15 x 11 x 5.5 (38.1 x 27.9 x 14)	24.0 (10.9)	3/8" NPT

Note: (1) All flow rates shown will provide a UV dose of no less than 16,000 mW-s/cm2 or greater.

Drinking Water

Aqua Flo Ultraviolet Disinfection Systems

UV20 Series™

The Aqua Flo Product's UV20 Series is designed to provide disinfected water at a flow rate of 8 - 10 gallons per minute. This system is ideal for whole house water treatment. In addition to disinfection, the double and triple models provide filtration for the removal of sediment and chemical contaminants.

This ultraviolet water treatment system makes a perfect companion to water softeners, distillers, reverse osmosis and ozone systems. The UV20 Series has proven to be Aqua Flo Product's most popular product line and has created an industry standard in whole house disinfection.

Features:

- ➔ Electronic lamp indicator (LED)
- ➔ Standard voltage 115V

Options:

- ➔ 220V/50Hz (2-Prong Euro plug)
- ➔ 12V DC
- ➔ Lamp Out Circuit (LOC) - (normally open) Safety monitor for alarm
- ➔ Lamp Out Circuit (LOC) - (normally closed) Safety monitor for solenoid shut off
- ➔ Three year warranty except on electrical components which are covered for a period of one year.



Specifications & Performance UV20 Series

Model Description	# of Sumps	Sump Type	Sump 1	Sump 2	Sump 3	Lamp #	Power Used	Flow Rates ¹ GPM (L/min)	Dimensions HxWxD In. (cm)	Shipping Weight LBS. (kg)	Inlet/Outlet Size
UV20-1	1	#20	UV	None	None	# 20	22 Watts	10 (38)	25 x 5.5 x 5.5 (63.5 x 14 x 14)	16.0 (7.3)	3/4" NPT
UV20-1 Normally Closed	1	#20	UV	None	None	# 20	22 Watts	10 (38)	25 x 5.5 x 5.5 (63.5 x 14 x 14)	16.0 (7.3)	3/4" NPT
UV20-1 Normally Open	1	#20	UV	None	None	# 20	22 Watts	10 (38)	25 x 5.5 x 5.5 (63.5 x 14 x 14)	16.0 (7.3)	3/4" NPT
UV20-2 SD	2	#20	5 Micron Sed Filter	UV	None	# 20	22 Watts	10 (38)	25 x 11 x 5.5 (63.5 x 27.9 x 14)	23.0 (10.4)	3/4" NPT
UV20-2 SD Normally Closed	2	#20	5 Micron Sed Filter	UV	None	# 20	22 Watts	10 (38)	25 x 11 x 5.5 (63.5 x 27.9 x 14)	23.0 (10.4)	3/4" NPT
UV20-2 SD Normally Open	2	#20	5 Micron Sed Filter	UV	None	# 20	22 Watts	10 (38)	25 x 11 x 5.5 (63.5 x 27.9 x 14)	23.0 (10.4)	3/4" NPT
UV20-3 SD/CB	3	#20	5 Micron Sed Filter	10 Micron Carbon Block	UV	# 20	22 Watts	8 (30)	25 x 16 x 5.5 (63.5 x 40 x 14)	33.0 (15.0)	3/4" NPT
UV20-3 SD/CB Normally Closed	3	#20	5 Micron Sed Filter	10 Micron Carbon Block	UV	# 20	22 Watts	8 (30)	25 x 16 x 5.5 (63.5 x 40 x 14)	33.0 (15.0)	3/4" NPT
UV20-3 SD/CB Normally Open	3	#20	5 Micron Sed Filter	10 Micron Carbon Block	UV	# 20	22 Watts	8 (30)	25 x 16 x 5.5 (63.5 x 40 x 14)	33.0 (15.0)	3/4" NPT

Note: (1) All flow rates shown will provide a UV dose of no less than 16,000 mW-s/cm² or greater.

Drinking Water

Aqua Flo Ultraviolet Disinfection Systems

UV BigBoy™ Series

The UV BigBoy Series is the most versatile commercial ultraviolet disinfection system on the market today. This 15 to 60 GPM series is manufactured with versatility in mind, and is virtually unlimited in the possible filter configurations and manifold sequences. The series is designed with the same traditional style that PURA has made an industry standard - worldwide.

One advantage of the UV BigBoy Series is the convenient manifold mounting rack. The rack can be used to configure up to four UV chambers in parallel or in series. This allows the user to achieve either a higher UV dosage or higher flow rate (up to 60 GPM).

This mounting rack configuration provides easy access for cleaning and maintenance to the individual units without the need to shut down the entire water distribution line. The standard LED lamp monitor provides a visual verification the lamp is in operation.

The UV BigBoy Series, with its capacity, versatility and cost, is the world's most flexible, complete water disinfection system in its class.



Features:

- ➔ Electronic lamp indicator (LED)
- ➔ Standard voltage 115V

Options:

- ➔ 220V/50Hz (2-Prong Euro plug)
- ➔ 12V DC
- ➔ Lamp Out Circuit (LOC) - (normally open) Safety monitor for alarm
- ➔ Lamp Out Circuit (LOC) - (normally closed) Safety monitor for solenoid shut off
- ➔ Three year warranty except on electrical components which are covered for a period of one year.



Specifications & Performance UV BigBoy Series

Model Description	# of Sumps	Sump Type	Sump 1	Sump 2	Sump 3	Lamp #	Power Used	Flow Rates ¹ GPM (L/min)	Dimensions HxWxD In. (cm)	Shipping Weight LBS. (kg)	Inlet/Outlet Size
UVBB-1	1	#20BB	UV	None	None	#20	22 Watts	15 (57)	28 x 7.5 x 9.0 (71.1 x 19 x 22.9)	18.0 (8.2)	1-1/2" NPT
UVBB-1 Normally Closed	1	#20BB	UV	None	None	#20	22 Watts	15 (57)	28 x 7.5 x 9.0 (71.1 x 19 x 22.9)	18.0 (8.2)	1-1/2" NPT
UVBB-1 Normally Open	1	#20BB	UV	None	None	#20	22 Watts	15 (57)	28 x 7.5 x 9.0 (71.1 x 19 x 22.9)	18.0 (8.2)	1-1/2" NPT
UVBB-2	2	#20BB	5 Micron Sed Filter	UV	None	#20	22 Watts	15 (57)	28 x 15 x 9.0 (71.1 x 38.1 x 22.9)	35.0 (15.9)	1-1/2" NPT
UVBB-2 Normally Closed	2	#20BB	5 Micron Sed Filter	UV	None	#20	22 Watts	15 (57)	28 x 15 x 9.0 (71.1 x 38.1 x 22.9)	35.0 (15.9)	1-1/2" NPT
UVBB-2 Normally Open	2	#20BB	5 Micron Sed Filter	UV	None	#20	22 Watts	15 (57)	28 x 15 x 9.0 (71.1 x 38.1 x 22.9)	35.0 (15.9)	1-1/2" NPT
UVBB-3	3	#20BB	5 Micron Sed Filter	10 Micron Carbon Block	UV	#20	22 Watts	15 (57)	28 x 23 x 9.0 (71.1 x 58.4 x 22.9)	54.0 (24.5)	1-1/2" NPT
UVBB-3 Normally Closed	3	#20BB	5 Micron Sed Filter	10 Micron Carbon Block	UV	#20	22 Watts	15 (57)	28 x 23 x 9.0 (71.1 x 58.4 x 22.9)	54.0 (24.5)	1-1/2" NPT
UVBB-3 Normally Open	3	#20BB	5 Micron Sed Filter	10 Micron Carbon Block	UV	#20	22 Watts	15 (57)	28 x 23 x 9.0 (71.1 x 58.4 x 22.9)	54.0 (24.5)	1-1/2" NPT

Model Description	# of Sumps	Sump Type	Sump 1	Sump 2	Sump 3	Sump 4	Lamp #	Power Used	Flow Rates ¹ GPM (L/min)	Dimensions HxWxD In. (cm)	Shipping Weight LBS. (kg)	Inlet/Outlet Size
UVBB-R1	4	#20BB	empty ⁽²⁾	empty ⁽²⁾	empty ⁽²⁾	UV	#20	22 Watts	15 (57)	45 x 34 x 18 (114 x 86 x 45)	65.0 (29.5)	1-1/2"
UVBB-R2	4	#20BB	empty ⁽²⁾	empty ⁽²⁾	UV	UV	#20	44 Watts	30 (114)	45 x 34 x 18 (114 x 86 x 45)	75.0 (34.0)	1-1/2"
UVBB-R4	4	#20BB	UV	UV	UV	UV	#20	88 Watts	60 (227)	45 x 34 x 18 (114 x 86 x 45)	91.0 (41.3)	1-1/2"

Drinking Water

AQUA FLO

Aqua Flo Ultraviolet Disinfection Systems

UV1-EPCB Series™

Aqua Flo Product's UV1-EPCB Series is a bright example of Aqua Flo Product's patented All-In-One concept. This product combines both ultra-violet disinfection with carbon filtration all in a very attractive and compact system.

The UV-1 Series is rated for 1 gallon per minute and uses either a 0.5 micron (EPCB) carbon block filter or a 10 micron (EPCB 10) carbon block filter. This easy to install system can be used as a stand alone or in conjunction with other water treatment products.

Features:

- Compact Size
- Standard voltage 115V

Options:

- 220V/50Hz (2-Prong Euro plug)
- 12V DC



Specifications & Performance UV1-EPCB Series

Model Description	# of Sumps	Sump Type	Sump Content	Lamp #	Power Used	Flow Rates ¹ GPM (L/min)	Dimensions HxWxD In. (cm)	Shipping Weight LBS. (kg)	Inlet/Outlet Size
UV1-EPCB	1	#10SL	EPCB Carbon/UV	#10	10 Watts	1 (3.8)	13.5 x 5.0 x 5.0 (34.3 x 12.7 x 12.7)	7.0 (3.2)	1/2" NPT

Notes: EPCB refers to Extended Pass Carbon Block filter

(1) All flow rates shown will provide a UV dose of no less than 16,000 mW-s/cm² or greater.

UV ADDON Series™

Aqua Flo Product's UV ADDON Series is designed to be an easy addition to water treatment systems that require ultraviolet disinfection (RO systems, holding tanks, water dispensers, recirculating systems and more). The ADDON systems are available with a 1 GPM or 3 GPM flow rate. They are constructed using a 304 grade stainless steel body with a molded head that includes 3/8" quick connect fittings on the inlet/outlet. This versatile system also includes a heavy duty mounting bracket, but will also fit standard 2" RO mounting clips. The UV ADDON Series can be used almost anywhere and is equipped with a unique power supply that makes installation simple, space requirements minimal and lamp changes easy.

Features:

- 3/8" quick connect fittings
- Standard voltage 115V

Options:

- 220V/50Hz (2-Prong Euro plug)
- 12V DC



Specifications & Performance UV ADDON Series

Model Description	# of Sumps	Sump Type	Sump Content	Lamp #	Power Used	Flow Rates ¹ GPM (L/min)	Dimensions HxWxD In. (cm)	Shipping Weight LBS. (kg)	Inlet/Outlet Size
UV ADDON-1	1	304 SS	UV	#10	10 Watts	1 (3.8)	12 x 4 x 3.5 (30.5 x 10.2 x 8.9)	5.0 (2.3)	3/8" QC
UV ADDON-3	1	304 SS	UV	#20	22 Watts	3 (11.4)	22.5 x 4 x 3.5 (57.2 x 10.2 x 8.9)	7.0 (3.2)	3/8" QC

Notes: (1) All flow rates shown will provide a UV dose of no less than 16,000 mW-s/cm² or greater.

Hydrotech



Aqua Flo Filtration Products

Your Water Quality is a Growing Concern

Aging infrastructure and increasing groundwater contamination is a growing reality and concern. The ingestion and inhalation of water disinfection products, such as chlorine, is also undesirable and unnecessary from both an aesthetic and physical standpoint.

Finding The Right Solution

Improving your water quality is easy and economical. While bottled water remains a popular option for drinking water, it is an expensive, less convenient alternative that creates waste and is hard on the environment.

Aqua Flo™ Water Filtration Products provide you with a wide range of solutions for fresh, clean water. Not only do you get great-tasting water for drinking and cooking, you also get clear, odor free water for washing and utility use. No more carrying or storing heavy bottles either!



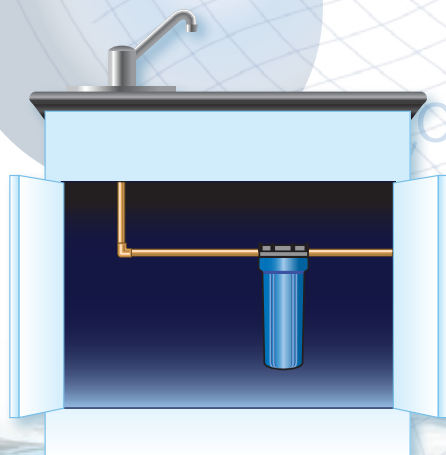
Water travels through miles of pipes before reaching your home. Chlorine is commonly used to kill bacteria along the way. Once at your tap, it is desirable to reduce chlorine.

Aqua Flo Filter Cartridges are available to solve a wide variety of water problems:

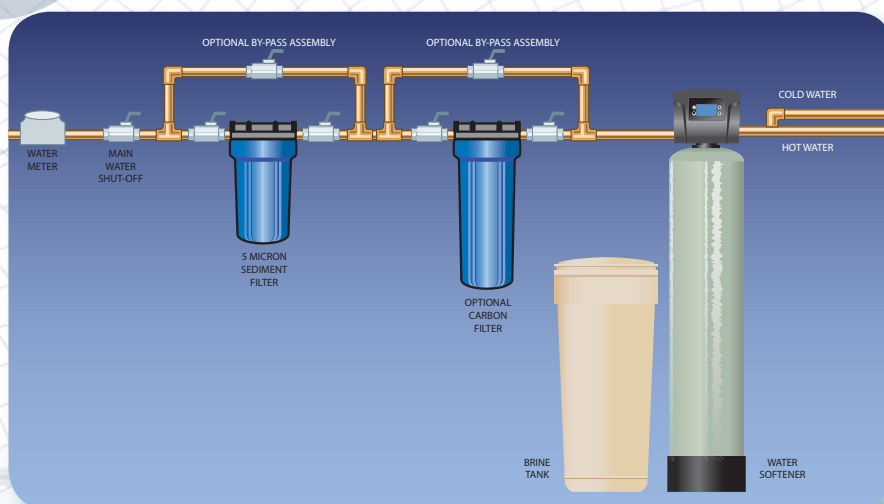
- Remove dirt, silt, clay and other sediments
- Remove iron to prevent staining
- Minimize unpleasant odors, including chlorine

Understanding Your Aqua Flo Filtration System

Aqua Flo Filtration Systems consist of a Filter Housing that connects to your plumbing system and disposable Filter Cartridge that performs the work. Depending on your needs, systems can consist of a single or series of Housings installed either under a specific sink (Point-of-Use) or where the water main enters the home (Point-of-Entry). Filter Cartridges are easily replaced periodically, typically on an annual or semi-annual basis, depending on your incoming water quality.



Point of Use



Point of Entry

Aqua Flo Filtration Products

All Aqua Flo Filtration products provide durable, high-quality reliable performance.

The **Aqua Flo Platinum line** features top-of-the-line performance plus **3rd party certification** which is sometimes required by local plumbing codes.

AQUA FLO
PLATINUM



Visit www.nsf.org for specific details on certification



Visit www.wqa.org for specific details on certification



The **Aqua Flo Value line** also offers great performance and durability at a more economical price point.

AQUA FLO



Hydrotech



Aqua Flo Filtration Products

Filter Housings

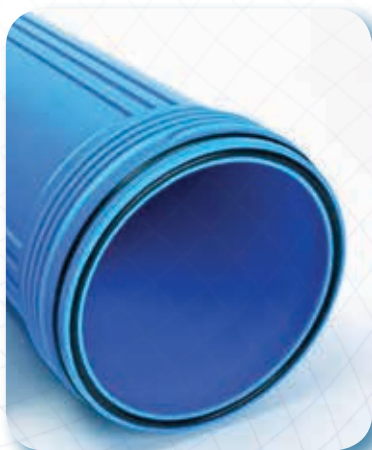
Filter Housings come in different sizes, colors, materials of construction and offer different features.

Here is a quick breakdown:

- ➔ **Size** – Required flow rates and installation space will determine the size of the housing. Housings typically come in four sizes: 2.5"x 10", 2.5"x 20", 4.5"x 10", 4.5"x 20"
- ➔ **Color** – Transparent or Opaque (Blue). Transparent housings allow for visual inspection of the cartridges but are less durable and not suitable for outdoor applications.
- ➔ **Material of Construction** - Plastic is standard for most applications. Stainless steel is used for higher temperature applications.

Features – Some housings provide additional unique features:

- ➔ **Valve-in-Head** – allows you to bypass or shut off the water during cartridge replacement.
- ➔ **Pressure Relief Button** – relieves pressure from the housing prior to changing cartridge
- ➔ **Stainless Steel Threads** – reduces possibility of cross threading and allows for tighter pipe fit
- ➔ **Double O-Ring** – ensures added seal insurance protecting from leaks



Double O-Ring Seal



Pressure Relief Button



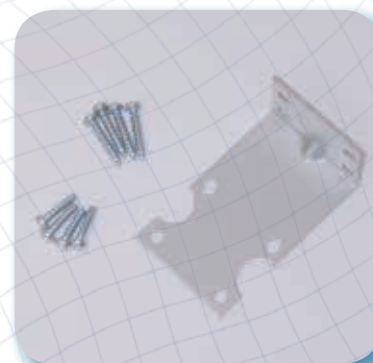
Valve-in-Head

Filter Housing Kits

All Aqua Flo® Point-of-Use Water Filter Housings are easy to install and come with a mounting bracket and hardware plus sump wrench for easy sump removal. Filter cartridges are sold separately.



Sump Wrench



Mounting Bracket and Hardware

WARNING:

Do not use on drinking water supplies, which are microbiologically unsafe or of unknown quality without first adequately disinfecting the water. Protect against freezing to prevent cracking of the filter and water leakage.

NOTE:

All dimensions and micron ratings are nominal. The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.

We recommended replacing the clear sump every 5 years. Do not subject to freezing temperatures.

Aqua Flo Filtration Products

Filter Housings

AQUA FLO
PLATINUM



P-H-PR-20BV P-H-PR-20 P-H-PR-10 P-H-PR-10BV P-SL-10-1/2-NPR

Aqua Flo Platinum™ Housings

Item #	Model Description	Features	Filter Size (In)	Inlet/Outlet Size NPT (In)	Color	Flow Rate (USGPM)	Dimensions A X B (In)	Weight (Lbs)	Certification
36051	HOUSING, P-H-PR-10-34	Pressure Relief, Double O-Ring	2.5" x 10"	3/4"	Blue	4	5 X 12	4	NSF 42
36053	HOUSING, P-H-PR-10BV-1	Pressure Relief, Double O-Ring	4.5" x 10"	1"	Blue	15	7 X 14	6	NSF 42
36112	HOUSING, P-H-PR-20BV-1	Pressure Relief, Double O-Ring	4.5" x 20"	1"	Blue	20	7 X 24	8	NSF 42
36237	HOUSING, P-SL-10-1/2-NPR	NA	2.5" x 10"	1/2"	Blue	4	4 X 12	4	NSF 42
36273	HOUSING, P-H-PR-20-34	Pressure Relief, Double O-Ring	2.5" x 10"	3/4"	Blue	4	5 X 23	7	NSF 42

*NSF-42 for Material Safety and Structural Integrity Only

Aqua Flo™ Housings

Item #	Model Description	Features	Filter Size (In)	Inlet/Outlet Size NPT (In)	Color	Flow Rate (USGPM)	Dimensions A X B (In)	Weight (Lbs)	Certification
26065	HOUSING, WVIH34SS	Valve-in-Head, SS Thread	2.5" x 10"	3/4"	Clear	4	5" x 13.5"	4	No
26066	HOUSING, WCT34SS	Pressure Relief, SS Threads	2.5" x 10"	3/4"	Clear	4	5.25" x 12.25"	4	No
26258	HOUSING, H-PR-10BV-1	Pressure Relief	4.5" x 10"	1"	Blue	15	7.25" x 14"	6	No
26259	HOUSING, H-PR-20BV-1	Pressure Relief	4.5" x 20"	1"	Blue	20	7.25" x 24"	8	No
26261	HOUSING, H-PR-20BV-34	Pressure Relief	4.5" x 20"	3/4"	Blue	20	7.25" x 24"	8	No
26262	HOUSING, H-PR-10BV-34	Pressure Relief	4.5" x 10"	3/4"	Blue	15	7.25" x 14"	6	No
26263	HOUSING, H-PR-20BV-15	Pressure Relief	4.5" x 20"	1.5"	Blue	20	7.25" x 24"	7	No
26264	HOUSING, H-PR-10-34	Pressure Relief	2.5" x 10"	3/4"	Blue	4	5.25" x 12.25"	4	No
26265	HOUSING, H-PR-20-34	Pressure Relief	2.5" x 20"	3/4"	Blue	4	5.25" x 22.5"	7	No
65020006	HOUSING, APC34	Pressure Relief	2.5" x 10"	3/4"	Clear	4	5.25" x 12.25"	3	No
65020007	HOUSING, VIH34	Valve-in-Head	2.5" x 10"	3/4"	Clear	4	5" x 13.5"	4	No

Specifications:

- Max. Water Temperature: 30°C (100°F)
- Min. Water Temperature: 2°C (35°F)
- Max. Water Pressure; 100 psi (689 kPa)
- Materials of Construction: Reinforced Polypropylene (cap and blue sump) & Styrene-Acrilonitrile (clear sump)
- Housing O-Ring: EPDM
- Pressure Relief Button: Nylon
- Limited One Year Warranty

AQUA FLO



Aqua Flo Filtration Products

Cartridge Selection Guide

Model #	Scale and Rust Particles	Coarse Sand	Sand/ Dirt/ Silt	Fine Dirt/ Silt/ Sand	Extra Fine Dirt/Silt/ Sand	Bad Taste & Odor	Aesthetic Chlorine: Taste & Odor
Pleated Polyester Cartridge (PPC) Filter							
PPC-1-10, PPC-5-20BV, P-PPC-5-BV	✓	✓	✓	✓	✓		
PPC-20-10BV	✓	✓	✓				
PPC-20-20BV	✓	✓	✓				
Dual Gradient (DG) Density Cartridge Filter**							
DG-25-1-10BV, DG-50-5-20BV, P-DG-50-5-20BV	✓	✓	✓	✓	✓		
DG-75-25-10BV, DG-75-25-20BV	✓	✓	✓				
Carbon Block (CB) Cartridge Filter ^(†)							
P-CCB-1-10, P-CB-10-20BV, CCB-1-10, CB-10-20BV						✓	✓
Pleated Polyester Reusable (PR) Cartridge Filter							
PR-30-10BV, P-PR-30-10BV, P-PR-30-20BV, PR-30-20BV	✓	✓					
Radial Flow (RF) Granular Activated Carbon Cartridge Filter							
RF-20, RF-20BV, P-RF-20BV						✓	✓
Impregnated Carbon Cellulose (ICC) Dual Purpose Filter ^{(†) (‡)}							
ICC-5-10, P-CC-5-10	✓	✓	✓	✓	✓	✓	✓
ICC-20-20BV	✓	✓	✓			✓	✓
Impregnated Carbon Polyester (ICP) Dual Purpose Filter ^(‡)							
ICP-10-10	✓	✓	✓	✓	✓	✓	✓
ICP-10-20BV	✓	✓	✓			✓	✓
Model #	Scale and Rust Particles	Coarse Sand	Sand/ Dirt/ Silt	Fine Dirt/ Silt/ Sand	Extra Fine Dirt/Silt/ Sand	Bad Taste & Odor	Aesthetic Chlorine: Taste & Odor
Pleated Cellulose (PC) Cartridge Filter*							
PC-20-10, P-PC-20-20BV, PC-20-20BV	✓	✓	✓				
Granular Activated Carbon (GAC) Cartridge Filter ^(††)							
CGACC-10, CGAC-20BV						✓	✓
Spun Poly Bonded (SPB) Cartridge Filter							
SPB-1-10, SPB-5-20, P-SPB-5-20	✓	✓	✓	✓	✓		
Polypropylene Melt Blown (PPMB) Filter Cartridge							
PPMB-5-10, PPMB-5-20BV	✓	✓	✓	✓	✓		
PPMB-10-10, PPMB-10-20BV	✓	✓	✓	✓			
PPMB-25-10	✓	✓	✓				
PPMB-50-10	✓	✓					
PPMB-25-20	✓	✓	✓				
PPMB-50-20	✓	✓					
PPMB-20-40	✓	✓	✓				
PPMB-20-10BV	✓	✓	✓				
PPMB-20-20BV	✓	✓	✓				
String Wound (SW) Cartridge Filter							
SW-5-10, P-SW-5-10, SW-5-20	✓	✓	✓	✓	✓		
SW-30-10, P-SW-30-10, SW-30-10	✓	✓					

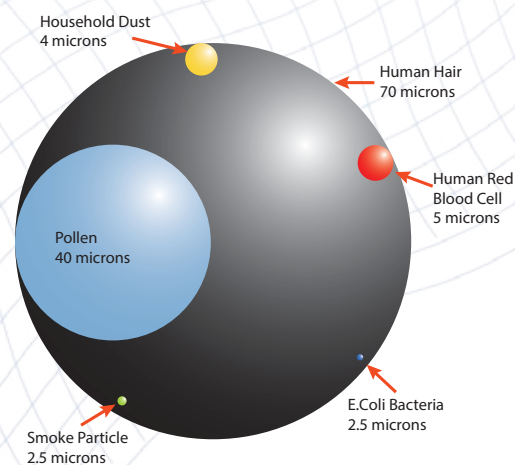
Filter Cartridges

There is an overwhelming selection of cartridges to choose from. We offer a range of popular cartridges to cover most water quality needs.

Your Professional Water Specialist can help determine the correct filtration products for your needs.

What is a Micron Rating?

A micron rating is also common for most cartridges. One micron is equivalent to 0.000039 inches (the diameter of a human hair is 50 to 70 microns). Choosing the right micron rating is a balance between performance and cartridge life. If you chose a smaller micron rating and the cartridge is loading up too fast then a higher micron rated cartridge may provide a better balance.



Drinking Water Aqua Flo Platinum Filters

Carbon Block (CB) Cartridge Filter

The CB cartridge filter is suitable for high capacity chlorine and bad

taste and odor reduction from drinking water. These filters are also used for sediment filtration, making them a great choice for pre-filtering water for reverse osmosis applications. They make an ideal choice for a wide range of residential, food service, commercial and industrial applications.



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Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
36002	P-CB-0.5-10	2.5" X 10"	.5	10000 @ 1.0	1.0 gpm
36008	P-CB-0.5-20BV	4.5" X 20"	.5	40000 @ 6.0	6.0 gpm
36012	P-CB-10-10	2.5" X 10"	10	8000 @ 1.0	1.0 gpm
36015	P-CB-10-10BV	4.5" X 10"	10	16000 @ 3.0	3.0 gpm
36017	P-CB-10-20	2.5" X 20"	10	16000 @ 2.0	2.0 gpm
36020	P-CB-10-20BV	4.5" X 20"	10	32000 @ 6.0	6.0 gpm
36023	P-CB-5-10	2.5" X 10"	5	8000 @ 1.0	1.0 gpm
36025	P-CB-5-10BV	4.5" X 10"	5	16000 @ 3.0	3.0 gpm
36027	P-CB-5-20	2.5" X 20"	5	16000 @ 2.0	2.0 gpm
36029	P-CB-5-20BV	4.5" X 20"	5	32000 @ 6.0	6.0 gpm
36032	P-CCB-1-10	2.5" X 10"	1	8000 @ 1.0	1.0 gpm
36034	P-CCB-5-10	2.5" X 10"	5	8000 @ 1.0	1.0 gpm
36073	P-LR-0.5-10*	2.5" X 10"	.5	6000 @ 1	1.0 gpm

Features:

- ➔ High Dirt-Holding Tolerance
Maximizes Utilization of the Carbon Block
- ➔ High porosity maximizes utilization of the carbon block



NSF/ANSI 42 for Material Safety Only. Visit www.nsf.org for specific details on certification

Dual Gradient (DG) Density Cartridge Filters

DG cartridge filters are made from 100% polypropylene. The progressively loose structure from inside to outside enhance cartridge performance in reduction of dirt, dust and other particles. The two separate gradient layers of the filter

enhances the performance such that it achieves a much higher dirt-loading capacity compared to similar size sediment cartridge filters including spun and string-wound. They make an ideal

sediment reduction choice for a wide range of residential, food service, commercial and industrial applications.

Features:

- ➔ No Fiber release and media migration
- ➔ Designed for purity, bacteria and chemical resistance
- ➔ Two Separate Gradient density layers enhance cartridge performance
- ➔ Three times the dirt-holding capacity than other traditional sediment filters

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26207	DG-25-1-10BV	4.5" X 10"	25/1	10 gpm
26208	DG-50-5-10BV	4.5" X 10"	50/5	10 gpm
26209	DG-75-25-10BV	4.5" X 10"	75/25	10 gpm
26210	DG-25-1-20BVV	4.5" x 20"	25/1	20 gpm
26211	DG-50-5-20BV	4.5" X 20"	50/5	20 gpm
26212	DG-75-25-20BV	4.5" X 20"	75/25	20 gpm



Certified to NSF42 for material safety only. visit www.wqa.org for specific details

Impregnated Carbon Cellulose (ICC) Dual Purpose Filter

The ICC cartridge filter has a dual benefit for sediment filtration and reduction of chlorine and bad taste and odor from drinking water. These carbon wrap sediment cartridges consist of polypropylene melt blown core with carbon impregnated outer layer wrap. It is an economical solution for general water filtration requirements. This filter has high dirt-loading capacity and is recommended for chlorinated water supplies. These dual-purpose cartridges are well suited for residential applications, and are great polishing filters for closedloop water stream systems. The netting and reinforced support provide strength to the filter.



Part #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
36151	P-ICC-5-5	2.5" X 5"	5	250 @ 0.5	0.5
36062	P-ICC-5-10	2.5" X 10"	5	100 @ 1.0	2.0
36064	P-ICC-5-20	2.5"X20"	5	100 @ 1.0	2.0

Item 36151 & 36064 are NSF / ANSI 42 for Material Safety Only. Item 36062 is WQA Certified to NSF / ANSI 42 Standards.

Features:

- ➔ Provides sediment filtration as well as taste/odor /chlorine reduction
- ➔ High dirt loading capacity
- ➔ External netting for additional strength

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Pleated Polyester Reusable (PR) Cartridge Filter

PR cartridge filters are made from reusable polyester fibers which are pleated to maximize dirt holding capacity. These cartridge filters are multipurpose.

Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
36076	P-PR-30-10	2.5" X 10"	30.0	9600	10.0
36078	P-PR-30-10BV	4.5" X 10"	30.0	24000	10.0
36083	P-PR-30-20BV	4.5" X 20"	30.0	48000	10.0
36085	P-PR-50-10	2.5" X 10"	50.0	9600	10.0
36087	P-PR-50-10BV	4.5" X 10"	50.0	24000	10.0



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Features:

- Pleated design maximizes dirt-holding capacity
- Durable, versatile and reusable
- Polyester media is bacteria and chemical resistant
- Nominal 30-micron rating and nominal 50-micron rating



Radial Flow (RF) Granular Activated Carbon Cartridge Filters

The RF cartridge filters are the solution for effective reduction of chlorine and bad taste and odor. These filters provide low pressure drop and carbon fines released from the filter are much less compared to the same size GAC style cartridge filter.

Features:

- Ideal for POE (whole house) and other high flow rate applications
- Unique design reduces carbon fines in filtered water
- Very low pressure drop

Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
36089	P-RF-10BV	4.5" X 10"	N/A	15,000 @ 3.0	3.0
36091	P-RF-20BV	4.5" X 20"	N/A	30,000 @ 6.0	6.0



Spun Poly Bonded (SPB) Cartridge Filters

The SPB filters are manufactured from 100% polypropylene which is resistant to chemical and less prone to bacterial attack. Also they do not impart any taste and odor to the water.

Features:

- Use on chlorinated or non-chlorinated supplies.
- Designed for purity, bacteria and chemical resistance
- Spun fibers form a true gradient
- Density from outer to inner surfaces

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
36095	P-SPB-25-10	2.5" X 10"	25.0	5 gpm
36097	P-SPB-5-10	2.5" X 10"	5.0	5 gpm
36099	P-SPB-5-20	2.5" X 20"	5.0	10 gpm



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Drinking Water Aqua Flo Platinum Filters



Polypropylene Melt Blown (PPMB) Filter Cartridges

The PPMB cartridge filters are made by thermally bonding polypropylene microfibers for higher filtration efficiency performance. The polypropylene material is chemical resistant and not prone to bacterial attack. They will also not add any taste, color and odor to the water. They are available in wide variety of sizes and micron ratings.

Features:

- ➔ Constructed from high quality polypropylene filter media for higher filtration efficiency
- ➔ Thermally bonded micro-fiber construction for high strength
- ➔ Available in micron ratings from 1 to 50 and lengths from 10" - 40"

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
36198	P-PMB-10-5	2.5" X 10"	5	2 gpm
36199	P-PMB-10-10	2.5" X 10"	10	2 gpm
36200	P-PMB-10-25	2.5" X 10"	25	2 gpm
36202	P-PMB-20-1	2.5" X 20"	1	5 gpm
36203	P-PMB-20-5	2.5" X 20"	5	5 gpm
36204	P-PMB-20-10	2.5" X 20"	10	5 gpm
36205	P-PMB-20-25	2.5" X 20"	25	5 gpm
36249	P-PMB-10-1	2.5" X 10"	1	2 gpm
36250	P-PMB-10-50	2.5" X 10"	50	2 gpm
36251	P-PMB-20-50	2.5" X 20"	50	5 gpm
36252	P-PMB-30-1	2.5" X 30"	1	6 gpm
36254	P-PMB-30-25	2.5" X 30"	25	6 gpm



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String Wound (SW) Polypropylene Cartridge Filters

SW cartridge filters are manufactured from polypropylene cord which is wound around the polypropylene core. These cartridge filters are economical solution for reduction of sediment, sand, rust and scale particles from the drinking water.

Features:

- ➔ String wound filters reduces sediment from a variety of liquids
- ➔ Low pressure drop
- ➔ Withstand high temperatures
- ➔ Wide chemical compatibility

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
36101	P-SW-10-10	2.5" X 10"	10	10 gpm
36102	P-SW-1-20	2.5" X 20"	1	10 gpm
36104	P-SW-30-10	2.5" X 10"	30	10 gpm
36106	P-SW-50-10	2.5" X 10"	50	10 gpm
36109	P-SW-5-10	2.5" X 10"	5	10 gpm
36138	P-SW-5-10BV	4.5" X 10"	5	15 gpm
36140	P-SW-25-10B	4.5" X 10"	25	15 gpm
36141	P-SW-1-20BV	4.5" X 20"	1	20 gpm
36142	P-SW-5-20BV	4.5" X 20"	5	20 gpm
36143	P-SW-25-20BV	4.5" X 20"	25	20 gpm
36241	P-SW-100-20BV	4.5" X 20"	100	20 gpm



Pleated Cellulose (PC) Filter Cartridges

The PC cartridge filters are made from pleated cellulose media and are recommended for general water filtration requirements.

Features:

- ➔ Pleated design maximizes dirt-holding capacity
- ➔ Designed for general water filtration purposes
- ➔ Nominal 20-micron rating
- ➔ Cellulose based material

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
36154	P-PC-20-10	2.5" X 10"	20.0	10 gpm
36156	P-PC-20-10BV	4.5" X 10"	20.0	10 gpm
36157	P-PC-20-20BV	4.5" X 20"	20.0	20 gpm



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Drinking Water Aqua Flo Platinum Filters



Pleated Polyester Cartridge (PPC) Filter

The PPC cartridge filters are made from resin impregnated cellulose and polyester fibers. They are constructed with thermally bonded media with end caps and inner core heat sealed together.

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Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
36122	P-PPC-5-10	2.5" X 10"	5.0	10 gpm
36130	P-PPC-5-10BV	4.5" X 10"	5.0	10 gpm
36134	P-PPC-5-20BV	4.5" X 20"	5.0	20 gpm

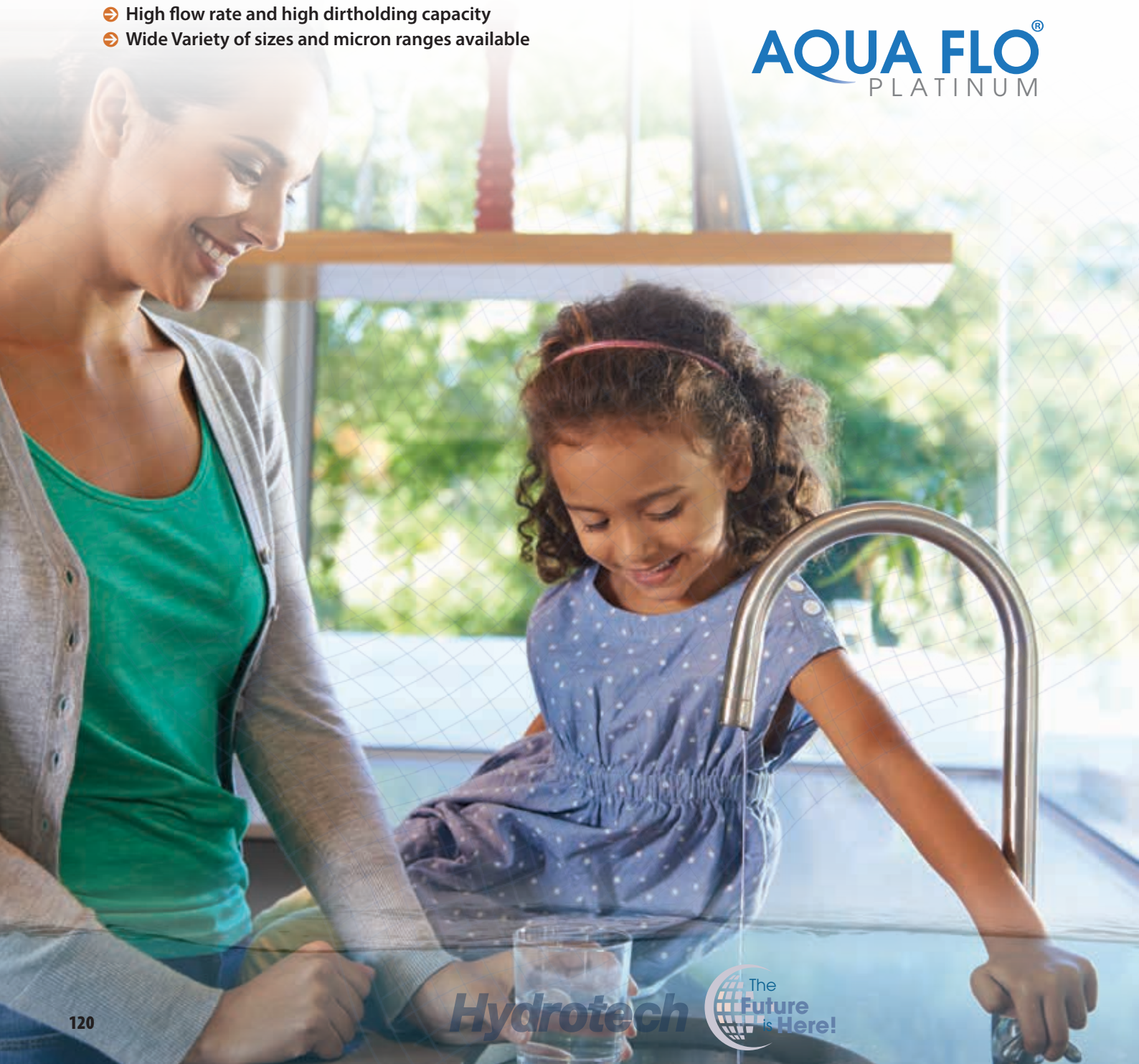
Features:

- Special formulation of resin impregnated cellulose and polyester fibers
- Provides higher wet strength than regular cellulose cartridges
- High flow rate and high dirt-holding capacity
- Wide Variety of sizes and micron ranges available



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Drinking Water Aqua Flo Economy Filters

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Carbon Block (CB) Cartridge Filter



The CB cartridge filter is suitable for high capacity chlorine and bad taste and odor reduction from drinking water. These filters are also used for sediment filtration, making them a great choice for pre-filtering water for reverse osmosis applications.

They make an ideal choice for a wide range of residential, food service, commercial and industrial applications.

Features:

- ➔ High Dirt-Holding Tolerance
Maximizes Utilization of the Carbon Block
- ➔ High porosity maximizes utilization of the carbon block

Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
26192	CCB-1-10*	2.5" X 10"	1	10,000 gallons @ 1 gpm	1 gpm
26193	CCB-5-10*	2.5" X 10"	5	6,000 gallons @ 1 gpm	1 gpm
26194	CB-0.5-10	2.5" X 10"	0.5	20,000 gallons @ 1 gpm	1 gpm
26195	CB-5-10	2.5" X 10"	5	6,000 gallons @ 1 gpm	1 gpm
26196	CB-10-10	2.5" X 10"	10	3,000 gallons @ 1 gpm	1 gpm
26197	CB-0.5-20	2.5" X 20"	0.5	45,000 gallons @ 2 gpm	2 gpm
26198	CB-5-20	2.5" X 20"	5	12,000 gallons @ 2 gpm	2 gpm
26199	CB-10-20	2.5" X 20"	10	6,000 gallons @ 2gpm	2 gpm
26201	CB-0.5-10BV	4.5" X 10"	0.5	50,000 gallons @ 2 gpm	2 gpm
26202	CB-5-10BV	4.5" X 10"	5	22,000 gallons @ 2 gpm	2 gpm
26203	CB-10-10BV	4.5" X 10"	10	15,000 gallons @ 2gpm	2 gpm
26204	CB-0.5-20BV	4.5" X 20"	0.5	150,000 gallons @ 4gpm	4 gpm
26205	CB-5-20BV	4.5" X 20"	5	40,000 gallons @ 4 gpm	4 gpm
26206	CB-10-20BV	4.5" X 20"	10	30,000 gallons @ 4 gpm	4 gpm



Dual Gradient (DG) Density Cartridge Filters

DG cartridge filters are made from 100% polypropylene. The progressively loose structure from inside to outside enhance cartridge performance in reduction of dirt, dust and other particles. The two separate gradient layers of the filter enhances the performance such that it achieves a much higher dirt-loading capacity compared to similar size sediment cartridge filters including spun and string-wound. They make an ideal sediment reduction choice for a wide range of residential, food service, commercial and industrial applications.

Features:

- ➔ No Fiber release and media migration
- ➔ Designed for purity, bacteria and chemical resistance
- ➔ Two Separate Gradient density layers enhance cartridge performance
- ➔ Three times the dirt-holding capacity than other traditional sediment filters

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26207	DG-25-1-10BV	4.5" X 10"	25/1	10 gpm
26208	DG-50-5-10BV	4.5" X 10"	50/5	10 gpm
26209	DG-75-25-10BV	4.5" X 10"	75/25	10 gpm
26210	DG-25-1-20BVV	4.5" x 20"	25/1	20 gpm
26211	DG-50-5-20BV	4.5" X 20"	50/5	20 gpm
26212	DG-75-25-20BV	4.5" X 20"	75/25	20 gpm

Impregnated Carbon Cellulose (ICC) Dual Purpose Filter

The ICC cartridge filter has a dual benefit for sediment filtration and reduction of chlorine and bad taste and odor from drinking water. These carbon wrap sediment cartridges consist of polypropylene melt blown core with carbon impregnated outer layer wrap. It is an economical solution for general water filtration requirements. This filter has high dirt-loading capacity and is recommended for chlorinated water supplies. These dual-purpose cartridges are well suited for residential applications, and are great polishing filters for closedloop water stream systems. The netting and reinforced support provide strength to the filter.



Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
26278	ICC-5-10	2.5" X 10"	5	2,500 gallons @ 1 gpm	5 gpm
26189	ICC-20-20BV	4.5" X 20"	20	7,500 gallons @ 4 gpm	10 gpm

Features:

- ➔ Provides sediment filtration as well as taste/odor /chlorine reduction
- ➔ High dirt loading capacity
- ➔ External netting for additional strength

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Pleated Polyester Reusable (PR) Cartridge Filter

PR cartridge filters are made from reusable polyester fibers which are pleated to maximize dirt holding capacity. These cartridge filters are multipurpose.

Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
26242	PR-30-10BV	4.5" X 10"	30	24,000 @ 10.0 gpm	10 gpm
26243	PR-50-10BV	4.5" X 10"	50	24,000 @ 10.0 gpm	10 gpm
26244	PR-30-20BV	4.5" X 20"	30	48,000 @ 10.0 gpm	20 gpm

Features:

- Pleated design maximizes dirt-holding capacity
- Durable, versatile and reusable
- Polyester media is bacteria and chemical resistant
- Nominal 30-micron rating and nominal 50-micron rating

Radial Flow (RF) Granular Activated Carbon Cartridge Filters

The RF cartridge filters are the solution for effective reduction of chlorine and bad taste and odor. These filters provide low pressure drop and carbon fines released from the filter are much less compared to the same size GAC style cartridge filter.



Features:

- Ideal for POE (whole house) and other high flow rate applications
- Unique design reduces carbon fines in filtered water
- Very low pressure drop

Item #	Model #	Maximum Size	Micron	Capacity (Gallons)	Flow Rate (gpm)
26253	RF-20	2.5' X 20"	N/A	6,000 gallons @ 2 gpm	4 gpm
26254	RF-10	2.5" X 10"	N/A	3,000 gallons @ 1 gpm	1 gpm
26255	RF-10BV	4.5" X 10"	N/A	35,000 gallons @ 2 gpm	4 gpm
26256	RF-20BV	4.5" X 20"	N/A	70,000 gallons @ 4 gpm	8 gpm

Spun Poly Bonded (SPB) Cartridge Filters

The SPB filters are manufactured from 100% polypropylene which is resistant to chemical and less prone to bacterial attack. Also they do not impart any taste and odor to the water.



Features:

- Use on chlorinated or non-chlorinated supplies.
- Designed for purity, bacteria and chemical resistance
- Spun fibers form a true gradient
- Density from outer to inner surfaces

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26213	SPB-1-10	2.5" X 10"	1	4 gpm
26222	SPB-5-10	2.5" X 10"	5	5 gpm
26221	SPB-5-20	2.5" X 20"	5	10 gpm

Granular Activated (CGAC) Carbon Cartridge Filter

The CGAC cartridge filters are effective in reduction of chlorine and other bad taste and odor from drinking water.

CGACC cartridge filter contain coconut shell based activated carbon which is an environment friendly but also effective in reducing certain compounds* better than the coal based granular activated carbon filter cartridges.



Features:

- Effective taste/odor/chlorine reduction
- Designed for maximum adsorption
- Post filter to reduce carbon fines

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26185	CGACC-10	2.5" X 10"	7,500 gallons @ 1 gpm	1 gpm @ 7 psi drop
26277	CGAC-10	2.5" X 10"	5,000 gallons @ 1.0 gpm	1 gpm @ 7 psi drop
26186	CGAC-20	2.5" X 20"	10,000 gallons @ 2.0 gpm	2 gpm @ 15 psi drop
26187	CGAC-BV	4.5" X 10"	12,500 gallons @ 2.0 gpm	2 gpm @ 5 psi drop
26188	CGAC-20BV	4.5" X 20"	25,000 gallons @ 4.0 gpm	4 gpm @ 5 psi drop

Drinking Water Aqua Flo Economy Filters

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Polypropylene Melt Blown (PPMB) Filter Cartridges

The PPMB cartridge filters are made by thermally bonding polypropylene microfibers for higher filtration efficiency performance. The polypropylene material is chemical resistant and not prone to bacterial attack. They will also not add any taste, color and odor to the water. They are available in wide variety of sizes and micron ratings.

Features:

- Constructed from high quality polypropylene filter media for higher filtration efficiency
- Thermally bonded micro-fiber construction for high strength
- Available in micron ratings from 1 to 50 and lengths from 10" - 40"

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26269	PPMB-5-10	2.5" X 10"	5	3 gpm
26223	PPMB-10-10	2.5" X 10"	10	4 gpm
26224	PPMB-25-10	2.5" X 10"	25	5 gpm
26225	PPMB-50-10	2.5" X 10"	50	8 gpm
26226	PPMB-1-20	2.5" X 20"	1	4 gpm
26227	PPMB-5-20	2.5" X 20"	5	7 gpm
26228	PPMB-10-20	2.5" X 20"	10	9 gpm
26229	PPMB-25-20	2.5" X 20"	25	11 gpm
26230	PPMB-50-20	2.5" X 20"	50	15 gpm
26231	PPMB-1-40	2.5" X 40"	1	8 gpm
26232	PPMB-5-40	2.5" X 40"	5	14 gpm
26233	PPMB-20-40	2.5" X 40"	20	20 gpm
26234	PPMB-1-10BV	4.5" X 10"	1	6 gpm
26235	PPMB-5-10BV	4.5" X 10"	5	10 gpm
26236	PPMB-10-10BV	4.5" X 10"	10	11 gpm
26237	PPMB-20-10BV	4.5" X 10"	20	14 gpm
26238	PPMB-1-20BV	4.5" X 20"	1	12 gpm
26239	PPMB-5-20BV	4.5" X 20"	5	20 gpm
26240	PPMB-10-20BV	4.5" X 20"	10	20 gpm
26241	PPMB-20-20BV	4.5" X 20"	20	20 gpm

String Wound (SW) Polypropylene Cartridge Filters

SW cartridge filters are manufactured from polypropylene cord which is wound around the polypropylene core. These cartridge filters are economical solution for reduction of sediment, sand, rust and scale particles from the drinking water.

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26273	SW-5-10	2.5" X 10"	5	5 gpm
26246	SW-10-10	2.5" X 10"	10	7 gpm
26247	SW-30-10	2.5" X 10"	30	10 gpm
26249	SW-50-10	2.5" X 10"	50	10 gpm
26250	SW-1-20	2.5" X 20"	1	15 gpm
26251	SW-5-20	2.5" X 20"	5	15 gpm
26252	SW-30-10BV	4.5" X 10"	30	20 gpm

Features:

- String wound filters reduces sediment from a variety of liquids
- Low pressure drop
- Withstand high temperatures
- Wide chemical compatibility



Pleated Polyester Cartridge (PPC) Filter

The PPC cartridge filters are made from resin impregnated cellulose and polyester fibers. They are constructed with thermally bonded media with end caps and inner core heat sealed together.

Features:

- Special formulation of resin impregnated cellulose and polyester fibers
- Provides higher wet strength than regular cellulose cartridges
- High flow rate and high dirt holding capacity
- Wide Variety of sizes and micron ranges available

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26174	PPC-1-10	2.5" X 10"	1	5 gpm
26175	PPC-5-10	2.5" X 10"	5	7 gpm
26176	PPC-1-20	2.5" X 20"	1	10 gpm
26177	PPC-5-20	2.5" X 20"	5	13 gpm
26178	PPC-5-10BV	4.5" X 10"	5	18 gpm
26179	PPC-20-10BV	4.5" X 10"	20	20 gpm
26180	PPC-5-20BV	4.5" X 20"	5	20 gpm
26181	PPC-20-20BV	4.5" X 20"	20	35 gpm

Drinking Water Aqua Flo Economy Filters

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Pleated Cellulose (PC) Filter Cartridges

The PC cartridge filters are made from pleated cellulose media and are recommended for general water filtration requirements.

Features:

- Pleated design maximizes dirt-holding capacity
- Designed for general water filtration purposes
- Nominal 20-micron rating
- Cellulose based material

Item #	Model #	Maximum Size	Micron	Flow Rate (gpm)
26276	PC-20-10	2.5" X 10"	20	10 gpm
26182	PC-20-20	2.5" X 20"	20	15 gpm
26183	PC-20-10BV	4.5" X 10"	20	20 gpm
26184	PC-20-20BV	4.5" X 20"	20	35 gpm

Specialty Filters

Water Softening

These cation exchange softening cartridges utilize a bed of sodium form cation resin beads to reduce hardness and scale deposits. The convenient and space-saving design of our WS Series cartridges means that softened water can be provided easily and cost effectively at the exact point of need.

Item #	Model #	Maximum Size	Capacity (grains)
36242	P-WS-10	2.5" X 10"	1,414
36243	P-WS-20	2.5" X 20"	2,520
36244	P-WS-20BV	4.5" X 20"	6,295

Deionization

These high-capacity, semi-conductor grade resin cartridges are ideal for use in pharmaceuticals, medical laboratories, cosmetics, and circuit board printing applications.

Item #	Model #	Maximum Size
36179	P-DI-10	2.5" X 10"
36180	P-DI-20	2.5" X 20"
36178	P-DI-20BB	4.5" X 20"

Iron Reduction

This cartridge helps to eliminate the orange and brown stains often found in sinks, toilets, tubs and other plumbing fixtures.

Item #	Model #	Maximum Size	Capacity (ppm)
36236	P-IR-20BV	4.5" X 20"	1,492 @ 3gpm

In-line Cartridge

Sealed in-line filters feature coconut shell, granular activated carbon, and are designed to reduce unwanted taste, odor and chlorine taste and odor.

Item #	Model #	Maximum Size	Micron
36070	P-IL-GAC-1/4	2" x 10	5
36248	P-IL-CGAC-3/8	2" x 10	5
36230	P-IL-PH-1/4	2" x 10	20

Ice Maker

High grade coconut shell activated carbon and a filter element for sediment removal make this the ideal choice for ice makers and water dispensers. Enjoy clean, clear, great tasting water and ice cubes.

Item #	Model #	Maximum Size
26003	WIM14	2.25" X 8"

Stainless Steel Housings



Features:

- ➔ Heavy-duty units for smaller filtration systems and point-of-use applications
- ➔ Brushed 304 stainless steel sump with a cast brass / nickel plated head
- ➔ Ideal for high-pressure / hot water applications
- ➔ Utilizes double open-end cartridges

Materials of Construction	
Housing	Brushed 304 Stainless Steel
Head	Brass / Nickel Plated
Max Temperature	180°F (82°C)
Pipe Size	3/4" NPT
Sealing Gaskets	Buna-N, Cellulose Fiber



Tin Core-String Wound Cartridges

- ➔ Tin core and string wound natural cotton media is suitable for general purpose high temperature filter applications with water, oils, solvents, paints and other non-FDA (non-potable) applications.
- ➔ Maximum Cartridge Temperature - 180°F (82°C)
- ➔ 2.5" O.D. Core x 10" Length (suitable for #10 and ST-1 Housings)
- ➔ Available in 5, 10, 25, 50 micron ratings

304SS Core String Wound Cartridges

- ➔ Maximum Cartridge Temperature - 180°F (82°C)

Cartridges

Item #	DESCRIPTION	WEIGHT (LBS)
26134	Sediment, 10" 10 Micron, Hot Water, Tin Core, Non-potable	0.5
26135	Sediment, 10" 25 Micron, Hot Water, Tin Core, Non-potable	0.5
26136	Sediment, 10" 50 Micron, Hot Water, Tin Core, Non-potable	0.5
26137	Sediment, 10" 5 Micron, Hot Water, Non-potable SS	0.5
26138	Sediment, 10" 10 Micron, Hot Water, Non-potable SS	0.5
26139	Sediment, 10" 25 Micron, Hot Water, Non-potable SS	0.5
26140	Sediment, 10" 50 Micron, Hot Water, Non-potable SS	0.5
26141	Sediment, 10" 5 Micron, Hot Water, Tin Core, Non-potable	0.5

- ➔ 2.5 O.D. Core x 10" Length (suitable for #10 and ST-1 Housings)
- ➔ Available in 5, 10, 25, 50 micron ratings

Housings

Item #	Model	Maximum Dimensions	Flow Rate (gpm)	Maximum Pressure
36146	SS-1	14 1/8" x 4 1/8" (360mm x 105mm)	10 gpm (38 lpm)	250 psi (17.2 bar)
36147	SS-2	24" x 4 1/8" (610mm x 105mm)	15 gpm (57 lpm)	250 psi (17.2 bar)
36148	SS-3	33 5/8" x 4 1/8" (853mm x 105mm)	20 gpm (76 lpm)	250 psi (17.2 bar)

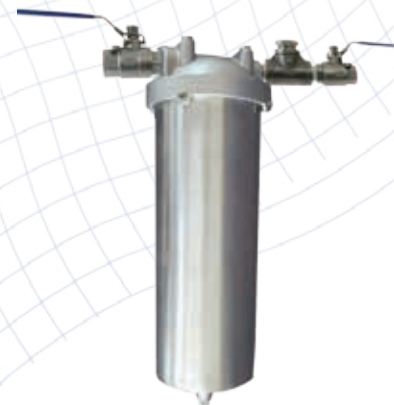
* Maximum cartridge diameter 3" (76mm)

#36145 Side Stream Filter Assembly

Pre-Assembled SS-1 Housing with stainless steel shutoffs and stainless steel flow indicator.

Side stream filters are primarily used for filtering a portion of the water in a closed loop boiler system to protect the boiler, controls and circulating pumps

Dimensions: 14 1/8" (h) x 20 3/4" (w) x 4 1/8" (d)



Bag Filters

BF Series (Polypropylene Felt)

- Filtration ratings from 1 to 200 microns to comply with any filtration requirement
- Manufactured from felt due to its high solids loading capabilities versus similar mesh fabrics
- The media is created by needle-punching two layers of synthetic fibers together in a supporting scrim
- A glazed finish, created by melting the outermost surface fibers, is used to produce a bond that reduces the possibility of migration.

Item #	Model #	Maximum Size	Micron
36184	P-BF-410-1	4" X 10"	1
36185	P-BF-410-10	4" X 10"	10
36186	P-BF-410-100	4" X 10"	100
36187	P-BF-410-25	4" X 10"	25
36188	P-BF-410-5	4" X 10"	5
36189	P-BF-410-50	4" X 10"	50
36190	P-BF-420-1	4" X 20"	1
36191	P-BF-420-10	4" X 20"	10
36192	P-BF-420-100	4" X 20"	100
36193	P-BF-420-200	4" X 20"	200
36194	P-BF-420-25	4" X 20"	25
36195	P-BF-420-5	4" X 20"	5
36196	P-BF-420-50	4" X 20"	50

High Flow Stainless Steel Housings

Features

- Side Inlet / Outlet connections
- Designed for industrial and commercial application.
- Stainless steel 304/316L heavy duty construction
- V Clamp Band for quick cartridge replacement
- Standard housings accept OD2.5" DOE cartridge

Item #	Model #	Qty.(length) of Cartridge	Max.Flow (gpm)	Inlet/Outlet Connection	Vent	Drain	Max. Cartridge Diameter
36219	Housing,P-SS-BC-12	4(30")	84/105	2" MNPT	1/4"NPT	1/2"NPT	OD2.5"
36220	Housing,P-SS-BC-16	4(40")	112/140	2" MNPT	1/4"NPT	1/2"NPT	OD2.5"
36221	Housing,P-SS-BC-20	5(40")	84	2" MNPT	1/4"NPT	1/2"NPT	OD2.5"
36222	Housing,P-SS-BC-4	4(10")	28/35	2" MNPT	1/4"NPT	1/2"NPT	OD2.5"
36223	Housing,P-SS-BC-8	4(20")	56/70	2" MNPT	1/4"NPT	1/2"NPT	OD2.5"

Housing, P-SS-BC-8



Accessories



Sump Wrenches

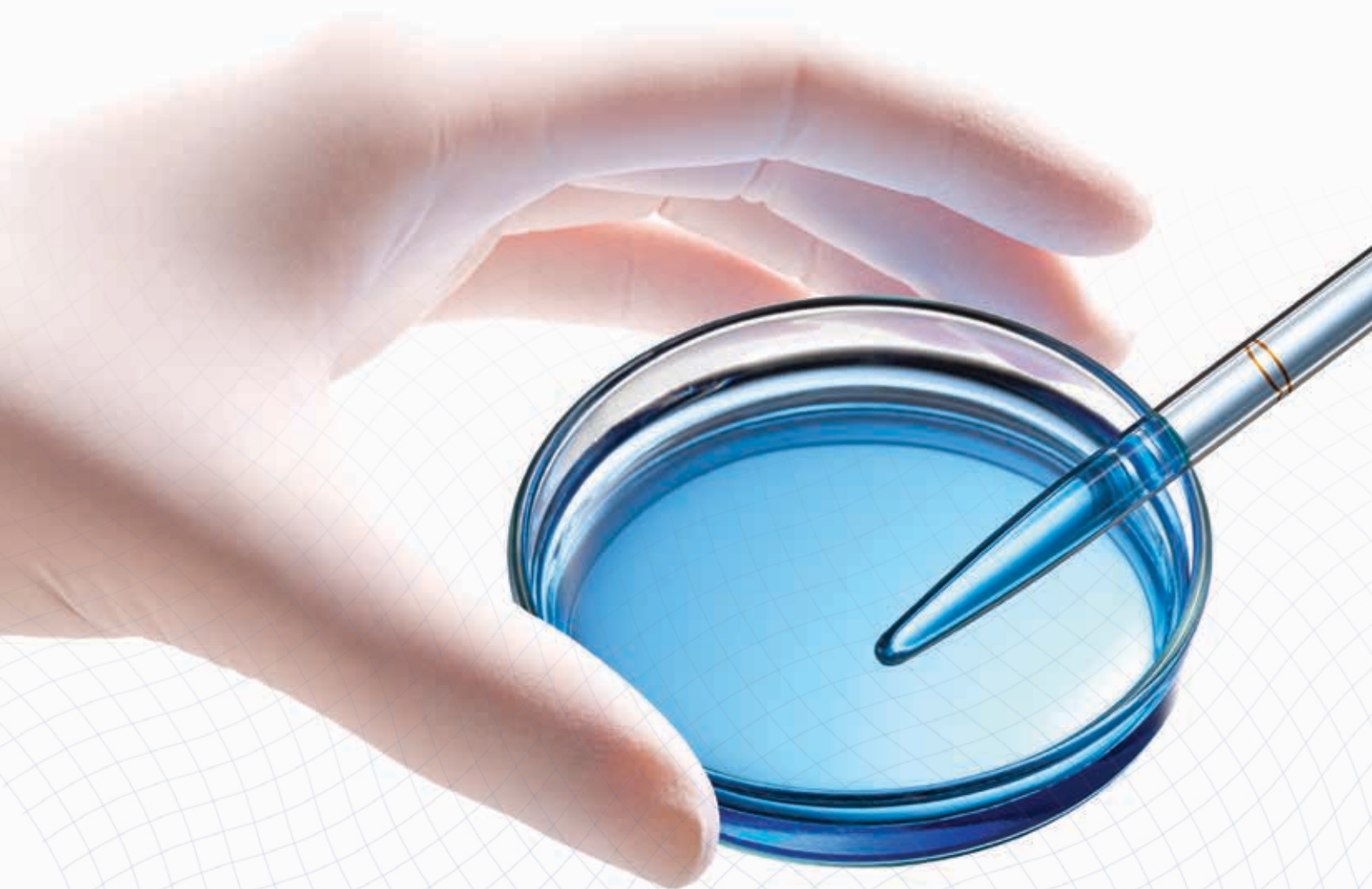
- #26007 - Wrench with six notches fits all 10" clear housings.
- #92508 - Wrench, H-PR-10 and H-PR-20 Models
- #92509 - Wrench, Big Valve Housings, H-PR-BV Models



Aqua Flo Sump O-Rings

- #92512 - O-Ring, Sump, Big Value Housings, H-PR-BV
- #92513 - O-Ring, Sump, H-PR-10 and H-PR-20
- #92060 - O-Ring, Sump, WCT34SS and WVIH34SS
- #26022 - O-Ring, Sump, APC and VIH

Accessories



Chemical Feed Pumps
Pro Chemicals
Test Kits
Mazzei Injectors
John Guest Fittings

Accessories

Chemical Feed Pumps

45 Pump Series Single Head Adjustable Rate

How it Works

Stenner's adjustable metering pump is built with three detachable components: the motor, feed rate control and pump head. Outputs are dependent upon three factors: the rpm of the motor gears, the percentage setting on the feed rate control and the size of the peristaltic pump tube. All Stenner metering pumps have a 3-point roller design in the pump head, which acts as a check valve to prevent back flow, siphoning, overdosing and loss of prime.

The motor shaft rotates at a fixed rpm which drives the adjustable feed rate control to intermittently engage the roller assembly within the pump head. The chemical solution in the pump tube is captured between the rollers as they rotate and compress the tube. As the rollers advance, the squeezed tube section regains its original form and generates a vacuum, creating the self-priming feature that delivers a constant flow unaffected by the outlet pressure.



STENNER PUMPS

Advantages:

- ⇒ Self-priming up to 25 feet does not lose prime
- ⇒ Can pump off-gassing solutions
- ⇒ Solutions contained in tube, not exposed to pump components or air
- ⇒ Sub-assemblies fit together without tools, easy service or conversion to another model
- ⇒ Pump head universal to all Stenner pumps
- ⇒ Can run dry without damage
- ⇒ Will not clog from dirt or debris
- ⇒ Reproducible outputs within 2%
- ⇒ Adjustable feed rate control from 5% - 100% in 2.5% increments
- ⇒ Pump tubes accept a variety of chemical
- ⇒ 1 Year Guarantee from date of manufacture

The patented mechanical feed rate control allows the pump's output to be scaled from 5% to 100% with the simple turn of the dial.

Accessories

Chemical Feed Pumps

45MHP2

100 psi (6.9 bar)
max 3 gpd (11 lpd)

Outputs @ 60Hz

Gallons per day: 0.2 to 3.0
Gallons per hour: 0.01 to 0.13
Liters per day: 0.8 to 11.4
Liters per hour: 0.03 to 0.48
Ounces per minute: 0.02 to 0.27
Milliliter per minute: 0.56 to 7.92

Outputs @ 50Hz

Liters per day: 0.6 to 9.1
Liters per hour: 0.03 to 0.38
Milliliters per minute: 0.31 to 6.32

Maximum Operating Temperature

12° F (52° C)

Amp Draw

1.7 120V; 0.9 220V, 230V, 250V

Dimensions (l x w x h)

10.6 x 5.3 x 6.0 in
(26.9 x 13.4 x 15.2 cm)

Shipping Weight

9 lbs (4 kg)

45MHP10

100 psi (6.9 bar)
10 gpd (38 lpd)

Outputs @ 60Hz

Gallons per day: 0.5 to 10.0
Gallons per hour: 0.02 to 0.42
Liters per day: 1.9 to 37.9
Liters per hour: 0.08 to 1.58
Ounces per minute: 0.04 to 0.89
Milliliter per minute: 1.32 to 26.32

Outputs @ 50Hz

Liters per day: 1.5 to 30.3
Liters per hour: 0.06 to 1.26
Milliliters per minute: 1.04 to 21.04

Discharge Pressure

26-100 psi (1.7-6.9 bar)

Voltage

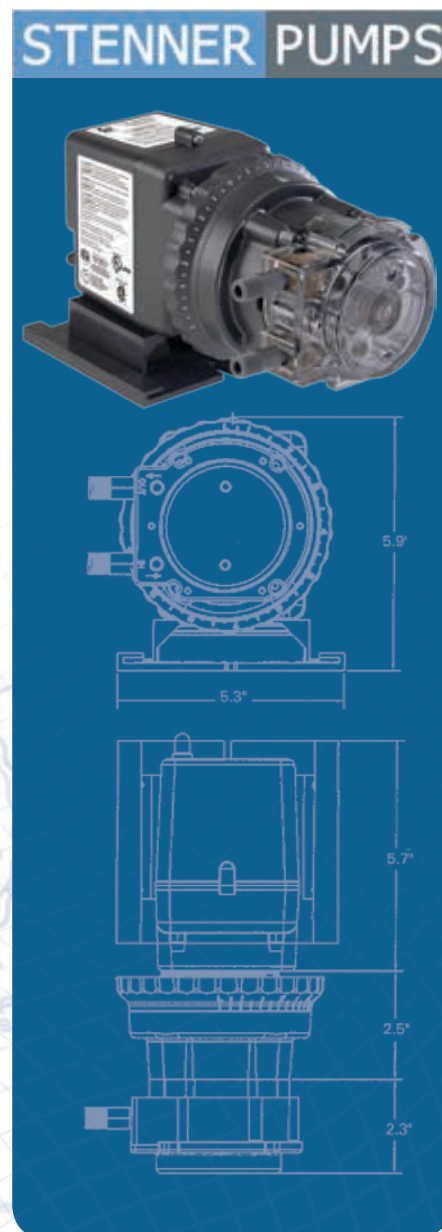
120V 60Hz; 220V 60Hz
230V 50Hz; 250V 50Hz International

Motor

shaded pole; 26 rpm; 1/30 HP

Suction Lift

25' (7.6 m))



Model	Tube	Feed Rate Setting: Outputs per day in US Gallons @ 60Hz										
		L	1	2	3	4	5	6	7	8	9	10
45MHP2	#1	0.2	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3
45MHP10	#2	0.5	1	2	3	4	5	6	7	8	9	10

Description
45MHP2-110v, ¼" tubing
45MHP2-220v, ¼" tubing
45MHP10-110v, ¼" tubing
45MHP10-220v, ¼" tubing

Accessories

Chemical Feed Pumps

85 Pump Series Single Head Adjustable Rate

How it Works

Stenner's fixed output metering pump is built with two detachable components: the motor and pump head. Outputs are dependent upon the rpm of the motor gears and the size of the peristaltic pump tube.

The fixed rate pump has no output adjustment. All Stenner metering pumps have a 3-point roller design in the pump head, which acts as a check valve to prevent back flow, siphoning, overdosing and loss of prime.

The motor's output shaft rotates at a fixed rpm which drives the roller assembly within the pump head. The chemical solution in the pump tube is captured between the rollers as they rotate and compress the tube. As the rollers advance, the squeezed tube section regains its original form and generates a vacuum, creating the self-priming feature that delivers a constant flow unaffected by the outlet pressure.



STENNER PUMPS

Advantages:

- ➔ Self-priming up to 25 feet and does not lose prime
- ➔ Can pump off-gassing solutions
- ➔ Solutions contained in tube, not exposed to pump components or air
- ➔ Subassemblies fit together without tools; easy service or conversion to another model
- ➔ Pump head universal to all Stenner pumps
- ➔ Can run dry without damage
- ➔ Will not clog from dirt or debris
- ➔ Reproducible outputs within 2%
- ➔ Adjustable feed rate control from 5%-100% in 2.5% increments
- ➔ Pump tubes accept a variety of chemicals

Outputs @ 60Hz

Gallons per day: 0.8 to 17.0
Gallons per hour: 0.03 to 0.71
Liters per day: 3.0 to 64.4
Liters per hour: 0.13 to 2.68
Ounces per minute: 0.07 to 1.51
Milliliter per minute: 2.08 to 44.65

Outputs @ 50Hz

Liters per day: 2.4 to 51.5
Liters per hour: 0.10 to 2.15
Milliliters per minute: 1.67 to 35.76

Discharge Pressure

26-100 psi (1.7-6.9 bar)

Voltage

Voltage 120V 60Hz; 220V 60Hz/230V 50Hz; 250V 50Hz International

Motor

shaded pole; 44 rpm; 1/30 HP

Suction Lift

25' (7.6 m)

Maximum Operating Temperature

125° F (52° C)

Amp Draw

1.7 120V; 0.9 220V, 230V, 250V

Dimensions (l x w x h)

10.6 x 5.3 x 6.0 in (26.9 x 13.4 x 15.2 cm)

Shipping Weight

9 lbs (4 kg)

Model	Tube	Feed Rate Setting: Outputs per day in US Gallons @ 60Hz										
		L	1	2	3	4	5	6	7	8	9	10
85MHP5	#1	0.3	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0

Description
STENNER-PUMP-85MHP5-110
STENNER-PUMP-85MHP5-220

Accessories

Chemical Feed Pumps

Materials of Construction

All Housings: Lexan® polycarbonate plastic
Pump tube & check valve duckbill: Santoprene® FDA approved
Pump tube: Tygothane® FDA approved
Checkvalve duckbill (w/Tygothane tube): Pellathane®
Suction/discharge tubing & ferrules (1/4" & 6 mm): LDPE polyethylene, NSF/FDA approved
Tube fittings, connecting nuts, check valve fitting, weighted strainer: Type 1 Rigid PVC-NSF listed
All fasteners: Stainless Steel
Lexan® is a registered trademark of General Electric.
Santoprene® is a registered trademark of Advanced Elastomer system
Tygothane® is a registered trademark of Saint-Gobain Performance Plastics
Pellathane® is a registered trademark of The Dow Company

Agency listings

Santoprene®: UL, CSA, CE, NSF-50, NSF-61
Tygothane®: UL, CSA, CE

Accessories shipped with each pump

3 connecting nuts 1/4" or 3/8"
3 ferrules 1/4" & 6 mm or 2 ferrules 3/8"
1 injection check valve
1 weighted strainer
1 20' roll of suction/discharge tubing 1/4" or 3/8" white or UV black or 6 mm (Europe) white
1 spare pump tube
1 mounting bracket
1 installation manual

STENNER PUMPS



Accessories

Flow Switch (Low Flow Rate – SPDT)

Description:
 For use on liquid lines using water, ethylene glycol solutions, or other liquids not corrosive to the brass or phosphor bronze parts. The SPDT contact switch is activated by a low flow rate; however, it has a large flow capacity with a minimum pressure drop.

- Applications:**
- ➔ Water purification and treatment systems
 - ➔ Booster pumps
 - ➔ Fast shutdown on high input boilers to guard against circulation failure
 - ➔ Cooling systems for electronic tubes, bearings, and compressors

F61KD-4



Description	Inlet and Outlet Size Female NPT	Enclosure NEMA Type	Adjustment Range - GPM (L/Min)		Maximum Liquid Temp	Minimum Liquid Temp	Maximum Liquid Pressure
			R to Y Closes Flow Increase	R to Y Opens Flow Decrease			
F61KD-4C Flow Switch (Low Flow Rate - SPDT)	3/4" x 3/4" (19mm x 19mm)	1	Min 0.6 (2.27) Max 1.1 (4.17)	Min 0.3 (1.14) Max 0.9 (3.4)	250°F (121°C)	32°F (0°C)	150 psig (1034 kPa)

Dimensions
5 1/32" h x 4" w x 2 13/16" d
127mm x 102mm x 71mm)

Pulsafeeder Kopkit



Electrical	120 VAC
Horsepower	1
AC Full Load A	16
AC Locked Rotor A	96
Non-Inductive or Resistance Load A	16
Pilot Duty	125 VA, 24/277 VAC

Kopkit®
 Available for every model, the KOPkit provides an economically priced package of parts required for routine maintenance. The kit typically contains new valve cartridges with o-rings, head, diaphragm, secondary o-ring seal, head screws and washers.

Accessories

Stenner Pump Control Module

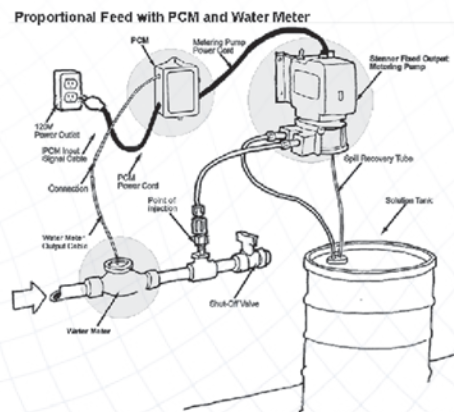
How It Works:

The Pump Control Module (PCM) is a component of the proportional feed system, which delivers repeatable doses regardless of the system's flow rate. The system is used in applications requiring proportional chemical injection.

The proportional feed system, Stenner refers to as the PCM system consists of three components:

- ➔ PCM – pump control module
- ➔ Single head fixed output pump (45 or 85 model)
- ➔ Dry contact water meter

The water meter sends a pulse signal to the PCM which activates the pump to deliver the desired dose based on water volume. The PCM turns on the pump for the set duration determined to inject the solution into the water line.



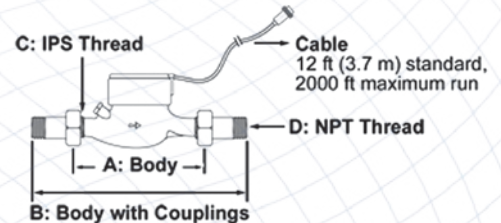
Water Meters

Features:

- ➔ Reed switch
- ➔ Dry contact
- ➔ Power not required

Material:

- ➔ Body: Cast bronze
- ➔ Internal: Engineered thermoplastic
- ➔ Magnet: Alnico



Size	A Body	B Body w Couplings	C IPS Thread	D NPT Thread
3/4"	7 1/2" (19.1 cm)	12 5/8" (32.1 cm)	1" (2.5 cm)	3/4" (1.9 cm)
1"	10 1/4" (26.0 cm)	15 5/8" (36.7 cm)	1 1/4" (3.2 cm)	1" (2.5 cm)
1 1/2"	11 3/4" (29.9 cm)	17 5/8" (44.8 cm)	2" (5.1 cm)	1 1/2" (3.8 cm)
2"	11 3/4" (29.9 cm)	17 5/8" (44.8 cm)	2 1/2" (6.4 cm)	2" (5.1 cm)

Water Meters	Min Flow	Max Flow	Max Operating Temp	Max Operating Pressure
Description	(Gallons Per Minute)			
Meter, Contacting Stenner WM0751G 3/4" 1Gallon/Pulse	0.22	22	105 F (40 C)	150 psi
Meter, Contacting Stenner WM1001G 1" 1Gallon/Pulse	0.44	52	105 F (40 C)	150 psi
Meter, Contacting, 1.5" 1.0 GPC, 404(Gal/Contact)	0.88	88	105 F (40 C)	150 psi
Meter, Contacting, 2.0" 1.0 GPC, 504(Gal/Contact)	1.98	132	105 F (40 C)	150 psi
Timer, Stenner, Pump Control Module 5, 0.5 to 5.0 seconds				

Accessories

Retention Tanks

Made from a unique 3 piece internal construction that allows for consistent engineered dome profiles and integrally bonded connections that lead to longer tank life. Its heavy duty base is molded out of ABS for maximum strength and durability. And, It has a removable schedule 80 PVC bottom connection that can be "accessorized" for increased installation flexibility.

- ➔ Durable PVC water connection.
- ➔ Flexwave tanks are made in the USA and built to comply with NSF/ANSI Std 61
- ➔ 5 year warranty



FWC Contact Retention Tanks - Dimensions & Capacities

Model	Total Tank Volume		Height		Diameter		Socket Glue Connection	FPT	Total Weight	
	Gallons	Litres	In	Cm	In	Cm			Lbs	Kilos
FWC 30	30	114	42.5	108	16.5	41.8	1 1/4"schd-80	1 1/4"	23.0	10.4
FWC 40	40	151	53.4	135.6	16.5	41.8	1 1/4"schd-80	1 1/4"	31.0	14.1
FWC 40 SQ	40	151	36.9	93.8	21.4	54.2	1 1/4"schd-80	1 1/4"	33.1	15.0
FWC 80	80	303	64.1	162.8	21.4	54.2	1 1/4"schd-80	1 1/4"	60.0	27.0
FWC 120	120	454	71.5	181.6	24.2	61.4	1 1/4"schd-80	1 1/4"	83.5	38.0

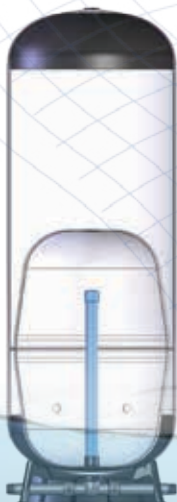
Maximum working temperature, internal & external 120F. Materials of Construction: Tank top and bottom domes injection molded copolymer polypropylene. Shell extruded polypropylene. Outer shell composite construction with fiberglass coated with epoxy resin. Base is injection molded ABS. Top and side ports are stainless steel reinforced.

BAF Mixing Tank - Dimensions & Capacities

Model	Total Tank Volume		Height		Diameter		Thread Connection	Outlet Connection at top of tank	Total Weight	
	Gallons	Litres	In	Cm	In	Cm			Lbs	Kilos
BAF 80	80	303	64.1	163	21.4	54.4	1 1/4"NPT	1 1/4" FPT	23.0	10.4
BAF 120	119	450	71.5	182	21.4	54.4	1 1/4"NPT	1 1/4" FPT	31.0	14.1

Maximum working pressure 100 PSI. Maximum working temperature, internal & external 120F. Materials of Construction: Copolymer polypropylene wrapped with fiberglass coated with epoxy resin. Base is rigid ABS. Inner baffle is a copolymer polypropylene with a PVC sch 40 standpipe and diffuser cap. Top port is stainless steel reinforced and bottom connections are a 1 1/4" NPT schedule 80- connection

Mixing Tanks



The Mixmaster(BAF) Series tanks are a retention tank with an internal baffle and diffuser which improves mixing and increases the retention time improving the effectiveness of chemical treatment of water for disinfection or mineral removal. Great for killing bacteria or for agricultural applications.

- ➔ Polypropylene tank reinforced with fiberglass sealed with epoxy resin.
- ➔ Cross- link polyethylene upper and lower water chamber. Standpipe and diffuser 1-1/4"pvc sch 40

Accessories

PAE Metal Storage Tanks for Reverse Osmosis Applications

Water goes through a reverse osmosis membrane very slowly and people don't have the patience to wait a long time to get a glass of water. For this reason the residential RO units need a water storage tank to store the purified water. The RO tanks can deliver stable and constant water flow when the faucet is opened.

To avoid bad odors from the diaphragm, all of the PAE tank diaphragms are post-cured before assembly, to eliminate the possibility of odors from the tank.

PAE tanks are NSF approved under standard 58, and CE approved under the PED (pressure equipment directive).

- ➔ Maximum Working Pressure: 100PSI
- ➔ All Tanks are Pre-charged at 7 PSI
- ➔ Fittings sold separately
- ➔ NSF 58 listed



Model #	Port	Capacity gal (liters)	Diameter inch (mm)	Height inch (mm)	Color	Shipping Weight lbs (kg)
RO-122	1/4" NPT	3.2 (12)	9.0 (230)	13.8(353)	White	6.8 (3.1)
RO-132	1/4" NPT	4.4 (16.6)	10.9 (279)	13.7 (350)	White	9.5 (4.3)
RO-1070	3/4" NPT	14 (53)	15.3 (390)	22.6(575)	White	27 (12.3)
RO-2000	3/4" NPT	20 (75.6)	15.3 (390)	30.3 (770)	White	37 (16.7)

Shut-off Valve for 1/4" NPT Tank Item #	Description
PPSV500822W	Shut Off Valve, 1/4" QC X 1/4" NPTF
PPSV501222W	Shut Off Valve, 3/8" QC X 1/4" NPTF
80704	Shut Off Valve, 3/8" Comp Nut X 1/4" NPTF
Shut-off Valve for 3/4" NPT Tank Item #	Description
92295	Kit, 3/8" Comp Nut Shut-off valve X 3/4" NPTF

Accessories

Chemicals



Sani-System Liquid Sanitizer Concentrate

Sani-System is the only EPA & NSF approved sanitizer for use in water softeners and reverse osmosis units. It's proven to kill 99.99% of harmful bacteria without the use of chlorine, oxidizers or acids that can harm system equipment parts and resin. The exact pre-measured doses of concentrated formula are contained in Ready-To-Use packets and sanitize equipment in 60 seconds!

Simple to Use:

For water softeners it is as simple as pouring into the brine well or brine tank and manually regenerating the unit. For reverse osmosis units, simply remove the cartridges and place the packet contents in the first housing and flush. Sani-System is the only sanitizer on the market proven by the WQA to safely sanitize an RO unit membrane.

User Benefits:

- ➔ Faster, easier and safer than other alternative sanitizers
- ➔ Easy & reliable single dose packages
- ➔ 99.99% effective kill rate against harmful bacteria
- ➔ Only sanitizer on market proven by WQA to sanitize membrane

Technical Information:

- ➔ Sani-System is a clear liquid and will react to oxidizers
- ➔ Routine storage. Rubber gloves are suggested when handling. Read all relevant MSDS before handling.
- ➔ Do not mix with other chemicals
- ➔ Certified to NSF/ANSI 60 Standards

Description
Sani-System RO Sanitizer 0.25 fl.oz (24 Packets)
Sani-System Water Softener Sanitizer 0.5 fl.oz (24 Packets)

Accessories

Chemicals

Pro Chemicals

Pro Chemicals provides a diverse portfolio of water softener cleaners designed to clean, restore and maintain the life of water softeners. These products are formulated to treat water softeners with iron or for daily preventative maintenance.

Rust Out® Water Softener Cleaner/iron remover

Rust Out® chemically removes iron and rust build-up that coats the resin bead and fouls the water softener. Rust Out changes rust and iron into a clear solution that easily rinses away and does not contain harsh or abrasive chemicals that damage fiberglass, porcelain or acrylic finishes. The advanced formula contains more than five chemicals that are formulated to clean, restore and maintain the life of water softeners. Rust Out can also be used to clean tough rust stains from toilets, sinks, tubs, white clothes and exterior surfaces.



Description
Rust Out - 1.5 lb. Bottle
Rust Out - 5 lb. Bottle
Rust Out - 50 lb Pail



Res Care® Liquid Resin Cleaning Solution

Res Care® is a specially formulated liquid cleaner designed to remove limited iron, manganese, silt, metal particles and organic compounds that cause softener inefficiencies. Regular use of Res Care will restore the softener back to peak efficiency and maintain the life of the unit. For best results use a Res Care Automatic Feeder or manually add during regeneration to prevent mineral build-up.

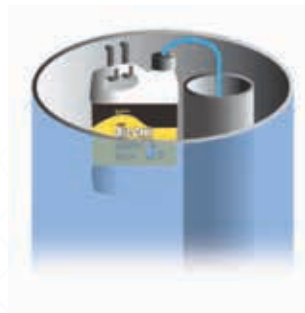
Description
Res Care - 1 gal. (128 oz) Bottle
Res Care - 64 oz Bottle (Easy Feeder Refill)
Res Care - 1 qt. (32 oz) Bottle

Accessories

Chemicals

Easy Feeder

The Pro Easy Feeder automatically dispenses the right amount of Pro Res Care Cleaning Solution to maintain water softener efficiency. The Pro Easy Feeder is non-electric and easy to install and use. For use with 64 oz bottles of Res Care.



Description

Easy Feeder - 0.5 oz/day Feeder

Easy Feeder - 1.0 oz/day Feeder



Pot® Perm Greensand Iron Filter Regenerant

Pro Pot Perm is an iron filter regenerant and a strong oxidizing agent that converts dissolved iron and/or manganese to insoluble oxides which can easily be removed through filtration. As an iron filter regenerant, Pot Perm regenerates and oxidizes greensand iron filter media, restoring the exchange capacity of the unit.

Description

Pot Perm - 5 Lb. Bottle

Pot Perm - 10 Lb. Bottle

Pot Perm - 55 Lb. Bottle

Softener Mate®

All Purpose Water Softener Cleaner

Maintains performance of all softeners. Pro Softener Mate softener cleaner is a unique blend of chemicals formulated to remove limited iron, manganese, silt, metal particles and organic compounds that cause softener inefficiencies. Regular use of Softener Mate softener cleaner as a maintenance program will restore the softener back to peak efficiency and maintain the life of the unit.

Description

Pro Softener Mate 1.5 Lb. Bottle

Pro Softener Mate, 5 Lb. Bottle



Accessories

Chemicals

Description
Ban T - 1.5 lb. Bottle

Ban T® Alkaline Water Neutralizer

Ban T® (formerly called Pro-Citric Acid) is specifically formulated to effectively lower pH and remove iron and other contaminants from fouled water softeners. Ban T should be used as preventative maintenance on all water softeners in areas with moderate iron content to clean, restore and maintain the life of the softener. Ban T is an environmentally-friendly cleaning agent that removes hard water deposits and moderate iron staining from household fixtures.



Neutra Sul® - Eliminate Rotten Egg Smell Professional Grade Oxidizer

Protects against irregular coloring and rotten egg smells in treated water. Pro Neutra Sul® is formulated to neutralize the rotten egg smell and pollutants from any water supply through oxidation. Neutra Sul should be used in place of Hydrogen Peroxide 7% solution to prevent the formation of colors, tastes, corrosion and scaling by pollution degradation. Pro Neutra Sul is NSF Certified to meet NSF/ANSI Standard 60 for drinking water additives.

Description
Neutra Sul -1 gallon Bottle
Neutra Sul -2.5 gallon Bottle

Neutra 7® Acid Water Neutralizer®

Neutra 7® (formerly called Pro Soda Ash) is a proprietary alkaline blend which neutralizes acid water and keeps the injection point clean. This helps to eliminate corrosion of piping, pressure tanks, water heaters and fixtures without the hassle of constant cleaning of calcium build-up.



Description
Neutra 7 - 7 Lb. Bottle
Neutra 7 - 40 Lb. Pail



Neutra 5® Acid Water Neutralizer®

Prevents corrosion in water systems. Pro Neutra 5 is a highly alkaline compound which serves as an acid water neutralizer in potable systems. This helps eliminate corrosion from piping, pressure tanks, water heaters and fixtures. A Neutra 5 acid water neutralizer solution injected into a water system will neutralize acid water and prevent corrosion. Pro Neutra 5 is NSF Certified to meet NSF/ANSI Standard 60 for drinking water additives.

Description
Neutra 5 - 40 Lb. Pail

Accessories

Hach Test Kits



#202300



#49018



#66751



#4918370



NEW Dealer Combination Kit
– Hardness, iron,
sulphur, pH, Manganese, TDS

Description
5B HARDNESS KIT - 0-30 GPG
BUFFER SOLUTION HARDNESS 1 ,100 ML MDB 42432
CN65 TOTAL/FREE CHLORINE KIT
DPD FREE CHLORINE PP 5ML PK/100.,14077-99
DPD TOTAL CHLORINE PP 5ML PK/100. 14076-99
HA62A HARDNESS, IRON, pH KIT
HARDNESS 2 TEST SOLUTION,100 ML MDB 42532
HARDNESS 3 TEST SOLUTION,100 ML MDB
HS-C HYDROGEN SULPHIDE KIT (0 - 5 MG/L)
METER TDS MYRON L 0-5000 PPM 512M5
MN5 MANGANESE (0-3 MG/L) KIT
PAPER, HYDROGEN SULFIDE 100
PH/TEMP METER, pH-200, 0-14 pH
PH/TEMP WATERPROOF HYDRO TESTER, PH-80
PILLOW, BUFFER CITRATE POWDER PK/100
PILLOW, FERROUS IRON REAGENT POWDER PK/100
PILLOW, HARDNESS INDICATOR POWDER PK/100 Manver 2
PILLOW, SODIUM PERIODATE POWDER PK/100
SOAP TEST KIT
SOLUTION, HARDNESS 1, 500 ML
SOLUTION, HARDNESS 2, 500 ML
SOLUTION, HARDNESS 3, 500 ML
TA3 TANNIN - LIGNIN KIT
TABLETS, ALKASELTZER 36
TDS-4 POCKET SIZE METER, HM DIGITAL
TEST KIT COMBINATION DEALER 2496101
TEST KIT, HA-77 HARDNESS & IRON
UNIVER 3 POWDER 28.3 GRAMS 213-20H
UNIVER 3 POWDER PILLOWS,PK/100
WIDE RANGE 4 pH SOLUTION



#49145300 hach 5b hardness test Kit 1 – 30
gpg Trust the original Hach test kit! Simple drop
count Titration measures hardness as CaCo3
(1 gpg = 17.1 mg / l). 100 tests.

Accessories

Spectrum Test Kits (U.S. Only)

SPECTRUM® High Quality Test
DEMO & TEST KITS For Testing the Quality of Water

	Basic	Standard	Deluxe
Components	2403	2401	2404
Sturdy Plastic Case	X	X	X
Hardness Test	X	X	X
Iron Test		X	X
pH Test		X	X
Chlorine Test			X
TDS Test			X



Basic Kit Hardness



Standard Kit Hardness,
Iron, pH & Chlorine

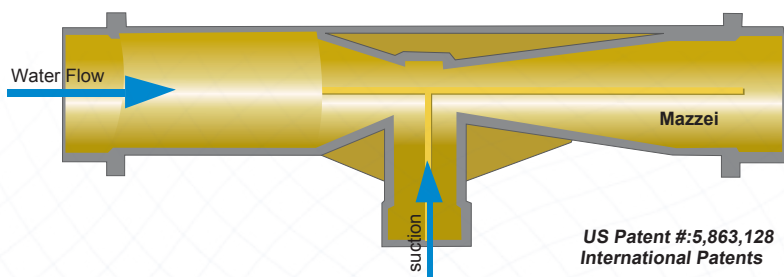


Deluxe Kit Hardness,
Iron, pH, Chlorine & TDS

Accessories

Mazzei Injectors

Mazzei® Injectors are high-efficiency, venturi-type, differential pressure injectors with internal mixing vanes. When a sufficient pressure difference exists between the inlet and outlet ports of the injector, a vacuum is created inside the injector body, which initiates suction of a liquid or gas through the suction port.



Description
Injector, Mazzei, 384-PP, ½" Inlet / Outlet
Injector, Mazzei, 484A-PP, ¾" Inlet / Outlet
Injector, Mazzei, Bypass Kit 384-PP, ½" Inlet / Outlet
Injector, Mazzei, Bypass Kit 484A-PP, ¾" Inlet / Outlet

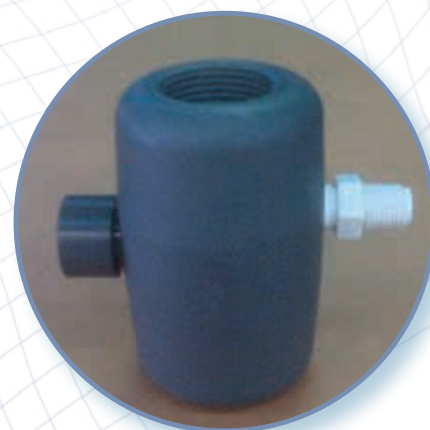
How a Mazzei® Injector Works

When pressurized water enters the injector inlet, it is constricted toward the injection chamber and changes into a high-velocity jet stream. The increase in velocity through the injection chamber results in a decrease in pressure, thereby enabling an additive material to be drawn through the suction port and entrained into the water stream. As the jet stream is diffused toward the injector outlet, its velocity is reduced and it is reconverted into pressure energy (but at a pressure lower than injector inlet pressure).

Mazzei® Injectors are extremely efficient. They operate over a wide range of pressures and require only a minimal pressure differential between the inlet and outlet sides to initiate a vacuum at the suction port.

Mattson / Witt K7225 Eductor

Used for iron removal - the K7225 Eductor is used in combination with an aeration tank and a backwashable filter containing special media adds a controlled amount of air to the water supply just before it enters the aeration tank. As the water sprays into the aeration tank it picks up more air. The oxygen in the air starts the natural iron removal process by oxidizing the iron and causing it to come out of solution. The iron can then be more easily filtered.



Description
Eductor PVC 1" FXF 0-15 GPM Single Port

Accessories

Tubing & Fittings (John Guest Quick Connect)

Polyethylene Tubing

The PP Range of inch-size push-in fittings is offered for tube sizes 1/4" O.D. to 1/2" O.D. The fittings are manufactured in white polypropylene with food grade EPDM O-rings. They have been developed to satisfy the compatibility needs for a wide range of applications.

Working Pressures and Temperatures

Water Max. 150 psi at 70°F (Max. 10 Bar at 20°C)

Max. 60 psi at 140°F (Max. 4 Bar at 60°C)

Min. 33°F/1°C



Polypropylene Shut-Off Valve

The PPSV Range of Shut-Off Valve is offered for tube sizes 1/4" O.D. and 3/8" O.D., produced in polypropylene and fitted with EPDM O-rings. Polypropylene has the advantage of being more chemically resistant than acetal. The valves are for use with potable water. For use with other potable liquids please contact our Technical Support Department for guidance. The valves are not to be used with compressed air, explosive gases, petroleum spirits and other fuels or for heating systems.

Working Pressures and Temperatures

Water Max. 150 psi at 70°F (Max. 10 bar at 20°C)

Max. 60 psi at 140°F (Max. 4 bar at 60°C)

Min. 33°F/1°C



Polypropylene Fittings

The John Guest PE Range of plastic tubing is produced in Linear Low Density Polyethylene for cold and intermittent hot water applications. Our tubing is made from FDA compliant materials and is NSF International Standard 51 & 61 certified. John Guest LLDPE Tubing provides excellent resistance to environmental stress cracking as measured by ASTM D-1693 (10% IGEPA). John Guest Polyethylene tubing is designed for use with John Guest Super Speedfit push-in fittings, John Guest Shut-Off Valves and virtually all standard tubing connectors.

Accessories

Tubing & Fittings (John Guest Quick Connect)

Part #	Model Description
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Male Connector - NPTF Thread



CI010821W	1/4" X 1/8"-WHITE, (10 Pack)
CI010822W	1/4" X 1/4"-WHITE, (10 Pack)
CI010823W	1/4" X 3/8"-WHITE, (10 Pack)
CI011222W	3/8" X 1/4"-WHITE, (10 Pack)
PI010821S	1/4" X 1/8", (10 Pack)
PI010822S	1/4" X 1/4", (10 Pack)
PI010823S	1/4" X 3/8", (10 Pack)
PI011221S	3/8" X 1/8", (10 Pack)
PI011222S	3/8" X 1/4", (10 Pack)
PI011223S	3/8" X 3/8", (10 Pack)
PI011224S	3/8" X 1/2", (10 Pack)
PI011623S	1/2" X 3/8", (10 Pack)
PI011624S	1/2" X 1/2", (10 Pack)
PI012026S	5/8" X 3/4", (10 Pack)
PP010822W	1/4" X 1/4"-WHITE, (10 Pack)
PP010823W	1/4" X 3/8"-WHITE, (10 Pack)
PP011222W	3/8" X 1/4"-WHITE, (10 Pack)
PP011223W	3/8" X 3/8", (10 Pack)
PP011224W	3/8" X 1/2", (10 Pack)
PP011623W	1/2" X 3/8", (10 Pack)
PP011624W	1/2" X 1/2", (10 Pack)

Male Connector - Flare Male Connector (tube X thread)



PI0108F4S	1/4" X 1/4", (10 Pack)
PI0112F4S	3/8" X 1/4", (10 Pack)
PI0112F6S	3/8" X 3/8", (10 Pack)
PI0112F8S	3/8" X 1/2", (10 Pack)
PI0116F8S	1/2" X 1/2", (10 Pack)

Union Tee (for use when branching of - RO faucets & tanks)



CI0208W	1/4" - WHITE, (10 Pack)
CI0212W	3/8" - WHITE, (10 Pack)
PI0208S	1/4", (10 Pack)
PI0212S	3/8", (10 Pack)
PI0216S	1/2", (10 Pack)
PP0208W	1/4", (10 Pack)
PP0212W	3/8", (10 Pack)

Reducing Tee (tube x tube x branch)



PI301208S	3/8" X 3/8" X 1/4", (10 Pack)
PI301612S	1/2" X 1/2" X 3/8", (10 Pack)
PP30121208W	3/8" X 3/8" X 1/4", (10 Pack)
PP301612W	1/2" X 1/2" X 3/8", (10 Pack)

Part #	Model Description
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Union Elbow (tube)



CI0308W	1/4" - WHITE, (10 Pack)
CI0312W	3/8" - WHITE, (10 Pack)
PI0308S	1/4", (10 Pack)
PI0312S	3/8", (10 Pack)
PI0316S	1/2", (10 Pack)
PP0308W	1/4", (10 Pack)
PP0312W	3/8", (10 Pack)
PP0316W	1/2", (10 Pack)

Fixed Elbow (NPTF Thread - tube X thread)



CI480821W	1/4" X 1/8" - WHITE, (10 Pack)
CI480822W	1/4" X 1/4" - WHITE, (10 Pack)
CI480823W	1/4" X 3/8" - WHITE, (10 Pack)
CI481222W	3/8" X 1/4" - WHITE, (10 Pack)
PI480821S	1/4" X 1/8", (10 Pack)
PI480822S	1/4" X 1/4", (10 Pack)

PI480823S	1/4" X 3/8", (10 Pack)
PI481222S	3/8" X 1/4", (10 Pack)
PI481223S	3/8" X 3/8", (10 Pack)
PI482024S	5/8" X 1/2", (10 Pack)
PP480821W	1/4" X 1/8", (10 Pack)
PP480822W	1/4" X 1/4", (10 Pack)
PP480823W	1/4" X 3/8", (10 Pack)
PP481222W	3/8" X 1/4", (10 Pack)
PP481223W	3/8" X 3/8", (10 Pack)

Reducing Elbow (tube X tube)



PI211208S	3/8" X 1/4", (10 Pack)
PI211612S	1/2" X 3/8", (10 Pack)
PP211208W	3/8" X 1/4", (10 Pack)
PP211612W	1/2" X 3/8", (10 Pack)

Plug In/Stem Elbow (stem X tube)



CI220808W	1/4" X 1/4" - WHITE, (10 Pack)
CI221208W	3/8" X 1/4" - WHITE, (10 Pack)
CI221212W	3/8" X 3/8" - WHITE, (10 Pack)
PI220808S	1/4" X 1/4", (10 Pack)
PI221208S	3/8" X 1/4", (10 Pack)
PI221212S	3/8" X 3/8", (10 Pack)
PI221616S	1/2" X 1/2", (10 Pack)
PP220808W	1/4" X 1/4", (10 Pack)
PP221208W	3/8" X 1/4", (10 Pack)
PP221212W	3/8" X 3/8", (10 Pack)
PP221616W	1/2" X 1/2", (10 Pack)

Accessories

Tubing & Fittings (John Guest Quick Connect)

Part #	Model Description
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Union Connector (tube X tube)



CI0408W	1/4" - WHITE, (10 Pack)
CI0412W	3/8" - WHITE, (10 Pack)
PI0408S	1/4", (10 Pack)
PI0412S	3/8", (10 Pack)
PI0416S	1/2", (10 Pack)
PP0408W	1/4", (10 Pack)
PP0412W	3/8", (10 Pack)
PP0416W	1/2", (10 Pack)

Reducing Union (union X tube X tube)



PI201208S	3/8" X 1/4", (10 Pack)
PI201612S	1/2" X 3/8", (10 Pack)
PP201208W	3/8" X 1/4", (10 Pack)
PP201612W	1/2" X 3/8", (10 Pack)

Stem Adaptor (NPTF Thread - stem X thread)



CI050821W	1/4" X 1/8" - WHITE, (10 Pack)
CI050822W	1/4" X 1/4" - WHITE, (10 Pack)
CI051222W	3/8" X 1/4" - WHITE, (10 Pack)
CI051223W	3/8" X 3/8" - WHITE, (10 Pack)
PI050821S	1/4" X 1/8", (10 Pack)
PI050822S	1/4" X 1/4", (10 Pack)
PI051222S	3/8" X 1/4", (10 Pack)
PI051223S	3/8" X 3/8", (10 Pack)
PI051623S	1/2" X 3/8", (10 Pack)
PI051624S	1/2" X 1/2", (10 Pack)
PP050821W	1/4" X 1/8", (10 Pack)
PP050822W	1/4" X 1/4", (10 Pack)
PP051222W	3/8" X 1/4", (10 Pack)
PP051223W	3/8" X 3/8", (10 Pack)
PP051623W	1/2" X 3/8", (10 Pack)
PP051624W	1/2" X 1/2", (10 Pack)

Stem Reducer (stem X thread)



CI061208W	3/8" X 1/4" - WHITE, (10 Pack)
PI061208S	3/8" X 1/4", (10 Pack)
PI061612S	1/2" X 3/8", (10 Pack)
PP061208W	3/8" X 1/4", (10 Pack)
PP061612W	1/2" X 3/8", (10 Pack)

Part #	Model Description
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Bulkhead Union (tube X mounting hole diameter)



CI1208W	1/4" - 0.67 - WHITE, (10 Pack)
PI1208S	1/4" - 0.67, (10 Pack)
PI1212S	3/8" - 0.83, (10 Pack)
PI1216S	1/2" - 1.06, (10 Pack)
PP1208W	1/4" - 0.67, (10 Pack)
PP1212W	3/8" - 0.83, (10 Pack)
PP1216W	1/2" - 1.06, (10 Pack)

Reducing Bulkhead Union (tube X tube X mounting hole diameter)



PI121208S	3/8" X 1/4" - 0.83, (10 Pack)
PP121208W	3/8" X 1/4" - 0.83, (10 Pack)

Faucet Connector UNS Thread (tube X thread)



CI3208U7S	1/4" X 7/16", (10 Pack)
CI3212U7S	3/8" X 7/16", (10 Pack)
PP3208U7W	1/4" X 7/16", (10 Pack)
PP3212U7W	3/8" X 7/16", (10 Pack)

Stem to Hose Barb (stem X hose barb)



PI250808S	1/4" X 1/4", (10 Pack)
PI251208S	3/8" X 1/4", (10 Pack)
PI251212S	3/8" X 3/8", (10 Pack)
PI251216S	3/8" X 1/2", (10 Pack)
PP251212W	3/8" X 3/8", (10 Pack)
PP251216W	3/8" X 1/2", (10 Pack)
PP251612W	1/2" X 3/8", (10 Pack)
PP251616W	1/2" X 1/2", (10 Pack)

Stem to Hose Barb Long Version (stem X hose barb)



PI251212SL	3/8" X 3/8", (10 Pack)
PI290808S	1/4" X 1/4", (10 Pack)
PI291208S	3/8" X 1/4", (10 Pack)

Female Connector NPTF Thread (tube X thread)



PI450822S	1/4" X 1/4", (10 Pack)
PI451222S	3/8" X 1/4", (10 Pack)
PP450822W	1/4" X 1/4", (10 Pack)
PP451222W	3/8" X 1/4", (10 Pack)

Accessories

Tubing & Fittings (John Guest Quick Connect)

Part #	Model Description
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Female Flare Connector FFL (tube X thread)



PI4512F4S	3/8" X 1/4", (10 Pack)
PI4512F6S	3/8" X 3/8", (10 Pack)

Plug (stem)

PI0808S	1/4", (10 Pack)
PI0812S	3/8", (10 Pack)
PI0816S	1/2", (10 Pack)
PP0808W	1/4", (10 Pack)
PP0812W	3/8", (10 Pack)
PP0816W	1/2", (10 Pack)

End Stop (tube)



PI4608S	1/4", (10 Pack)
PI4612S	3/8", (10 Pack)

PEI202820	3/4 x 1/2 Reducing Coupler,
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PEX Plug-in Elbow



PEI222020	PEX Plug-In Elbow, 1/2" Stem - 1/2" Pipe,
PEI222828	PEX Plug-In Elbow, 3/4" Stem - 3/4" Pipe,

PEX Reducing Tee



PEI3028A	PEX Reducing Tee 3/4" x 3/4" x 1/2" CTS,
PEI3028B	PEX Reducing Tee 3/4" x 1/2" x 1/2" CTS,
PEI3028C	PEX Reducing Tee 1/2" x 1/2" x 3/4" CTS,
PEI3028D	PEX Reducing Tee 3/4" x 1/2" x 3/4" CTS,

PEX Stackable Tee



PEI532020	PEX Stackable Tee 1/2" CTS x 1/2" Stem x 1/2" CTS
PEI532820	PEX Stackable Tee 3/4" CTS x 3/4" Stem x 1/2" CTS
PEI532828	PEX Stackable Tee 3/4" CTS x 3/4" Stem x 3/4" CTS

PEX Miscellaneous



PEIBTC2034	PEX Female Swivel Elbow, 1/2" CTS x 1/2" NPS
PEIBTC20C75	PEX Female Ballcock Elbow, 1/2" CTS x 7/8"-15/16 UNS
PEISTC2034	PEX Female Swivel Connector, 1/2" CTS x 1/2" NPS
PEISTC20C75	PEX Female Ballcock Connector, 1/2" CTS x 7/8"-15/16 UNS

Water Conditioning Glossary

Absorption - The process in which one substance is taken into the body of another substance, termed the absorbent. An example is the absorption of water into soil.

Acid - A substance which releases hydrogen ions when dissolved in water. Most acids will dissolve the common metals and will react with a base to form a neutral salt and water.

Activated Carbon - A granular material usually produced by the roasting of cellulose base substances, such as wood or coconut shells, in the absence of air. It has a very porous structure and is used in water conditioning as an adsorbent of organic matter and certain dissolved gases. Sometimes called "activated charcoal."

Adsorption - The process in which matter adheres to the surface of the adsorbent.

Aeration - The process in which air is brought into intimate contact with water, often by spraying water through air or by bubbling air through water. Aeration may be used to add oxygen to the water for oxidation of matter such as iron or to cause the release of dissolved gases such as carbon dioxide or hydrogen sulfide from the water.

Alkalinity - The quantitative capacity of a water or water solution to neutralize an acid. It is usually measured by titration with a standard acid solution of sulfuric acid and expressed in terms of its calcium carbonate equivalent.

Anion - A negatively charged ion in solution such as bicarbonate, chloride or sulfate.

Anion Exchange - An ion exchange process in which anions in solution are exchanged for other anions from an ion exchanger. In demineralization, for example, bicarbonate, chloride and sulfate anions are removed from solution in exchange for a chemically equivalent number of hydroxide anions from the anion exchange resin.

Aquifer - A layer or zone below the surface of the earth which is capable of yielding a significant volume of water.
Atom - The smallest particle of an element that can exist either alone or in combination with smaller particles of the same element or of a different element.

Attrition - The process in which solids are worn down or ground down by friction, often between particles of the same material. Filter media and ion exchange materials are subject to attrition during backwashing, regeneration and service.

Backwash - The process in which beds of filter or ion exchange media are subjected to flow opposite to service flow direction to loosen the bed and to flush suspended matter collected during the service run to waste.

Bacteria - Unicellular micro-organisms which typically reproduce by cell division. Although usually classed as plants, bacteria contain no chlorophyll.

Bacteriostatic - A feature of a carbon filter that is supposed to inhibit the growth of bacteria within the filter - usually by the addition of silver.

Base - A substance which releases hydroxyl ions when dissolved in water. Bases react with acids to form a neutral salt and water.

Bed - The ion exchange or filter media in a column or other tank or operational vessel.

Bed Depth - The height of the ion exchange or filter media in the vessel after preparation for service.

Boiling Point - The temperature at which a substance will change from a liquid state to a gaseous or vapor state.

Brackish Water - Water containing between 1000 and 1500 mg/l of dissolved solids is generally considered to be brackish.

Brine (R.O.) - Same as reject water. One of two streams of fluids generated by a reverse osmosis unit. It contains the impurities removed from the feed water.

Brine (Softening) - A strong solution of salt(s), such as sodium chloride, and water used in the regeneration of ion exchange water softeners but also applied to the mixed sodium, calcium and magnesium chloride waste solution from regeneration.

Calcium (Ca) - One of the principal elements making up the earth's crust, the compounds of which, when dissolved, make the water hard. The presence of calcium in water is a factor contributing to the formation of scale and insoluble soap curds which are a means of clearly identifying hard water.

Calcium Hypochlorite (CaClO₂) - A chemical compound used as a bleach and a source of chlorine water treatment; specifically useful because it is stable as a dry powder and can be formed into tablets.

Capacity - An expression of the quantity of an undesirable material which can be removed by a water conditioner between servicing of the media (i.e. cleaning, regeneration or replacement) as determined under standard test conditions. For ion exchange water softeners, the capacity is expressed in grains of hardness removal between successive regenerations and is related to the pounds of salt used in regeneration. For filters, the capacity may be expressed in the length of time or total gallons delivered between servicing.

Caustic Soda - The common name for sodium hydroxide.

Cation - An ion with a positive electrical charge, such as calcium, magnesium and sodium.

Cation Exchange - Ion exchange process in which cations in solution are exchanged for other cations from an ion exchanger.

Cellulose Acetate (CA) and Cellulose Triacetate (CTA) - A family of synthetic materials based on cellulose used to make reverse osmosis membranes. While CTA is superior to CA, under adverse water conditions both are effective in removing a wide spectrum of impurities from water. The disadvantage of cellulose-type membranes is that they are subject to bacterial attack, particularly in unchlorinated water supplies. CTA has superior bacterial resistance.

Channeling - The flow of water or other solution in a limited number of passages in a filter or ion exchange bed instead of distributed flow through all passages in the bed.

Water Conditioning Glossary

Chloramines - Chemical complexes formed from the reaction between ammonia and chlorine. They are presently being used to disinfect municipal water supplies because, unlike chlorine, they do not combine with organics in the water to form potentially dangerous carcinogens such as trihalomethanes (THMs). Chloramines can exist in three forms, the proportions of which depend on the physical and chemical properties of the water. Water containing chloramines may not be used for fish or kidney dialysis equipment.

Chlorides (Cl) - an ion which forms acids when combined with hydrogen and salts when combined with metal ions. Chlorides can be corrosive and impart a salty taste to water.

Chlorine (Cl₂) - A gas widely used in the disinfection of water and an oxidizing agent for organic matter, iron, etc.

Coagulant - A material, such as alum, which will form a gelatinous precipitate in water and cause the agglomeration of finely divided particles into larger particles which can then be removed by settling and/or filtration.

Colloid - Very finely divided solid particles which will not settle out of a solution; intermediate between a true dissolved particle and a suspended solid which will settle out of solution. The removal of colloidal particles usually requires coagulation to form larger particles which may be removed by sedimentation and/or filtration.

Compensated Hardness - A calculated value based on the total hardness - the magnesium to calcium ratio and the sodium concentration of a water. It is used to correct for the reductions in hardness removal capacity caused by these factors in cation exchange water softeners. No single method of calculation has been widely accepted.

Conductivity - The quality or power to carry electrical current. In water, the conductivity is related to the concentration of ions capable of carrying electrical current.

Contact Time - The length of time water is in direct contact with activated carbon (R.O.) or chlorine (chlorination system.) This is a major factor in determining how effectively impurities will be removed.

Corrosion - The destructive disintegration of a metal by electrochemical means.

Cycle Time - The amount of time in seconds elapsed between pump start and pump shut-down.

Dechlorination - The removal of excess chlorine residual, often after super-chlorination.

Deionization (DI) - The removal of all ionized minerals and salts (both organic and inorganic) from a solution by a two-phase ion exchange procedure. First, positively charged ions are exchanged for a chemically equivalent amount of hydrogen ions. Second, negatively charged ions are removed by an ion exchange resin for a chemically equivalent amount of hydrogen ions. The hydrogen and hydroxide ions introduced in this process unite to form water molecules. The term is often used interchangeably with demineralization.

Disinfection - A process in which pathogenic, disease producing bacteria are killed. May involve disinfecting agents such as chlorine or physical processes such as heating.

Dissolved Solids - The weight of matter in true solution in a stated volume of water. Includes both inorganic and organic matter and is usually determined by weighing the residue after evaporation of the water at 105°F or 180°C.

Distillation - The process in which a liquid, such as water, is converted into its vapor state by heating and the vapor cooled and condensed to the liquid state and collected. Used to remove solids and other impurities from water. Multiple distillations are required for extreme purity. DNA - Deoxyribonucleic acid constituting the genetic material of the chromosome in a cell, responsible for reproductive characteristics.

Drawdown - The amount of water delivered by the storage tank between pump shut-down and pump start.

E Coli (Escherichia Coli) - One of the members of the coliform group of bacteria indicating fecal contamination.

Effluent - The stream emerging from a unit, system or process such as the softened water from an ion exchange softener.

Exhaustion - The state of an ion exchange material in which it is no longer capable of effective function due to the depletion of the initial supply of exchangeable ions. The exhaustion point may be defined in terms of a limiting concentration of matter in the effluent or, in the case of demineralization, in terms of electrical conductivity.

Fecal - Matter containing or derived from animal or human waste.

Feed Pressure - The pressure at which water is supplied to the R.O. module.

Feed Water - A term which refers to the water supply that is put into a water treatment system for processing (removal of impurities.)

Flocculation - The agglomeration of finely divided suspended solids into larger, usually gelatinous, particles. The development of a 'floc' after treatment with a coagulant by gentle stirring or mixing.

Flow Control - A device designed to limit the flow of water or regenerant to a predetermined value over a broad range of inlet water pressures.

Flow Rate - The quantity of water or regenerant which passes a given point in a specified unit of time, often expressed in gallons per minute.

Flux - The flow rate of water through reverse osmosis membranes, per square foot of surface.

Fouling - The process in which undesirable foreign matter accumulates in a bed of filter media or ion exchanger, clogging pores and coating surfaces and thus inhibiting or retarding the proper operation of the bed.

Freeboard - The vertical distance between a bed of filter media or ion exchange material and the overflow or collector for backwash water. The height above

Water Conditioning Glossary

the bed of granular media available for bed expansion during backwashing. May be expressed either as a linear distance or a percentage of bed depth.

Grain (gr) - A unit of weight equal to 1/7000 of a pound or 0.0648 gram.

Grain per Gallon (gpg) - A common basis for reporting water analysis in the United States and Canada. One grain per U.S. gallon equals 17.12 milligrams per liter (mg/l) or parts per million (ppm). One grain per British (Imperial) gallon equals 14.3 mg/l or ppm.

Greensand - A natural mineral, primarily composed of complex silicates, which can be coated with manganese oxide to form a catalytic absorptive surface. This surface is used to attract ferrous iron and manganese as well as to absorb dissolved oxygen which is used to oxidize iron, manganese or hydrogen sulfide.

Hardness - A characteristic of natural water due to the presence of dissolved calcium and magnesium. Water hardness is responsible for most scale formation in pipes and water heaters and forms insoluble "curd" when it reacts with soaps. Hardness is usually expressed in grains per gallon (gpg), parts per million (ppm) or milligrams per liter (mg/l), all as calcium carbonate equivalent.

Hard Water - Water with a total hardness of 1 gpg or more as calcium carbonate equivalent.

Hydrologic Cycle - The natural water cycle, including precipitation of water from the atmosphere as rain or snow, flow of water over or through the earth and evaporation or transpiration to water vapor in the atmosphere.

Hydrogen Sulfide (H₂S) - A gas characterized by an offensive odor, commonly referred to as "rotten egg" odor. Flammable and poisonous in high concentrations, corrosive to most metals and can even tarnish silver. Detectable by most people in concentrations as low as 0.5 ppm.

Hydrocharger - Trade name of a particular type of air induction or injector valve.

Hydrolysis - The chemical degradation of an R.O. membrane in water due to certain conditions such as high pH. Cellulose based membranes are quite susceptible to hydrolysis while the TFC type are virtually immune.

Influent - The stream entering a unit, stream or process, such as the hard water entering an ion exchange water softener.

Ion - An atom, or group of atoms, which function as a unit and have a positive or negative electrical charge due to the gain or loss of one or more electrons.

Ion Exchange - A reversible process in which ions are released from an insoluble permanent material in exchange for other ions in a surrounding solution; the direction of the exchange depends upon the affinities of the ion exchanger for the ions present and the concentrations of the ions in the solution.

Iron (Fe) - An element often found dissolved in ground water (in the form of ferrous iron) in concentrations usually ranging from 0-10 ppm (mg/l). It is objectionable

in water supplies because of the staining caused after oxidation and precipitation (as ferric hydroxide); because of the tastes; and because of unsightly colors produced when iron reacts with tannins in beverages such as coffee and tea.

Iron Bacteria - Organisms which are capable of utilizing ferrous iron, either from the water or from steel pipe in their metabolism and precipitating ferric hydroxide in their sheaths and gelatinous deposits. These organisms tend to collect in pipelines and tanks during periods of low flow and to break loose in slugs of turbid water to create staining, taste and odor problems.

Magnesium (Mg) - One of the elements making up the earth's crust, the compounds of which, when dissolved in water, make the water hard. The presence of magnesium in water is a factor contributing to the formation of scale and insoluble soap curds.

Manganese (Mn) - An element sometimes found dissolved in ground water, usually with dissolved iron but in lower concentrations. Causes black stains and other problems similar to iron.

Manganese Greensand - Greensand which has been processed to incorporate in its pores and on its surface the higher oxides of manganese. The product has a mild oxidizing power and is often used in the oxidation and precipitation of iron, manganese and/or hydrogen sulfide and their removal from water.

Mechanical Filtration - The process of removing suspended particles from water by a straining action. The finest mechanical filters can remove bacteria as small as 0.2 microns.

Media - The selected materials in a filter that form the barrier to the passage of certain suspended solids or dissolved minerals. (Singular of media is medium).

Milligrams per Liter (mg/l) - A unit concentration of matter used in reporting the results of water and wastewater analysis. In dilute water solutions, it is practically equal to parts per million but varies from the ppm in concentrated solutions such as brine. As most analysis is performed on measured volumes of water, the mg/l is a more accurate expression of the concentration and is the preferred unit of measure.

Micron - A linear measure equal to one millionth of a meter or .00003937 inch. The symbol for the micron is the Greek letter "μ".

Micron Rating - The term applied to a filter or filter medium to indicate the particle size above which all suspended solids will be removed throughout the rated capacity. As used in industry standards, this is an "absolute" not "nominal" rating. (Refer to S-200, Recommended Industry Standards for Household & Commercial Water Filters.)

Mineral - A term applied to inorganic substances such as rocks and similar matter found in the earth strata as opposed to organic substances such as plant and animal matter. Minerals normally have definite chemical composition and crystal structure. The term is also applied to matter derived from minerals such as the

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inorganic ions found in water. The term has been incorrectly applied to ion exchangers, even though most of the modern materials are organic ion exchange resins.

Mineral Salts - The form in which minerals from dissolved rock exist in water. Same as Total Dissolved Solids. This is the so-called inorganic form of minerals. In excess, they cause water to have a disagreeable taste. Some are harmful to human health.

Molecular Weight - The sum of the atomic weights of the individual atoms (from a periodic chart) that make up a molecule of a particular substance (e.g. H₂O) H=1 atomic weight, O=16 atomic weight, therefore, molecular weight = 2 + 16 = 18.) Cellulose based membranes can remove substances as light as MW of 300, while TFC type membranes remove substances as light as MW of 200.

Nanometer - A measure of a wavelength in the electromagnetic spectrum. One nanometer equals 109 meter.

Neutralization - In general, the addition of either an acid or a base to a solution as required to produce a neutral solution. The use of alkaline or basic materials to neutralize the acidity of some waters is common practice in water conditioning.

Organic Iron - A ferrous iron molecule which is enveloped in an organically complex molecule that resists oxidation. May be present in water that contains a great deal of colored colloidal turbidity.

Organics - Any of the compounds whose chemical structure is based on carbon (e.g. carbon dioxide, wood, sugar, protein, plastics, methane, THM, TCE, etc.)

Osmosis - A process of diffusion of a solvent, such as water through a semipermeable membrane, which will transmit the solvent but impede most dissolved substances. The normal flow of solvent is from the dilute solution to the concentrated solution. (See Reverse Osmosis).

Osmotic Pressure - The pressure created by the tendency of water to flow in osmosis. Every 100 ppm of TDS generates about 1 pound per square inch (psi) of osmotic pressure. This osmotic pressure must first be overcome by the water pressure for the reverse osmosis membrane to be effective.

Oxidation - A chemical process in which electrons are removed from an atom, ion or compound. The addition of oxygen is a specific form of oxidation. Combustion is an extremely rapid form of oxidation while the rusting of iron is a slow form.

Oxidizing Agents - Any substance that oxidizes another substance and is itself reduced in the process. Common examples include: oxygen, chlorine, potassium permanganate, hydrogen peroxide, iodine and ozone.

Ozone (O₃) - An unstable form of oxygen occurring naturally in the upper atmosphere or artificially produced because of its strong oxidizing or disinfection characteristics.

Particle Size - As used in industry standards, the size of a particle suspended in water as determined by its smallest dimension, usually expressed in microns.

Parts per Million (ppm) - A common basis for reporting the results of water and waste water analysis, indicating the number of parts by weight of water or other solvent. In dilute water solutions, one part per million is practically equal to one milligram per liter, which is the preferred unit. 17.12 ppm equals one grain per U.S. gallon.

Pathogen - An organism which may cause disease.

PCB - Polychlorinated Biphenyls - A highly toxic organic contaminant found in water supplies which is suspected of causing cancer in humans.

pH - or the potential of hydrogen ion activity or concentration. pH is a measure of the intensity of the acidity or alkalinity of water on a scale from 0 to 14, with 7 being neutral. When acidity is increased, the hydrogen ion concentration increases, resulting in a lower pH value. Similarly, when alkalinity is increased, the hydrogen ion concentration decreases, resulting in higher pH. The pH value is an exponential function so that pH is 10 times as alkaline as pH 9 and 100 times as alkaline as pH 8. Similarly, a pH 4 is 100 times as acid as pH 6 and 1000 times as acid as pH 7.

Potassium Chloride (KCl) - a compound consisting of potassium and chloride, becoming increasingly popular as a substitute for sodium chloride in regenerating water softeners.

Potassium Permanganate (KMnO₄) - A powerful oxidizing agent consisting of dark purple crystals with blue metallic sheen. Explosive in contact with sulfuric acid or hydrogen peroxide. Increases flammability of combustible materials. Used to renew the black manganese oxide coating on greensand media.

Precipitate - To cause a dissolved substance to form a solid particle which can be removed by settling or filtering such as in the removal of dissolved iron by oxidation, precipitation and filtration. The term is also used to refer to the solid formed and the condensation of water in the atmosphere to form rain or snow.

Pre-treatment - Whatever alterations of the raw feed water are required to prevent damage to the reverse osmosis membrane.

Product Water - The pure water that has been separated from the feed water stream by the reverse osmosis membrane.

Pumping Rate - The amount of actual water that can be drawn from a pressure system expressed in gallons per minute (gpm) obtained by dividing the drawdown (gallons) by the cycle time (seconds) and multiplying the result by 60 (seconds).

Quartz - A high grade of glass made using quartz sand.

Raw Water - Untreated water or any water before it reaches a specific water treatment device or process.

Recovery - The amount of product water as compared with the total amount of feed water. This will give a measure of the efficiency of operation. For example, starting with 10 gallons of feed water, if 6 gallons is product water and 4 gallons reject water, the recovery is 60%.

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Regenerant - A solution of a chemical used to restore the capacity of an ion exchange or oxidation system.

Regeneration - In general, includes the backwash, brine and fresh water rinse steps necessary to prepare a water softener exchange bed for service after exhaustion. Specifically, the term may be applied to the "brine" step in which the sodium chloride solution is passed through the exchanger bed. The term may also be used for similar operations relating to demineralizers and certain filters.

Rejection - The percentage of TDS removed from the feed water. Typically greater than 90% rejection is achieved with reverse osmosis.

Reject Water (same as Brine) - That portion of the feed water that does not pass through the R.O. membrane and which carries the remaining impurities to the drain.

Residual Chlorine - Chlorine remaining in a treated water after a specified period of contact time to provide protection throughout a distribution system. The difference between the total chlorine added and that consumed by oxidizable matter.

Resin - Synthetic organic ion exchange material such as the high capacity cation exchange resin widely used in water softeners.

Reverse Osmosis (R.O.) - A process that reverses, by the application of pressure, the flow of water in the natural process of osmosis so that the water passes from the more concentrated to the more dilute solution through a semi-permeable membrane.

Sediment - The sum of particles of dirt, clay, silt and vegetation which float or are suspended in water and can be removed by mechanical filtration. See Turbidity.

Semi-permeable - A term which applies to special materials, both natural and synthetic, which allow certain substances such as water to pass through (to permeate) while blocking or rejecting the passage of other substances such as dissolved solids and organics.

Service (Peak) Flow Rate - The greatest amount of water (expressed in gallons per minute) that a particular filter can effectively process based on short pump runs of less than 10 to 15 minutes maximum.

Sequester - A chemical reaction in which certain ions are bound into a stable, water soluble compound, thus preventing undesirable action by the ions.

Soap - One of a class of chemical compounds which possesses cleaning properties, formed by the reaction of a fatty acid with a base of alkali. Sodium and potassium soaps are soluble and useful but can be converted to insoluble calcium and magnesium soaps (curd) by the presence of these hardness ions in water.

Soda Ash - The common name for sodium carbonate, a chemical compound used as an alkaline builder in some soap and detergent formulations to neutralize acid water and in the lime soda ash water conditioning process.

Total Hardness - The sum of all hardness constituents in a water, expressed as their equivalent concentration of calcium carbonate. Primarily due to calcium and magnesium in solution but may include small amounts of metals, such as iron, which can act like calcium and magnesium in certain reactions (see Hardness.)

Toxic - Having an adverse physiological effect on man.

Toxic Metals - Elemental metals that find their way into water supplies from natural and industrial sources and which are detrimental to human health (e.g. lead, cadmium, mercury, arsenic.)

Toxic Organics - Carbon-based chemicals which are frequently found in our water supplies and are harmful to human health. They are usually from agricultural and industrial effluents and hazardous waste dumps (e.g. TCE, PCB, DCBP, pesticides, etc.)

Turbidity - Suspended biological, inorganic and organic particles in water which may be in sufficient amount to make the water seem cloudy (see Sediment.)

Virus - The smallest form of life known to be capable of producing disease of infection, usually considered to be of large molecular size. They multiply by assembly of component fragments in living cells, rather than by cell division as do most bacteria.

Volatile Organic Chemical (VOC) - Chemicals or compounds with boiling points below 212°F, facilitating their evaporation before water.

Water Softening - The removal of calcium and magnesium, the ions which are the principal cause of hardness, from water.

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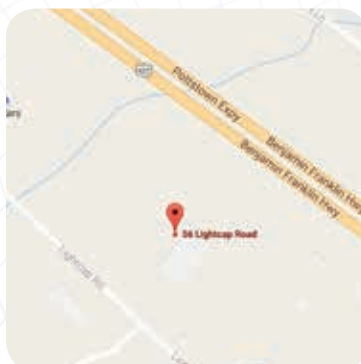
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