

Water Conditioning Products



Introduction to DURO®	2
Water Analysis	7
Water Softener Sizing	10
Residential Water Softeners	11
Residential Water Filters	25
Drinking Water Systems	49
Pura® Ultraviolet Disinfection Systems	63
Precision Distillers	71
Aqua Flo Point-of-Use Filtration Products	75
Pentek Point-of-Use Filtration Products	89
Miscellaneous Filter Systems & Cartridges	157
Chemical Feed Pumps, Applications & Accessories.....	163
Water Treatment Chemicals	185
Media	195
Testing Equipment & Reagents	211
Commercial Products	215
Sales & Marketing	259
Water Conditioning Glossary.....	263
Parts Lists & Diagrams	271

Canada

Contact our National Order Desk and Customer Service Department

Head Office

490 Pinebush Road, Unit 1
Cambridge, Ontario N1T 0A5

Phone 519-650-1380
Toll Free Phone: 877-288-9888
Toll Free Fax: 800-223-8296
Email: customerservicecanada@watergroup.com

United States

Contact our National Order Desk and Customer Service Department

Head Office

193 Osborne Road
Fridley, Minnesota 55432

Phone: 763-571-9001
Toll Free Phone: 877-581-1833
Toll Free Fax: 800-544-6651
Email: customerserviceusa@watergroup.com

Visit our website at www.watergroup.com

Partnering with Professionals for Quality Water

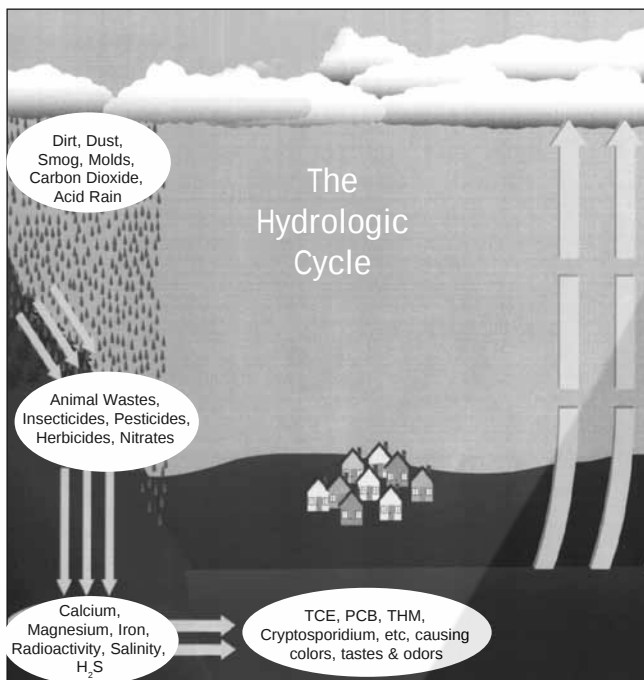
The DURO® water treatment program was developed specifically with the plumbing professional in mind. Providing the right products, training and support, the DURO water treatment program allows plumbing professionals to easily integrate water treatment into their business - taking advantage of additional opportunities to expand their sales. DURO products are exclusively distributed through wholesalers throughout North America.

DURO products are manufactured, marketed and distributed by WaterGroup Inc. and WaterGroup Companies Inc.

With a history dating back to 1932, WaterGroup is a proven leader in the water treatment industry. Product development, design engineering and manufacturing of most core items are all in-house. With over 250,000 square feet of manufacturing capacity, three major distribution facilities and several bonded warehouses - all in North America - WaterGroup is one of the continent's largest manufacturers of water treatment equipment. Economies of scale, combined with high-efficiency operations, help trim costs and deliver exceptional value throughout the entire product line.

Our Commercial Engineering Application Center provides comprehensive support for application, selection and after-sale service of more challenging commercial projects. Our Customer Service Department combines over 100 years of experience to make sure help is only one phone call away. Our website is designed to provide instant access to things you need in a hurry - from product manuals to sales literature.

The DURO water treatment program provides you with the support you need to succeed. DURO field representatives are fully trained to understand and respond to the real needs of plumbing professionals - from complete product and application training to sales literature and advertising materials.



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 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.

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. 1.5-7.5 ppm Iron Guard Water 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). 0.3-10 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 iron-bearing 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 manganese-bearing soils. Usually found in combination with iron.	0.05-1.0 ppm Chemical Free M Iron Filter (Note 1). 1.0-2.0 ppm Neutralizing Filter followed by 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 7.0 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.	0.1-3.0 ppm Chemical Free Iron Filter or Iron & Sulfur Filter. 3.0-15 ppm Chemical Feed Pump feeding chlorine followed by a Multimedia 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 mater.	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.

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 6 and 1000 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.

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 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. Manufacturing 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 Equivalent Iron for the softener to remove should not be greater than 1.5 ppm. Total Equivalent Iron is calculated as follows:

$$\text{Iron ppm} + 2 \times \text{Manganese ppm} < 1.5 \text{ ppm}$$

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 Equivalent Iron is 0.5 - 1.5 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 Equivalent Iron is greater than 1.5 ppm, an Iron Filter is required as pretreatment prior to the softener.

Residential Water Softeners

Water Conditioning Products



What is hard water?

Many water supplies contain dissolved hardness minerals, calcium and magnesium. These minerals build up as scale inside your kettle, water heater, plumbing fixtures and appliances, reducing their efficiency and leading to major repairs. The minerals also react with soap to form a scum or curd which appears as bathtub ring. This curd greys and stiffens your laundry, leaves your hair dull and your skin itchy.

Hard water costs you money. It's more than an inconvenience, it's like having a sneak thief in your home stealing your hard-earned money.

Conditioned water benefits

Soft water provides many benefits . . .

- Brighter, softer laundry
- Sparkling glassware and dishes
- Easier household cleaning
- Cleaner, shinier hair
- Smooth shaving

In addition, soft water saves you money. You can reduce expenditures on cleaning products and conditioners. Clothing and linens last longer and your expensive appliances and plumbing are protected against scale.

How Water Softeners Work

Water softeners contain a bed of ion exchange resin beads. As water passes through the bed, calcium and magnesium, the hardness minerals, are removed and held by the resin.

Eventually the resin beads become saturated with hardness minerals and must be cleaned and regenerated. A brine solution is drawn in to the resin bed to release the accumulated minerals. This process is called ion exchange.

After the minerals and brine are rinsed away with fresh water, the regenerated resin is ready to soften water again.

DURO 6200 Series

The DURO 6200 Series combines an **electronic control** with a solid state microprocessor which monitors your water use, regenerating only when a preset volume of water has been used.

9100SXT TMI Water Softeners

9100SXT TMI consists of two identical mineral tanks containing ion exchange resin, one tank is in operation, the second is in reserve. A tank containing brine solution completes the system. As water passes through the resin bed, calcium and magnesium, the hardness minerals, are removed and held by the resin.

Eventually the resin beads become saturated with hardness minerals and must be cleaned and regenerated. 9100SXT TMI's control valve automatically diverts the incoming water into the reserve tank, continuing conditioned water service while the first tank is being regenerated. A brine solution is drawn into the resin bed to release the accumulated hardness minerals. The minerals and brine are rinsed away with fresh water and the regenerated resin is ready to condition water again.

9100SXT TMI's control valve includes a simplified electronic control with metering system which monitors your soft water use, alternating the two mineral tanks and initiating regeneration only when a preset volume of water has been used. This ensures you always have conditioned water and eliminates unnecessary regenerations.



Water Softener Selection Guide

No. of People	Model Type	Total Grains of Hardness							
		5	10	15	20	25	30	35	40
1	1. 6200 Series	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM
2	1. 6200 Series	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT30SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT30MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT30SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM
3	1. 6200 Series	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT30SXT	DT40SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT30MI	EFT40MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT30SXT	EFT40SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF45EM
4	1. 6200 Series	DT20SXT	DT20SXT	DT20SXT	DT20SXT	DT30SXT	DT30SXT	DT40SXT	DT60SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT20MI	EFT20MI	EFT30MI	EFT30MI	EFT40MI	EFT60MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT30SXT	EFT30SXT	EFT40SXT	EFT60SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF45EM	HF60EM
5	1. 6200 Series	DT20SXT	DT20SXT	DT20SXT	DT30SXT	DT30SXT	DT40SXT	DT60SXT	DT60SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT20MI	EFT30MI	EFT30MI	EFT40MI	EFT60MI	EFT60MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT30SXT	EFT30SXT	EFT40SXT	EFT60SXT	EFT60SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF30EM	HF30EM	HF45EM	HF60EM	HF60EM
6	1. 6200 Series	DT20SXT	DT20SXT	DT20SXT	DT30SXT	DT40SXT	DT40SXT	DT60SXT	DT90SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT20MI	EFT30MI	EFT40MI	EFT40MI	EFT60MI	EFT90MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT20SXT	EFT30SXT	EFT40SXT	EFT40SXT	EFT60SXT	EFT90SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF30EM	HF45EM	HF45EM	HF60EM	HF90EM
7	1. 6200 Series	DT20SXT	DT20SXT	DT30SXT	DT40SXT	DT40SXT	DT60SXT	DT90SXT	DT90SXT
	2. Econoflo MI	EFT20MI	EFT20MI	EFT30MI	EFT40MI	EFT40MI	EFT60MI	EFT90MI	EFT90MI
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT30SXT	EFT40SXT	EFT40SXT	EFT60SXT	EFT90SXT	EFT90SXT
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF45EM	HF45EM	HF60EM	HF90EM	HF90EM
8	1. 6200 Series	DT20SXT	DT20SXT	DT30SXT	DT40SXT	DT60SXT	DT60SXT	DT90SXT	CALL
	2. Econoflo MI	EFT20MI	EFT20MI	EFT30MI	EFT40MI	EFT60MI	EFT60MI	EFT90MI	
	3. Econoflo SXT	EFT20SXT	EFT20SXT	EFT30SXT	EFT40SXT	EFT60SXT	EFT60SXT	EFT90SXT	
	4. High Flow 7000	HF30EM	HF30EM	HF30EM	HF45EM	HF60EM	HF60EM	HF90EM	
9	1. 6200 Series	DT20SXT	DT30SXT	DT40SXT	DT40SXT	DT60SXT	DT60SXT	DT90SXT	CALL
	2. Econoflo MI	EFT20MI	EFT30MI	EFT40MI	EFT40MI	EFT60MI	EFT60MI	EFT90MI	
	3. Econoflo SXT	EFT20SXT	EFT30SXT	EFT40SXT	EFT40SXT	EFT60SXT	EFT60SXT	EFT90SXT	
	4. High Flow 7000	HF30EM	HF30EM	HF45EM	HF45EM	HF60EM	HF60EM	HF90EM	
10	1. 6200 Series	DT20SXT	DT30SXT	DT40SXT	DT60SXT	DT60SXT	DT90SXT	CALL	CALL
	2. Econoflo MI	EFT20MI	EFT30MI	EFT40MI	EFT60MI	EFT60MI	EFT90MI		
	3. Econoflo SXT	EFT20SXT	EFT30SXT	EFT40SXT	EFT60SXT	EFT60SXT	EFT90SXT		
	4. High Flow 7000	HF30EM	HF30EM	HF45EM	HF60EM	HF60EM	HF90EM		

Note: This guide will only select a water softener based on softening capacity. If high flow rates require a larger softener than the Water Softener Selection Guide suggests, consider the High Flow 7000 Series Water Softener.

How Do We Compare?



Softener Model Selection

Once the softener has been sized, the Water Softener Selection Guide on the previous page provides three different models for your customer to choose from. The differences among the various models are itemized on the following pages and will help your customer make the decision that is best for them.

Cabinet vs. Twin Tank

All models shown in the Selection Guide are Twin Tank models. Twin Tank models are rugged, durable and typically have higher salt storage capacity than a comparable cabinet model.

Cabinet models give a water softener that 'clean appliance' look which can be quite important if the unit is installed in the home in plain sight where visitors and household traffic is constantly nearby. Cabinet models are also slightly more compact allowing tight installations to be more easily serviced.

High Hardness OR High Demand Conditions

In certain cases due to high hardness or high usage demand situation, a standard 6200 series, Econoflo or High Flow 7000 softener may not be appropriate. In these cases we suggest calling our knowledgeable order desk staff for selection of a softener beyond the product range shown above. These options include:

- **9100SXT TMI Twin Alternating Meter Initiated Softeners**
- **Light Commercial Softeners**
- **Water Softener in combination with additional equipment or drinking water systems**

Features	- GOOD - Econoflo 5600 MI	- BETTER - High Flow 7000	- BEST - 6200 SXT
Guarantee - Control Valve	5 Years	7 Years	7 Years
Guarantee - Cabinets, Brine Tanks and Mineral Tanks	10 Years	Lifetime	Lifetime
Bypass Valve	❖	❖	❖
Brine Overflow Safety Valve	❖	❖	❖
Insulated Tank Jacket on 9" & 10" Units		❖	❖
Soft Water Brine Refill		❖	❖
High Efficiency Counter-Current Regeneration			❖
Uses 50% Less Water per Regeneration**		❖	❖
Fully Programmable		❖	❖
Adjustable Regeneration Cycles		❖	❖
Calendar Clock Override		❖	❖
LED Display at a Glance		❖	❖

*6200 SXT uses 50% less water than Econoflo

High Flow 7000 is ideal for homes with 1" to 1 1/4" water lines.

NOTE: 6200 SXT softeners achieve a salt and water savings over Econoflo softeners due to the difference in the factory settings of comparable size products. It is recommended the factory settings remain unchanged, but adjustments may be made in the field.

Features

- Up to 21 GPM flows for residential/commercial softening and filtration applications
- High backwash flow rate of 17GPM
- Electronic timer provides quick setup and programming
- Quick connect clips allow easy installation and maintenance of drain and brine lines
- Regenerates up to 5 cu. ft. softeners
- Battery back-up, to keep time-of-day during a power outage
- Advanced SXT electronics
- Soft water brine refill
- Complete piston, seal, spacer pack for easy and quick servicing
- Hinge cover for easy and simple service.
- Clamp Ring for easy valve installation and service.

Options

- Available in 3/4"-1" NPT, BSP and sweat connections
- Metered with regeneration day override
- Manual operation
- Backwash filter



Back



Front

Valve Specifications

Valve material	Fiber-reinforced ploymer
Inlet/Outlet	3/4" - 1" NPT, BSP, Sweat
Cycles	Up to 5 cycles

Flow rates (50 psi Inlet) - Valve Alone (GPM)

Piston	Standard
Continuous	21
Peak (25 psi drop)	26
Cv (flow at 1 psi drop)	5.5
Max. backwash (25 psi drop)	17
Max. Rapid Rinse (25 psi drop)	10

Regeneration

Downflow/Upflow	Upflow only
Adjustable cycles	Yes
Time available	199 minutes per cycle

Meter Information

Meter accuracy	+1/-5% (.25 - 15GPM)
Meter capacity Range (gal).	1 - 60,000

Dimensions

Distributor pilot	1.05"
Drain line	1/2" NPT Quick Connect
Brine line	3/8" Quick Connect
Mounting base	2-1/2" NPSM
Height from top of tank	6.37"

Typical Applications

Water softener	6" - 16" diameter
Filters	6" - 16" diameter

Additional Information

Injector brine system	1610
Electrical rating	24 VAC, 50/60 Hz
Max. VA	15
Estimated shipping weight	11 lbs.
Pressure	Hydrostatic: 300 psi Working: 20 - 125 psi
Temperature	34° - 110° F

“Enjoy soft water with efficiency and economy . . . 6200SXT Water Conditioner”

The 6200 SXT electronic control monitors your water use, regenerating only when necessary. This, in conjunction with counter-current regeneration enables 6200 SXT to operate using up to 50% less salt than conventional calendar clock conditioners.



Features

- Exclusive DURO composite electronic meter control valve with a 7 year guarantee
- Heavy duty cabinets, brine tanks and mineral tanks with a lifetime guarantee
- Exclusive electronic turbine meter accurately and efficiently monitors water usage
- LED displays time of day, remaining capacity and regeneration cycle in progress
- Microprocessor retains information and settings indefinitely
- User friendly push button controls
- Counter-current regeneration and high efficiency brining system yield maximum capacity per pound of salt
- Soft water refill improves brine efficiency
- Bypass valve for ease of installation and service
- Brine safety valve provides extra overflow protection
- Tank jacket reduces condensation (9" and 10" twin tank models)
- 115 volt to 24 volt UL approved transformer included

Specifications

 Unit † Item #	Model #	Tank Size	Media (CF)	Capacity Grains			Service Flow Rate (gpm)	Backwash Flow Rate (gpm)	Brine Tank Dimension (W X D X H) in.	Salt Capacity (lbs)	Shipping Weight (lbs)
				10 lbs of Salt/CF of Resin	6 lbs of Salt/CF of Resin	3 lbs of Salt/CF of Resin					
DURO Cabinet Softeners											
4621	DC20SXT	9 x 35	0.75	22,500	13,500	6,750	8	1.5	14 x 22 x 42	250	90
4622	DC30SXT	10 x 35	1	30,000	18,000	9,000	9	2	14 x 22 x 42	240	105
DURO Twin Tank Softeners											
4623	DT20SXT	9 x 35	0.75	22,500	13,500	6,750	8	1.5	18 X 35	224	85
4624	DT30SXT	10 x 35	1	30,000	18,000	9,000	9	2	18 X 35	224	100
4625	DT40SXT	10 X 47	1.25	37,500	22,500	11,250	9	2	21 X 36	308	140
4626	DT60SXT	12 X 52	2	60,000	36,000	18,000	12	3	21 X 36	308	190
4627	DT90SXT	14 X 65	3	90,000	54,000	27,000	15	4	21 X 36	308	230

NOTE: For Valve breakdown, refer to 6200 Softener Manual included with unit or go to www.watergroup.com.



† USA customers will need to add "-4" to the item numbers for ordering.

Newer homes across North America are being plumbed with a 1" to 1-1/4" water main and many feature multiple washrooms, large bathtubs and multi-jet showers needing adequate flow with a minimal drop in pressure.

The High Flow 7000SXT Series Softener fills this requirement by using a new valve that is designed to accommodate a flow from a 1" or 1-1/4" line. The valve features glass filled composite body, simple electronics and easy serviceability. The electronics feature a variable reserve that automatically determines when the softener should regenerate based on the residences actual usage pattern. Variable reserve saves water and salt by regenerating only when necessary.

The valve is mounted on a corrosion resistant fiberglass mineral tank which contains a 1" distributor, high quality softening resin and support bed. The system is also supplied with a new larger bypass valve and comes standard with both 1" and 1-1/4" MNPT Noryl pipe adapters. Brine tanks are constructed of durable polyethylene and include brine safety floats and salt grids (when applicable).



Note: US product equipped with black valve covers.

7000SXT Series features

- High Flow 7000SXT Control Valve with a 7 year guarantee
- User friendly electronics and simple serviceability
- Adjustable cycles
- Meter initiated regeneration with day override
- Variable reserve
- Soft water brine tank refill
- High Flow Bypass Valve
- 1" or 1-1/4" MNPT Noryl connectors
- Heavy duty mineral tank with a lifetime guarantee
- Durable brine tank with brine safety float with a lifetime guarantee

Options

- 1" & 1-1/4" sweat copper connectors (Item #41242-01)
- 1-1/4" & 1-1/2" sweat copper connectors (Item #41243-01)

Item #61601:
Optional 90° Elbow
(2 required)



7000 Cabinet Model Available in the USA only.

Specifications

Model Number [†]	Capacity - Grains			Flow Rates			Mineral Tank Size inches	Resin Volume cu.ft.	Brine Tank Size W x D x H inches	Salt Capacity lbs	Shipping Weight lbs
	@ 15lb/cu.ft.	Factory set at 10lb/cu.ft.	@ 6lb/cu.ft.	Service usgpm (lpm)	Peak usgpm (lpm)	Backwash usgpm (lpm)					
HF30EM	30,000	27,500	20,000	10 (38)	12 (45)	2.0 (7.6)	10 x 35 ⁽¹⁾	1.0	18 x 35	224	85
HFC30EM ⁽²⁾	30,000	27,500	20,000	10 (38)	12 (45)	2.0 (7.6)	10 x 35	1.0	13.5Wx22.5Lx35.5H	250	108
HF45EM*	45,000	41,250	30,000	12 (45)	16 (61)	2.4 (9.1)	10 x 54	1.5	22 x 38	365	125
HF60EM*	60,000	55,000	40,000	13 (49)	19 (72)	3.5 (13)	12 x 52	2.0	22 x 38	365	150
HF90EM*	90,000	82,500	60,000	15 (57)	20 (76)	5.0 (19)	14 x 65	3.0	22 x 38	365	235

[†] All HF__EM models come with SXT digital controls.

* Items include brine tank grid.

⁽¹⁾ Mineral tank sizes are 10 x 35 in Canada and 9 x 48 in USA.

⁽²⁾ Cabinet model available in the USA only.

• Maximum Water Temperature = 110°F (43°C)

• Maximum Operating Pressure = 100 PSIG (689 kPa)

• Electrical: 24 VAC/60Hz (115V to 24V Approved Class 2 Transformer included)

- The pressure drop for the stated peak flow rates will not exceed 15 psig through these devices.
- Changing salt settings from factory setting may require changing injector sizes to achieve stated capacities.
- Do not use where water is microbiologically unsafe.
- 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.

MEMBER



9100SXT TMI Water Softeners



“Continuous conditioned water service”

For residential applications where extreme hardness conditions exist, conditioned water demands are unusually high or a continuous 24 hour supply of conditioned water is required, 9100SXT TMI is the ideal solution.

Most water conditioners deliver hard water during regeneration. 9100SXT TMI overcomes this problem by using two tanks containing ion exchange resin, unlike ordinary conditioners which use only one. As the capacity of one tank is depleted, the control valve automatically diverts the water supply to the reserve tank and conditioned water service is maintained. The depleted tank is regenerated and becomes the reserve.



9100SXT TMI features

- Control with a **7 year guarantee**
- Heavy duty brine tanks and mineral tanks with a **lifetime guarantee**
- Integral super-cap power back up.
- Larger, back-lit display with additional characters and information icons.
- Updated user interface with more intuitive controls and programming codes.
- New diagnostic view that displays flow rate, peak flow rate, hours in service, volume used, reserve capacity settings, and software version
- Easier to troubleshoot by technicians
- Improved regeneration display
- Unit displays abbreviations for the specific regeneration steps instead of the step number
- Unit shows minutes and seconds remaining for each regeneration step instead of just minutes
- Addition of the “Day of Week” control type option
- Improved time of day functionality
- Flow Indicator flashes when outlet flow is detected.
- Service Icon flashes if a regeneration cycle has been queued



Item #19502:
Optional 90° Elbow

For higher flow rates and greater capacities, see commercial specifications.

Item # 18706 (not shown)
optional 1 inch yoke connector

Specifications

Item No.	Model No.	Capacity Grains			Flow Rate		Resin Tank Size Inches	Resin Volume Cu Ft	Cabinet/Brine Tank Size Inches W x D X H	Salt Capacity Lbs	Shipping Weight Lbs
		@ 10 lbs per cu ft	Factory set @ 6 lbs per cu ft	@ 3 lbs per cu ft	Service USGPM	Backwash USGPM					
3220-1	DT30TM	60,000	46,000	32,000	10	2	10 x 35	2	18 x 35	224	195
3221-1	DT40TM*	75,000	57,500	40,000	11	2	10 x 47	2.5	21 x 36	308	221
3222-1	DT45TM*	90,000	69,000	48,000	14	2	10 x 54	3	21 x 36	308	320

*Items include brine tank grid
Maximum Water Temperature = 110°F (43°C)
Maximum Operating Pressure = 100 PSIG (689 kPa)
Voltage = 115 volts standard
Pipe Size = 3/4"

- Capacity is based on TWO tanks of media.
- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.

- Changing salt settings from factory setting may require changing injector sizes to achieve stated capacities.
- Do not use where water is microbiologically unsafe.
- 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.



The Economical Soft Water Solution

Many water supplies contain hardness minerals which form a scale and create problems in water heaters, household appliances and plumbing systems. Econoflo removes calcium and magnesium, the hardness minerals, from your water supply. Your laundry will be cleaner and softer, bathing and grooming will be more enjoyable and your costly appliances, fixtures and plumbing will be protected against scale build-up.

All models have the following standard features:

- Heavy duty fiberglass tanks and brine tanks with a **10 YEAR guarantee**
- Choice of cabinet or twin tank styles
- Designed for simple operation and service
- Bypass valve for ease of installation and service
- Brine safety valve provides extra overflow protection

SXT Electronic Control Valve

- The easy to read large backlit display alternates between the time of day and remaining usable volume prior to regeneration, **guaranteed for 5 YEARS**
- The 5600SXT meter initiated valve regenerates only when needed once a preset volume of water has passed through the softener
- Regeneration cycles are fully adjustable
- An automatic override can be programmed to regenerate the valve after set number of days if regeneration has not been initiated by the meter due to low usage
- The standard regeneration occurs at 2:00 AM, but this can be easily adjusted to any other time of the day
- Diagnostics provide current and historical usage information

Item #19502:
Optional 90° Elbow



Meter Initiated Control Valve

- Demand regeneration control valve monitors water use, regenerating as necessary to save salt and water, **guaranteed for 5 YEARS**

Specifications

Item Number	Model Description	Capacity - Grains			Flow Rate		Mineral Tank Size Inches	Total Resin Cu Ft	Cabinet/Brine Tank Size Inches W x D x H	Salt Capacity Lbs	Shipping Weight Lbs
		@15 lbs per cu ft	Factory Set @ 10 lbs per cu ft	@6 lbs per cu ft	Service USGPM	Backwash USGPM					
SXT Model											
2100	EFC20SXT	22,500	20,625	15,000	8	1.5	9 x 35	.75	13 x 18 x 45	190	76.5
2101	EFC30SXT	30,000	27,500	20,000	10	2.0	10 x 35	1.0	13 x 18 x 45	170	90.5
2102	EFT20SXT	22,500	20,625	15,000	8	1.5	9 x 35	.75	18 x 35	239	86.5
2103	EFT30SXT	30,000	27,500	20,000	10	2.0	10 x 35	1.0	18 x 35	230	101.5
2104	EFT40SXT	37,500	34,375	25,000	12	2.0	10 x 47	1.25	18 x 35	230	123
2105	EFT60SXT*	60,000	55,000	40,000	13	3.0	12 x 52	2.0	22 x 38	365	185
2106	EFT90SXT*	90,000	82,500	60,300	15	4.0	14 x 65	3.0	22 x 38	365	253
Meter Initiated Model											
2095	EFC20MI	22,500	20,625	15,000	8	1.5	9 x 35	.75	13 x 18 x 45	190	70
2096	EFC30MI	30,000	27,500	20,000	10	2.0	10 x 35	1.0	13 x 18 x 45	170	84
2090	EFT20MI	22,500	20,625	15,000	8	1.5	9 x 35	.75	18 x 35	239	80
2091	EFT30MI	30,000	27,500	20,000	10	2.0	10 x 35	1.0	18 x 35	230	95
2092	EFT40MI	37,500	34,375	25,000	12	2.0	10 x 47	1.25	18 x 35	230	115
2093	EFT60MI*	60,000	55,000	40,000	13	3.0	12 x 52	2.0	22 x 38	365	170
2094	EFT90MI*	90,000	82,500	60,300	15	4.0	14 x 65	3.0	22 x 38	365	235

*Items include brine tank grid.

- EFC indicates cabinet model, EFT indicates twin tank model
- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Voltage = SXT: 24V / 60 Hz (120V to 24V wall mount transformer included); MI: 115 volts standard
- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.

- Changing salt settings from factory setting may require changing injector sizes to achieve stated capacities
- 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.

MEMBER

Econoflo Water Softeners



NOTES for all Econoflo Softeners:

- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.
- Changing salt settings from factory setting may require changing injector sizes to achieve stated capacities

- 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.
- * Do not use water that is microbiologically unsafe without adequate disinfection before or after the system.

Specifications

Model Description	Capacity - Grains			Flow Rate		Mineral Tank Size Inches	Total Resin Cu Ft	Cabinet/ Brine Tank Size Inches W x D x H	Salt Capacity Lbs	Shipping Weight Lbs
	@15 lbs per cu ft	Factory Set @ 10 lbs per cu ft	@6 lbs per cu ft	Service USGPM	Backwash USGPM					
SXT Model										
EFC20SXT	22,500	20,625	15,000	8	1.5	9 x 35	.75	13 x 18 x 45	190	76.5
EFC30SXT	30,000	27,500	20,000	10	2.0	10 x 35	1.0	13 x 18 x 45	170	90.5
EFT20SXT	22,500	20,625	15,000	8	1.5	9 x 35 ⁽¹⁾	.75	18 x 35	239	86.5
EFT30SXT	30,000	27,500	20,000	10	2.0	10 x 35 ⁽²⁾	1.0	18 x 35	230	101.5
EFT40SXT	37,500	34,375	25,000	12	2.0	10 x 47	1.25	18 x 35	230	123
EFT60SXT*	60,000	55,000	40,000	13	3.0	12 x 52	2.0	22 x 38	365	185
EFT90SXT*	90,000	82,500	60,300	15	4.0	14 x 65	3.0	22 x 38	365	253
Meter Initiated Model										
EFC20MI	22,500	20,625	15,000	8	1.5	9 x 35	.75	13 x 18 x 45	190	70
EFC30MI	30,000	27,500	20,000	10	2.0	10 x 35	1.0	13 x 18 x 45	170	84
EFT20MI	22,500	20,625	15,000	8	1.5	9 x 35 ⁽¹⁾	.75	18 x 35	239	80
EFT30MI	30,000	27,500	20,000	10	2.0	10 x 35 ⁽²⁾	1.0	18 x 35	230	95
EFT40MI	37,500	34,375	25,000	12	2.0	10 x 47	1.25	18 x 35	230	115
EFT60MI*	60,000	55,000	40,000	13	3.0	12 x 52	2.0	22 x 38	365	170
EFT90MI*	90,000	82,500	60,300	15	4.0	14 x 65	3.0	22 x 38	365	235
Calendar Clock Model (Available in USA Only)										
EFC20CC	22,500	20,625	15,000	8	1.5	9 x 35	.75	13 x 18 x 45	190	70
EFC30CC	30,000	27,500	20,000	10	2.0	10 x 35	1.0	13 x 18 x 45	170	84
EFT20CC	22,500	20,625	15,000	8	1.5	8 x 44	.75	18 x 35	239	80
EFT30CC	30,000	27,500	20,000	10	2.0	9 x 48	1.0	18 x 35	230	95
EFT40CC	37,500	34,375	25,000	12	2.0	10 x 47	1.25	18 x 35	230	115
EFT60CC*	60,000	55,000	40,000	13	3.0	12 x 52	2.0	22 x 38	365	170
EFT90CC*	90,000	82,500	60,300	15	4.0	14 x 65	3.0	22 x 38	365	235

⁽¹⁾ Mineral tank sizes are 9 x 35 in Canada and 8 x 44 in USA

⁽²⁾ Mineral tank sizes are 10 x 35 in Canada and 9 x 48 in USA

*Items include brine tank grid.

• EFC indicates cabinet model, EFT indicates twin tank model

• Maximum Water Temperature = 110°F (43°C)

• Maximum Operating Pressure = 100 PSIG (689 kPa)

• Pipe Size = 3/4"

• Voltage = SXT: 24V / 60 Hz (120V to 24V wall mount transformer included); MI & CC: 115 volts standard

Specifications - WQA Approved Softeners in Canada Only

Item No.	Model Number	Capacity - Grains			Flow Rate		Resin Tank Size (Inches)	Cabinet or Brine Tank (Inches W x D x H)	Resin Volume (cu. ft)	Salt Capacity (lbs.)	Shipping Weight (lbs.)
		@ 15 lbs /cu.ft	Factory @ 10 lbs/cu.ft	@ 6 lbs /cu.ft	Service USGPM	Backwash USGPM					
SXT Models											
2100	EFC20SXT	22,500	20,625	15,000	8	1.5	9 x 35	13 x 18 x 45	0.75	190	76.5
2101	EFC30SXT	30,000	27,500	20,000	10	2.0	10 x 35	13 x 18 x 45	1.0	170	90.5
2102	EFT20SXT	22,500	20,625	15,000	8	1.5	9 x 35	18 x 35	0.75	224	86.5
2203	EFT20SXT (8x44)	22,500	20,625	15,000	8	1.5	8 x 44	18 x 35	0.75	224	86.5
2103	EFT30SXT	30,000	27,500	20,000	10	2.0	10 x 35	18 x 35	1.0	224	101.5
2204	EFT30SXT (9x48)	30,000	27,500	20,000	10	2.0	9 x 48	18 x 35	1.0	224	101.5
2104	EFT40SXT	37,500	34,375	25,000	12	2.0	10 x 47	18 x 35	1.25	224	123
2105	EFT60SXT**	60,000	55,000	40,000	15	3.0	12 x 52	22 x 38	2.0	365	185
2106†	EFT90SXT**	90,000	82,500	60,300	20	4.0	14 x 65	22 x 38	3.0	365	253
Meter Initiated (MI) Models											
2095	EFC20MI	22,500	20,625	15,000	8	1.5	9 x 35	13 x 18 x 45	0.75	190	76.5
2096	EFC30MI	30,000	27,500	20,000	10	2.0	10 x 35	13 x 18 x 45	1.0	170	90.5
2090	EFT20MI	22,500	20,625	15,000	8	1.5	9 x 35	18 x 35	0.75	224	86.5
2201	EFT20MI (8x44)	22,500	20,625	15,000	8	1.5	8 x 44	18 x 35	0.75	224	86.5
2091	EFT30MI	30,000	27,500	20,000	10	2.0	10 x 35	18 x 35	1.0	224	101.5
2202	EFT30MI (9x48)	30,000	27,500	20,000	10	2.0	9 x 48	18 x 35	1.0	224	101.5
2092	EFT40MI	37,500	34,375	25,000	12	2.0	10 x 47	18 x 35	1.25	224	123
2093	EFT60MI*	60,000	55,000	40,000	15	3.0	12 x 52	22 x 38	2.0	365	185
2094†	EFT90MI*	90,000	82,500	60,300	20	4.0	14 x 65	22 x 38	3.0	365	253

**Items include brine tank grid.

† Not certified by WQA

EFC - cabinet model, EFT - twin tank model

Working Temperature = 34-110°F (1-43°C)
(Do not subject the unit to freezing temperatures)
Working Pressure = 20-125 PSIG (137-861 kPa)

Voltage = 120V / 60 Hz
Pipe Size = 3/4"

The WaterGroup Mini Cabinet Water Softeners are ideal for apartments and space-constrained areas. Handles up to 22,000 grains of hardness and features the reliable Fleck 5600SXT valve. Efficiently sized at just 22" x 13" x 27", it's a compact package delivering big performance and the soft water customers desire.

The SXT electronics of the valve provide both the owner and installer simple to operate user friendly method of making adjustments to the control. An alternating display shows the time of day and gallons of soft water remaining while the softener is in service.



Features:

- Compact design
- Designed for simple operation and service
- Two models – moderate (EFC-MINI-17) and high (EFC-MINI-22) hardness capacities
- The high capacity model is effective in removing iron of up to 10ppm*
- Consumes less than 50% less water for regeneration than standard water softeners (consumes 14.5 gallons of water for 3 lbs/cu.ft. of salt)
- Meter initiated regeneration
- Electronic control with large backlit display and user-friendly programming
- Fully adjustable regeneration cycle
- Diagnostic provide current and historical usage information
- Regeneration day override can be programmed

- Bypass included with ¾" MNPT connections
 - Heavy duty mineral tank
 - Heavy duty cabinet includes air check, brine safety valve and overflow protection fitting
 - Includes plastic salt grid
- * Depends of inlet water chemistry. Frequent backwashing and use of Resin Cleaner may be required. This softener is not recommended for iron bacteria or organically bound iron.

Options:

- Upflow regeneration
- 1" Yoke (Part # 18706)

Warranty:

The Mini Softener is backed by a seven year limited warranty against manufacturing defects and a ten year warranty on the mineral tank.

Model Comparison Chart

	EFC-MINI-17	EFC-MINI-22
Item Number	7111	7112
Control Valve	5600SXT, Meter Initiated	5600SXT, Meter Initiated
Dimensions-WxDxH - inches (mm)	13.5 x 22.5 x 27.25 (343 x 571 x 686)	13.5 x 22.5 x 27.25 (343 x 571 x 686)
Mineral Tank Size - inches (mm)	10" X 18" (254 x 457)	10" X 18" (254 x 457)
Salt Used for Regeneration lbs/cf	1 to 15	1 to 15
Length of Regeneration Cycle	18 minutes @ 3 lbs salt/cf	18 minutes @ 3 lbs salt/cf
Water used per Regeneration (gallons)	14.5 Gallons @ 3 lbs/cf	14.5 Gallons @ 3 lbs/cf
Salt Storage (lbs)	100 lbs (W/O Grid), 75 lbs (With Grid)	100 lbs (W/O Grid), 75 lbs (With Grid)
Shipping Weight - lbs (kg)	40 (18)	40 (18)
Service Flow Rates - USGPM (LPM)	10 (37.9)	10 (37.9)
Backwash Flow Rates - USGPM (LPM)	2 (7.6)	2 (7.6)
Maximum Water Temperature	110° F (43° C)	110° F (43° C)
Maximum Iron Reduction (ppm)	1	10
Maximum Water Pressure - psi (kPa)	120 (827)	120 (827)
Maximum Hardness Removed (Grains) (12 lbs salt/cf)	17,000	22,000
Salt Usage (lbs.)/Hardness Capacity (High Capacity)	6/8,500	6/11,000
Salt Usage(lbs.)/ Hardness Capacity (High Efficiency)	3 lbs/5,500	3 lbs/7,000
Programming Type	3 Button (Easy Programming)	3 Button (Easy Programming)
Bypass, ¾"	YES	YES
Overflow Fitting	YES	YES
Safety Float Valve with Aircheck	YES	YES
Plastic Brine Grid	YES	YES
Res-Up Feeder	Optional	Optional

Additional Notes:
 Electrical: Standard: 120V/60Hz (24V/60Hz with a supplied 120V/60Hz Wall Mount Approved Class 2 Transformer)
 Pipe Size: ¾"
 The Service Flow Rate given will not exceed a pressure drop of 15 psi.

Caution:
 These products are not intended to be used to treat water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
 The manufacturer reserves the right to make product improvements which deviate from the specifications and descriptions stated herein without obligation to change previously manufactured products or to note the change.

Iron Guard & Iron Guard Plus



Enjoy Iron-Free Soft Water

Combining proven water softener capabilities with the ability to remove clear and red water iron, the Iron Guard system, Model FE30MI, provides an effective and economical solution to hard and iron contaminated water. In addition, Iron Guard Plus, Model STFE30MI, is specially designed for application in low pH (acidic) water.

Hard water contains dissolved calcium and magnesium which build up inside your water heater, plumbing fixtures and appliances. The minerals also react with soap to form a scum which appears as bathtub ring, greys your laundry and leaves your hair dull and your skin itchy. Iron water leaves yellow, orange or brown stains on your laundry, sinks, tubs and toilets.

Iron Guard contains a bed of fine mesh ion exchange resin beads. As water passes through the bed, calcium and magnesium, the hardness minerals, and any clear or red water iron are removed and held by the resin. The Iron Guard Plus bed contains calcium carbonate in addition to the fine mesh ion exchange resin. This media combines to raise low pH water to enable the resin to remove hardness and red water iron.

Eventually, the resin beads become saturated and must be regenerated. A brine solution is drawn into the bed to drive out the accumulated minerals. This process is called ion exchange. After the minerals and brine are rinsed out with fresh water, the regenerated resin is ready to soften your water again.

The demand regeneration control valve includes a metering system which monitors your soft water use, regenerating only when necessary based on your water usage. Consequently, you save salt, water and money.

Iron Guard & Iron Guard Plus features

- Programmable composite meter control valve with a 7 year guarantee
- Heavy duty fiberglass tank and brine tank with a lifetime guarantee
- Bypass valve for ease of installation and service
- Timed brine refill with brine safety valve provides dual assurance of accurate brine level and salt use
- Tank jacket reduces condensation problems
- Contemporary styling in an attractive smoke white finish



Specifications

Model No.	Rated Capacity @ 15 Lbs/Cu Ft	Salt Dosage Lbs	Max Hardness gpg	Max Iron ppm	Service Flow Rate USGPM	Backwash Flow Rate USGPM	Mineral Tank Size Inches	Brine Tank Size Inches	Resin Volume Cu Ft	Salt Capacity Lbs	Shipping Weight Lbs
FE30MI	32,000	15	75	7.5	8	1.5	10 x 47	22 x 38	1.0	400	145
FE45MI	48,000	23	75	7.5	10	2.4	12 x 52	22 x 38	1.5	400	185
FE60MI	64,000	30	75	7.5	12	3.5	14 x 50	22 x 38	2.0	400	230
STFE30MI†	32,000	15	75	7.5	8	1.5	10 x 54	22 x 48	1.0	400	145

*Applications must be based on analysis by an authorized DURO representative or distributor.

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Voltage = 115 volts standard
- Inlet/Outlet Pipe Size = 3/4" - Drain = 1/2"
- 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.

All units include brine tank grid.

- Not recommended for iron bacteria or organically bound iron. Iron Guard Plus (STFE30MI) should not be applied unless pH is 6.8 or lower. Unit can be applied up to a maximum .75 mg/l manganese providing regular use of resin cleaner.
- Regular use of resin cleaner is essential to the proper functioning of the combination water softener and iron removal system.

† Iron Guard Plus may require the addition of media over a period of time.





Combination Softener and Tannins Filter

Tannins are decayed animal and vegetable matter which discolor your water and cause it to stain almost everything it comes in contact with. Hard water contains dissolved minerals, calcium and magnesium. The new combination Softener and Tannins Filter (STF) unit will restore your water to its natural clarity.

How it works

The combination Softener and Tannins Filter works to remove both hardness and tannins that cause undesirable color and staining by incorporating a mixed bed of specially formulated resins. As a softener, the unit removes hardness minerals which form a scale and create problems in household appliances and plumbing fixtures. As a Tannins Filter, the unit removes color caused by organics and holds them in the resin bed until the unit is regenerated. When the capacity for removing hardness or tannins is exhausted, the unit must be cleaned and regenerated. A solution of saturated salt brine is drawn through the resin bed to release the accumulated minerals and tannins. The bed is then rinsed clean of the minerals, tannins and brine with fresh water and is ready to work again.

Demand regeneration control

The demand regeneration control valve includes a metering system which monitors your water use and initiates regeneration only when necessary - saving you money!

Combination Softener and Tannins Filter features

- Programmable composite meter control valve with a 7 year guarantee
- Heavy duty brine tank and mineral tank with a lifetime guarantee
- Bypass valve for ease of installation and service
- Brine safety valve provides extra overflow protection



Item #19502:
Optional 90° Elbow

Specifications

Model No.	Tannin Removal Capacity ppm-gallons	Hardness Removal Capacity Grains @10 lbs/cu ft	Salt Per Regeneration Lbs	Flow Rate USGPM	Backwash Flow Rate USGPM	Mineral Tank Size Inches	Brine Tank Size Inches	Softening Resin Cu Ft	Anion Resin Cu Ft (A860)	Salt Capacity Lbs	Shipping Weight Lbs
STF20-860	2,000	27,500	20	3.5	2.0	12 x 52	22 x 38	1	1	400	150
STF30-860	3,000	41,250	30	5	2.4	14 x 65	22 x 38	1.5	1.5	400	200

*Application must be based on analysis by an authorized representative or distributor.

- Iron should be removed if in excess of 1.5 ppm
- Maximum tannin removal 3 ppm
- Suggested maximum hardness removal 20 grains per gallon
- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Voltage = 115V Standard
- Pipe Size = 3/4"

- 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.
- Regular use of Pro Neutra 7 soda ash resin cleaner is recommended.



Hot Water Softener



WaterGroup has a pre-assembled hot water softener. This softener uses a brass valve in a calendar clock initiated configuration setup.

Features:

- Hot Water Softener comes with a five year limited warranty
- Fully adjustable 5 cycle operation valve
- All softener internals and brine tank internals setup for hot water operation
- Maximum Operating Temperature = 65°C (150°F)
- The 1/2 cubic foot of resin unit is setup for low height installations
- Electrical: 120V/60Hz



Specifications

Item Number	Model Number	Capacity at regeneration salt levels (grains as CaCO ₃)				Service Flow Rate ⁽²⁾ USGPM	Backwash Flow Rate USGPM	Resin Volume cu.ft.	Mineral Tank Size Width x Height inches	Brine Tank Size Width x Height inches	Brine Tank Salt Capacity Lbs.	Shipping Weight Lbs.
		@15lb/cf	@10lb/cf ⁽¹⁾	@6lb/cf	@3lb/cf							
7376	FA15C	15,000	12,000	8,500	6,500	10	1.2	0.50	10 x 19	10 x 16	48	68
1901	FA20C	22,500	18,000	12,750	9,750	6	1.5	0.75	8 x 35	18 x 35	224	76
1902	FA30C	30,000	24,000	17,000	13,000	10	2.4	1.00	10 x 35	18 x 35	224	96
1903	FA40C	39,900	31,920	22,610	17,290	10	2.4	1.33	10 x 47	22 x 38	420	116

Notes: ⁽¹⁾ 10lb/cu.ft. salt dosage is the standard factory setting.

⁽²⁾ The Service Flow Rate given will not exceed a pressure drop of 15psi.

- Maximum Water Temperature = 34° to 150°F (1° to 65°C)
- Maximum Operating Pressure = 20 to 120 psi (137 to 827 kPa)
- Voltage = 115 volts standard

- These products are not intended to be used to treat water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- The manufacturer reserves the right to make product improvements which deviate from the specifications and descriptions stated herein without obligation to change previously manufactured products or to note the change.
- Peak flow rates are intended for intermittent use only and are for residential application only.



Residential Water Filters

Water Conditioning Products



Filters are available for various types of water problems:

- Sediment
- Organics
- Turbidity
- Taste and Odor

Often, more than one filter must be applied in series to correct a multiple problem.

Care should always be taken in the application of filtration. Special attention should be given to:

- Flow rates
- Pressure available
- Material to be filtered

These criteria apply not only to straight suspended material to be filtered, but also to material in a dissolved or solution state that must be oxidized and filtered.

Filters, in general, range from point-of-use (on tap) to full-line filtration with fully automatic units.

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 (gpm).

Example

Drawdown = 7.0 gallons

Cycle time = 80 seconds

$$\begin{aligned} &7.0 \text{ gallons divided by } 80 \text{ seconds} = \\ &0.0875 \times 60 \text{ seconds} = 5.25 \text{ gpm} \end{aligned}$$

Removes unpleasant taste & odor. . . **6200 SXT Activated Carbon Filter (ACF)**

Unpleasant tastes and odors caused by chlorine or organic substances, such as decayed vegetation and run-off are adsorbed by quality activated carbon. Occasional backwashing is necessary to free the filter bed of impurities and ready it for operation again.

Takes away cloudiness. . . **6200 SXT Multi-Media Filter (MMF)**

Suspended particulate matter, such as clay and silt, which gives water a cloudy appearance, is trapped in the filter bed to produce clean, clear water. A variety of gravels and sand facilitates more thorough backwashing and prevents channeling.

Protects pipes, fixtures & appliances. . . **6200 SXT Neutralizer Filter (NF)**

The NF contains special media which raises the pH of acidic water and neutralizes its acidic characteristics. On some applications, this filter also facilitates the removal of iron and manganese by raising the pH to enable an iron filter to be used. Occasional backwashing cleans the bed. Over a period of time, additional media may be required. The fill port options on the tanks make it easier for additional media refilling.



Neutralizer Filter
with Dome Hole
Tank Option

Features

- Exclusive DURO composite electronic meter control valve with a 7 year guarantee
- High filter backwashing flow rate of up to 17 GPM
- Heavy duty mineral tanks with a lifetime guarantee
- LED displays time of day, remaining capacity in days and regeneration cycle in progress
- Microprocessor retains information and settings indefinitely
- User friendly push button controls
- Bypass valve for ease of installation and service
- Tank jacket reduces condensation (8", 9" and 10" tank models)
- 115 volt to 24 volt UL approved transformer included



Iron free - Iron clad guarantee. . . **6200 SXT Chemical Free Iron Filter (IF)**

The IF has surpassed all other filters in its ability to remove iron. It uses no costly or messy chemicals. Instead, the system oxidizes iron and collects it in the filter media. IF also neutralizes acidic water. Occasionally, the iron is flushed from the filter using only water. Over a period of time, additional media may be required. The fill port options on the tanks make it easier for additional media refilling.



Get the iron & sulfur out. . . **6200 SXT Iron and Sulfur Filter (ISF)**

As the water passes through the filter bed, it comes in contact with oxygen-charged manganese greensand. This causes iron, manganese and sulfur to oxidize into particles which can be trapped in the filter bed. Eventually the manganese greensand loses its oxygen charge and regeneration is necessary. The filter bed is cleaned, then a measured amount of potassium permanganate is drawn from the feeder through the filter bed, recharging it with oxygen. Two rapid rinses ready the bed to filter your water again.

Specifications - 6200 Filters



Unit Item #	Model #	Tank Size	Media (CF)	Service Flow Rate (gpm)	Peak Service Flow Rate (gpm)	Backwash Flow Rate (gpm)	Shipping Weight (lbs)	All units come with plastic bypass *Items include brine tank grid Tank jackets are available on 8", 9" and 10" diameter tanks DC indicates cabinet model, DT indicates twin tank model	
Activated Carbon Filters (ACF)								Working Temperature = 34-110°F (1-43°C)	
4628	DACF75SXT	8 X 47	0.75	4	5	3.5	45	Working Pressure = 20-125 PSIG (137-861 kPa)	
4629	DACF10SXT	10 X 47	1	5	7	7	65	Voltage = 120V / 60 Hz	
4630	DACF15SXT	12 X 52	1.5	7	10	8	93	Pipe Size = 3/4"	
4631	DACF20SXT	14 X 50	2	10	12	10	105	Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rate for commercial applications or for a continuous rate when treated water supplies are geothermal heat pump, swimming pool, etc.	
Multimedia Filters (MMF)								• For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.	
4632	DMMF75SXT	8 X 47	0.75	4	5	4	95	• At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.	
4633	DMMF10SXT	9 X 48	1	5	7	5	145	• Changing salt settings from factory setting may require changing injector sizes to achieve stated capacities.	
4634	DMMF15SXT	10 X 54	1.5	7	10	7	213	• Do not use where water is microbiologically unsafe without adequate disinfecting the water before or after the unit	
4635	DMMF20SXT	12 X 52	2	10	12	10	265	• 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.	
Neutralizer Filter (NF)								IF Models ending in "M" are required when raw water has up to 1.0 mg/l of manganese or when pH is below 7.0. Over a period of time, it may become necessary to add more media to the unit. Adding media is necessary only when water has low pH or manganese is present.	
4640	DNF75SXT	8 X 47	0.75	2	3.5	3.5	75		
4641	DNF10SXT	9 X 48	1	3	5	4	115		
4642	DNF15SXT	10 X 54	1.5	5	8	5	165		
4643	DNF20SXT	12 X 52	2	6	10	7	215		
4644	DNF15SXT-DH	10 X 54 (DH)	1.5	5	8	5	165		
4645	DNF20SXT-DH	12 X 52 (DH)	2	6	10	7	215		
Chemical Free Iron Filters (IF)									
4646	DIF75SXT	8 X 47	0.75	2	5	3.5	110		
4647	DIF10SXT	9 X 48	1	3	6	4	145		
4648	DIF15SXT	10 X 54	1.5	4	10	5	250		
4649	DIF20SXT	12 X 52	2	5	15	7	365		
4650	DIF15SXT-DH*	10 X 54 (DH)	1.5	4	10	5	250		
4651	DIF20SXT-DH	12 X 52 (DH)	2	5	15	7	365		
Chemical Free Iron Filters Units (IF – M Models)									
4652	DIF75MSXT	8 X 47	0.75	2	5	3.5	110		
4653	DIF10MSXT	9 X 48	1	3	6	4	145		
4654	DIF15MSXT	10 X 54	1.5	4	10	5	250		
4655	DIF20MSXT	12 X 52	2	5	15	7	365	Pot Perm per Regen	Iron Capacity (ppm)
4656	DIF15MSXT-DH	10 X 54 (DH)	1.5	4	10	5	250		
4657	DIF20MSXT-DH	12 X 52 (DH)	2	5	15	7	365		
Manganese Greensand Filter (ISF) **									
4636	DISF75SXT	8 X 47	0.75	4	5	3.5	120	2 oz	4500
4637	DISF10SXT	10 X 47	1	5	6	5	150	4 oz	6000
4638	DISF15SXT	12 X 52	1.5	8	9	7	180	6 oz	9000
4639	DISF20SXT	14 X 50	2	10	11	10	265	8 oz	12000



Made in Canada

* DH = Dome Hole media tank

** Potassium Permanganate Feeder come unloaded. Potassium Permanganate sold separately.

The 2510AIO 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 2510AIO valve uses a patented construction 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 2510AIO 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.

Features

- 2510AIO Control Valve
- User-friendly SXT control and Simple Serviceability
- Adjustable Cycles
- Day Override
- Bypass Valve
- Heavy Duty Mineral Tank
- Inlet Check Valve

Maintenance

The 2510AIO valve requires annual maintenance and service of internal wear components including piston, seals and spacers. Please contact your local distributor for annual maintenance kits (Part# 61662).

Warranty

The 2510AIO valve is backed by a one year limited warranty against manufacturing defects. The mineral tank has a limited lifetime warranty. See installation manual for more details.



Specifications and Performance

Item #	Model #*	'M' Item #	'M' Model #**	Media Cu. Ft.	Pipe Size Inches	Flow Rates USGPM			Shipping Weight - Lbs	Capacity Iron (ppm)	Mineral Tank Size (inches)	Installation Space (inches)
						Service	Peak	Backwash				
4150	FAIO-0.75	4154	FAIO-0.75M	0.75	3/4"	2	4	3.5	110	22,500	8 x 47	10 x 10 x 57
4151	FAIO-1.0	4155	FAIO-1.0M	1.0	3/4"	3	6	4	145	30,000	9 x 48	11 x 11 x 58
4152	FAIO-1.5	4156	FAIO-1.5M	1.5	3/4"	4	10	5	250	45,000	10 x 54	12 x 12 x 64
4153	FAIO-2.0	4157	FAIO-2.0M	2.0	3/4"	5	15	7	365	60,000	12 x 52	14 x 14 x 62

* The standard 2510AIO filter unit comes with the bypass and 1" check valve installed at inlet of the valve. The standard unit does not come with the flow meter.

** Models ending in 'M' are required when raw water has up to 1.0 mg/L of manganese or when pH is below 7.0. Over a period of time, it may be necessary to add more media to the unit.

Adding media is necessary only when water has low pH or manganese is present.

Additional Notes:

Maximum Water Temperature = 110°F (43°C)

Maximum Operating Pressure = 100 PSIG (689 kPa)

Electrical: 24 VAC/60Hz (120V to 24V approved transformer)

- The pressure drop for the stated peak flow rates will not exceed 15 PSIG through these devices.
- Do not use where water is microbiologically unsafe
- The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated therein, without obligation to change previously manufactured products or to note the change.

2510 FAIOC Filter for Hydrogen Sulfide Reduction



Our Hydrogen Sulfide reduction AIO filter combines aeration with catalytic carbon technology to effectively reduce sulfur from water. Hydrogen sulfide (H₂S) is a nuisance to homeowners and water treatment professionals alike. These add objectionable sulfur-like taste and “rotten egg” odor to drinking water. Left untreated, it can lead to corrosion in drainage pipes and concrete sewers.

Groundwater systems are the most common drinking water source for sulfide contamination because of the anaerobic environment in which groundwater exists. Chlorination has been considered the most practical method for POE systems, but is often difficult to implement because continuous chemical addition and ongoing maintenance is required. The formation of THMs is also a concern.

Sulfide problems in surface water sources are much less frequent because of the natural aeration that occurs in most flowing surface water sources. Aeration is the most common treatment method in terms of volume of water treated annually because it's inexpensive, easy to maintain and doesn't produce potentially harmful reaction products such as tri-halo-methanes (THMs).



How does the 2510FAIOC 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 catalytic carbon filter bed where reduction of sulfides with catalytic activated carbons first involves adsorption of the sulfide species and then catalytic oxidation. The dissolved oxygen reacts with sulfides and oxidizing them to elementary sulfur and sulfates.

As more water passes through this filter, the oxygen in the unit is used up, and the media gets loaded with contaminants. The regeneration process then begins in order to replenish the supply of oxygen, and to backwash the precipitated contaminants trapped in the media bed. The filter is fitted with an inlet check valve to prevent any air from flowing backwards out of the filter tank.

Features

- 2510AIO Control Valve
- User-friendly SXT Control and Simple Serviceability
- Adjustable Cycles
- Day Override
- Bypass Valve
- Heavy Duty Mineral Tank
- Inlet Check Valve

Maintenance

The 2510AIO valve requires annual maintenance and service of internal wear components including piston, seals and spacers. Please contact your local distributor for annual maintenance kits (Part# 61662).

Warranty

The 2510AIO valve is backed by a one year limited warranty against manufacturing defects. The mineral tank has a limited lifetime warranty. See installation manual for more details.

Specifications and Performance

Item No.	Tank	Volume of Catalytic Carbon (CF)	Service Flow Rate (gpm)	Backwash Flow Rate (gpm)	Installation Space (inches)	Installation Space (inches)
4160	8 X 47	0.75	2.5	3.5	10 X 10 X 57	10 x 10 x 57
4161	9 X 48	1	3.3	4	11 X 11 X 58	11 x 11 x 58
4162	10 X 54	1.5	3.4 to 5	5	12 X 12 X 64	12 x 12 x 64
4163	12 X 52	2	5.1 to 6.6	7	14 X 14 X 62	14 x 14 x 62
4164	14 X 65	3	8.4 to 10	10	16 X 16 X 75	14 x 14 x 62

Additional Notes:

Minimum dissolved oxygen in water should be 4ppm

Pre-wet Media for 12 hours

Recommended Backwash Frequency - 3 to 5 days

Maximum Hydrogen sulfide concentration - 10ppm

If Iron is present, the rated flow rate needs to be reduced by 1 gpm

Ferrous Iron Maximum limit is 1 ppm

The standard 2510AIO filter unit comes with the bypass and check valve.

Maximum Water Temperature = 110°F (43°C)

Maximum Operating Pressure = 80 PSIG (551 kPa)

Electrical: 24 VAC/60Hz (120V to 24V approved transformer)

The pressure drop for the stated peak flow rates will not exceed 15 PSIG through these devices.

CAUTION: Do not use where water is microbiologically unsafe without disinfection before or after the system

Life Expectancy for media based on sulfide influent (Days for 1 cu. ft. unit)

Sulfide (ppm)	25 GPD*	50 GPD*	100 GPD*	125 GPD*	150 GPD*	200 GPD*	250 GPD*	300 GPD*
0.5	31,623	15,811	7,906	6,325	5,270	3,953	3,126	2,635
1	15,811	7,906	3,953	3,126	2,635	1,976	1,581	1,318
1.5	10,541	5,270	2,635	2,108	1,757	1,318	1,054	878
2	7,906	3,953	1,976	1,581	1,318	988	791	659
2.5	6,325	3,162	1,581	1,265	1,054	791	632	527
3	5,270	2,635	1,318	1,054	878	659	527	439
3.5	4,518	2,259	1,129	904	753	565	452	376
4	3,953	1,976	988	791	659	494	395	329
4.5	3,514	1,757	878	703	586	439	351	293
5	3,162	1,581	791	632	527	395	316	264
5.5	2,875	1,437	719	575	479	359	287	240
6	2,635	1,318	659	527	439	329	264	220

*Gallons Per Day

To Calculate bed life for carbon volumes other than 1 cu. Ft. multiply value in table by actual carbon volume (in cu. Ft.). A minimum of 4 ppm of Dissolved Oxygen is required for efficient removal for all sulfide concentrations listed above

Usage rates are based on a maximum total organic carbon (TOC) loading of 10 percent by weight. For higher loadings, the usage listed in the table will increase and bed life and volume treated will decrease

AIO Control Valve Regeneration Sequence

The regeneration cycle goes through 4 steps.

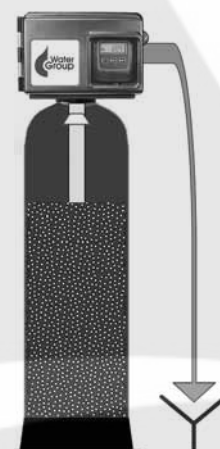
1. Backwash (minimum 30 psi inlet pressure required): During the backwash cycle, water flows upwards through the bed, expanding the media and carrying any precipitated contaminants trapped within it to the drain. The air is evacuated from the tank.

2. Air Draw: The air is injected to oxidize the tank. With the new design, the filter pulls the air into the tank to perform the oxidation instead of pulling in the brine or any oxidizing chemical. The unit is replenished with a new bubble of air. During this step water will run to the drain. There is a delay at the start of the cycle while the pressure of the air within the tank reaches atmospheric pressure. During this time no air is drawn into the tank. Once the pressure has equalized you can usually hear the sound of air being drawn in to the unit.

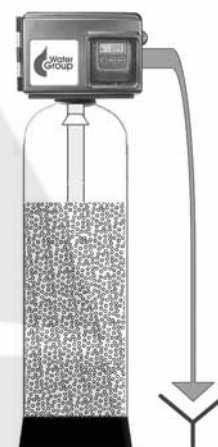
3. Rapid Rinse (minimum 30 psi inlet pressure required): During the rapid rinse cycle, the media bed will be re-settled for the next service period and any small loose particles of contaminant or media will be flushed to the drain.

4. In-Service Position: The unit then returns to the In-Service position. While this happens water continues to enter the tank, compressing the air into a bubble in the top of the tank. The actual size of the bubble will vary depending on the on-site conditions.

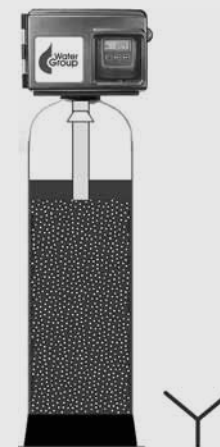
Step 1



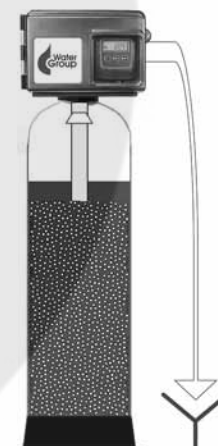
Step 2



Step 3



Step 4



DUROclean IF Chemical Free Iron Filter



The DUROclean IF has surpassed all other filters in its ability to remove iron. It uses no costly or messy chemicals. Instead, the system oxidizes iron and collects it in the filter media. DUROclean IF also neutralizes acidic water. Occasionally, the iron is flushed from the filter using only water.

Features

- Exclusive DURO 12 day calendar clock programmable composite control valve with a **7 year guarantee**
- Heavy duty mineral tanks with a **lifetime guarantee**
- Chemical free operation minimizes operating costs
- Conserves water by using only 10% of the water used by a conventional filter to regenerate
- Neutralizes acidic water
- Tank jackets standard on 8", 9" and 10" tanks
- Bypass valve for ease of installation and service



Item #19502:
Optional 90° Elbow

How DUROclean IF Works

The DUROclean IF consists of a hydrocharger and a backwashable filter containing special media, used in conjunction with a pump and pressure system.

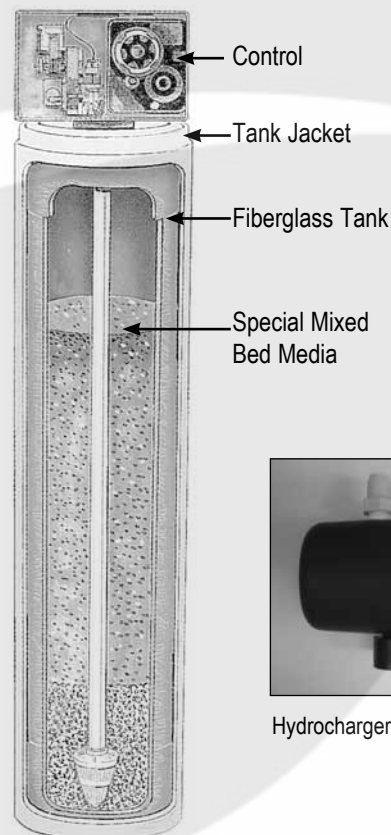
The hydrocharger adds a controlled amount of air to the water as it enters the pressure tank. The air begins the iron removal process as the water sits in the tank.

As water passes through the filter bed, its pH is automatically raised to neutral or higher and a catalytic effect occurs, changing the iron to a colloidal state.

The iron is trapped throughout the media bed, not just on the top of the bed as in conventional filters. This gives DUROclean an iron removal capacity four times greater than a conventional filter.

The filter media remains unchanged at the end of the oxidation process and therefore requires no chemical regeneration.

Periodically the iron has to be flushed from the filter bed. This is accomplished by backwashing which lasts between 10 and 12 minutes and occurs every 4 to 12 days depending on your water's condition.



Hydrocharger



Design Checklist - IF Chemical Free Iron Filter

The type of filter required is determined by observing the levels of the constituents shown in the water **analysis**.

1. Water Chemistry

- Chemical free filters remove iron (no limit) and hydrogen sulfide (up to 3 ppm). If manganese is present and exceeds 0.05 ppm, consult your sales representative.

2. Flow Rates

- What are the peak and normal flow rates?
- Is drain trench sized to handle backwash flow?

3. Temperature

- What is the water temperature range?
- Is a graph of annual temperature fluctuations available?
- Backwash rate must be adjustable if water varies more than 50°F (10°C).

4. Pressure

- What is the available line pressure? We recommend 30-50 psig for standard systems.
- If pressure exceeds 50 psig, consult your DURO® representative for specifications for a custom-designed air induction system.

5. pH

- Minimum 6.5 to 7.8

6. End Use of Water

- Iron and hydrogen sulfide removal applications that require no chemical be added to process stream.

7. Flow Pattern

- Does client require 24 hour/day uninterrupted service which would warrant a service/standby system?
- When is the "out of service" cycle and how long is it?
- Is there sufficient backwash water available?

8. Space Requirements

- What space is available for units and associated equipment?
- Is access to the area sufficient to get the equipment in place?
- Note additional space required for air induction assembly on piping.

9. Electrical

- Check that electrical supply is compatible with controls and pump motor if applicable.
- A dedicated electrical service should be available for filter controls.

Specifications

Item No.	"M" Item No.	Model Description	"M" Model No. Description	Media Cu Ft	Flow Rates USGPM			Installation Space Inches - W x D x H	Fiberglass Tank Size - Inches	Shipping Weight - Lbs
					Service	Peak	Backwash			
3230	3240	DIF75	DIF75M	0.75	2	5	3.5	10 x 10 x 57	8 x 47	100
3231	3241	DIF10	DIF10M	1.0	3	6	4	11 x 11 x 58	9 x 48	145
3232	3242	DIF15	DIF15M	1.5	4	10	5	12 x 12 x 64	10 x 54	250
3233	3243	DIF20	DIF20M	2.0	5	15	7	14 x 14 x 62	12 x 52	365

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Voltage = 115V standard
- Models ending in "M" are required when raw water has up to 1.0 mg/l of manganese or when pH is below 7.0. Over a period of time, it may become necessary to add more media to the unit. Adding media is only necessary when water has low pH or when manganese is present.
- Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rate for commercial applications or for a continuous rate when treated water supplies are geothermal heat pump, swimming pool, etc.

- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.
- For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.
- 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.

What is the chemical free filter system?

Very simply, the chemical free iron filter is a system for removal of iron from water.

How does it work?

The system consists of two components: a 'hydrocharger' and a bed type filter containing a special filter media. The hydrocharger, a small brass device, is located in the water line between the well and the pressure tank. When water is drawn from the well, it passes through the hydrocharger, which increases the velocity of a portion of the water stream. This causes the iron in the water to change into a colloidal form (very small insoluble particles). After passing through the pressure tank, the colloidal iron is collected by the media, which has an attraction to the colloidal iron. Periodically, the media bed is backwashed to the drain which rids it of the iron. It is then ready for use once again.

Does the chemical free filter use any chemicals?

It requires absolutely no chemicals.

How effective is the product for removal of iron?

Very effective. We have subjected it to the most difficult water conditions imaginable with virtually perfect results. We have yet to find any application where it has failed to perform, except where correct installation procedures were not followed or pumping rate was insufficient.

Will it remove all types of iron?

Yes. It effectively removes iron from water containing ferrous (dissolved) and ferric (precipitated 'red water').

What is the highest iron concentration it will remove?

It performs perfectly on water containing over 20 ppm of iron. To our knowledge, there is no maximum limit. We are constantly monitoring new installations on water of unusual characteristics.

Will it function on acid water (low pH) without a neutralizer?

Yes. Unlike typical oxidizing filters, the pH does not have to be neutral or higher. In fact, it raises pH if it is below 7. The amount of adjustment is dependent on the pre-treated water pH level.

How long does the backwashing procedure take?

Most applications require only 4 to 5 minutes for backwashing and rapid rinse. (To be conservative, automatic equipment is factory set at 6 minutes for backwashing and 4 minutes for rapid rinse for a total of 10 minutes).

How often does the chemical free iron filter need to be backwashed?

This depends on the water usage and the iron concentration in the water. For example, a family of four with water containing 6 ppm of iron will need to backwash every 12 days in an automatic backwashing mode.

How much water is required to backwash the unit?

With factory settings which cover most applications, a 1 cu. ft. chemical free filter requires only 50 gallons of water. This compares very favorably to oxidizing filters using potassium permanganate which require 175 - 300 gallons of water to regenerate - and on a more frequent schedule.

What is the capacity of iron removal between backwashings?

The most popular size, the 1 cu. ft. model, has a nominal capacity of 30,000 ppm, though actual capacity may be far higher. This figure is especially impressive when compared to an oxidizing filter with an iron removal capacity of only 8,000 ppm (mg/l).

What about pressure drop through the system?

Pressure drop is comparable to that experienced with a greensand filter.

What are required flow rates to backwash the filter bed?

A minimum of 4 gpm actual pumping rate is required to backwash the 1 cu. ft. model. Greater pumping rates are required on larger models.

What about hydrogen sulfide removal?

While not intended for this purpose, the chemical free iron filter is capable of removing small amounts of sulfur (generally 3 ppm or less). However, no warranties concerning its removal are extended since sulfur can vary greatly from a given well.

What is the filter media?

The media consists of a blend of special natural media, portions of which are not commonly used for water treatment. It contains no manganese greensand, manganese treated sodium aluminosilicate (Aridsorb™) or Birm™.

Will the filter bed 'wear out' and need replacing?

The filter media does not wear out if normally cared for, but will experience a slight attrition each year as does high capacity softening resin or any other water treatment media. Because of the conservative capacities used in product specifications, no media need be added for many years to restore capacity.

What about the effect of acid water (low pH) on the filter media?

The media is modestly sacrificial on low pH and, depending on the pH, may need 'topping off.'

Can a chemical free iron filter be placed on a public water supply or community water system at the point-of-use?

Yes, but a pressure tank must be added to the system after the hydrocharger. This is necessary to ensure water passes through the hydrocharger at sufficient velocity.

Are all types of pressure tanks acceptable?

Yes, but a bladder type will require more careful adjustment of the hydrocharger.

Will the chemical free iron filter work on commercial and industrial applications?

Yes. Systems have been engineered for applications operating at 300 gallons per minute and function on the same principles.

“Get the iron and sulfur out . . . automatically”

DUROclean ISF enables you to enjoy cleaner, stain-free laundry; protected plumbing; cleaner dishes and fresher tasting water. Iron, manganese and sulfur are oxidized and removed from your water, eliminating ugly staining and unpleasant tastes and odors.

Money saving demand regeneration control valve

The demand regeneration control valve includes a metering system which monitors your water use and initiates regeneration only when necessary - saving you money!



ISF Features

- Exclusive DURO® meter initiated programmable composite control valve with a **7 year guarantee**
- Heavy duty mineral tanks with a **lifetime guarantee**
- Tank jackets standard on 8" and 10" tanks
- Bypass valve for ease of installation and service



Item #19502:
Optional 90° Elbow

These are the symptoms

Iron causes ugly yellow, orange or brown rust stains on your laundry, sinks, tubs and toilets. It can also give water an unpleasant taste and smell which lingers on laundry and spoils food and beverages.

Manganese leaves ugly black stains on your bathroom and kitchen fixtures. Sulfur is identifiable by its distinctive 'rotten egg' odor and it too causes staining. Problems caused by iron, sulfur and manganese can occur individually or together.

This is the solution

As the water passes through the filter bed, it comes in contact with oxygen-charged manganese greensand. This causes iron, manganese and sulfur to oxidize into particles which can be trapped in the filter bed. Eventually the manganese greensand loses its oxygen charge and regeneration is necessary.

The filter bed is cleaned and then a measured quantity of potassium permanganate is drawn from the feeder through the filter bed, recharging it with oxygen. Two rapid rinses ready the bed to filter your water again.

Design Checklist - Iron & Sulfur Filter



The type of filter required is determined by observing the levels of the constituents shown in the water analysis.

1. Water Chemistry

- Iron, manganese and hydrogen sulfide can be removed by this type of filter. The total of iron and manganese determine flow rate. Check for pH to be above 7.0 to achieve complete removal of iron.

2. Flow Rates

- What are the peak and normal flow rates?
- Is drain trench sized to handle backwash flow?

3. Temperature

- What is the water temperature range?
- Is a graph of annual temperature fluctuations available?
- Backwash rate must be adjustable if water varies more than 50°F (10°C).

4. Pressure

- What is the available line pressure? We recommend 30-50 psi..

5. pH

- Operating range is 7.0 to 8.5.
- For complete removal of iron and manganese, a pH of 7.0 to 8.5 is required.

6. End Use of Water

- For precise control of potassium permanganate levels, use potassium permanganate controller.

7. Flow Pattern

- Does client require 24 hour/day uninterrupted service which would warrant a service/standby system?
- When is the 'out of service' cycle and how long is it?
- Is there sufficient backwash water available?

8. Chemical Storage

- Is there a suitable storage area for potassium permanganate?

9. Space Requirements

- What space is available for units and associated equipment?
- Is access to the area sufficient to get the equipment in place?

10. Electrical

- Check that electrical supply is compatible with controls and pump motor if applicable.
- A dedicated electrical service should be available for filter controls.

11. Regeneration Chemical

- Always maintain an adequate supply of Potassium permanganate in the solution tank. If the unit is operated without regeneration material - the bed can be irreversibly damaged.

Specifications

Item No.	Model Description	Manganese Greensand Cu Ft	Pot Perm* per Regen Ounces	Iron Removal Capacity ppm	Flow Rates USGPM		Installation Space - Inches W x D x H	Fiberglass Tank Size Inches	Shipping Weight Lbs
					Service	Backwash			
3260	DISF75MI	.75	2	4,500	4	3.5	20 x 10 x 57	8 x 47	120
3261	DISF10MI	1.0	4	6,000	5	5	22 x 12 x 57	10 x 47	150
3262	DISF15MI	1.5	6	9,000	8	7	24 x 14 x 62	12 x 52	180
3263	DISF20MI	2.0	8	12,000	10	10	26 x 16 x 60	14 x 50	265

* Potassium permanganate sold separately.

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Voltage = 115V Standard
- Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rates for commercial applications.

- At the stated flow rates, the pressure drop through these devices will not exceed 15 psig.
- For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.
- 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.





“Enjoy clean and clear water”

Common water problems such as unpleasant taste and odor, discoloration, acidity or haziness caused by sediment can be solved with the appropriate DUROclean water filter.

Enjoy cleaner, fresher laundry; clean, clear drinking water; sparkling and stain-free dishes and fixtures.

Standard 12 day calendar clock control valve

DURO®'s standard control valve schedules regeneration to occur at regular preset intervals based on your estimated water use.

Features

- Exclusive DURO 12 day calendar clock programmable composite control valve with a **7 year guarantee**
- Heavy duty mineral tanks with **a lifetime guarantee**
- Tank jackets standard on 8", 9" and 10" tanks
- Bypass valve for ease of installation and service



Item #19502:
Optional 90° Elbow

DUROclean ACF Activated Carbon Filters

Unpleasant tastes and odors caused by chlorine or organic substances, such as decayed vegetation and run-off are adsorbed by top quality activated carbon. Occasional backwashing is necessary to free the filter bed of impurities and ready it for operation again.

DUROclean MMF Multimedia Filters

Suspended particulate matter, such as clay and silt, which gives water a cloudy appearance, is trapped in the filter bed to produce clean, clear water. A variety of gravels and sand facilitates more thorough backwashing and prevents channeling.

DUROclean NF Neutralizing Filters

DUROclean NF contains special media which raises the pH of acidic water and neutralizes its acidic characteristics. In addition to protecting pipes, plumbing fixtures and appliances, this filter also facilitates the removal of iron and manganese by raising the pH to enable an iron filter to be used. Occasional backwashing cleans the bed. After a period of time, additional media may be required.

The type and size of filter required is determined by observing the levels of the constituents shown in the water analysis.

1. Water Chemistry

- NNF Neutralizing Filters - will raise the pH of acidic water and neutralize acidic characteristics.
- ACF Carbon Filters - the activated carbon media is an absorber. It is used to remove chlorine, chloramines, improve taste and odors and some color causing contaminants. The pH of the water should also be considered. Is the pH above 7.5? If it is, the 'halving value' for chlorine removal must be increased.
- MMF Multi-Media Filters - are used as particulate filters for the removal of suspended solids, oxidized iron, turbidity with a coagulant aid, silt and debris.

2. Flow Rates

- What are the normal and peak flow rates of the application?
- Is the drain trench sized to handle backwash flow?

3. Temperature

- What is the water temperature range?
- Is a graph of annual temperature fluctuations available?
- Backwash rate must be adjustable if the water temperature varies more than 50°F (10°C).

4. Pressure

- What is the available line pressure? We recommend 30 to 50 psig for standard systems to ensure filter is adequately backwashed.

5. End Use of Water

- NNF Neutralizing Filters - The calcium carbonate media neutralizes the pH of the water, but it will also increase the hardness and a water softener may become necessary after this filter.
- ACF Carbon Filters - Activated carbon media when used for de-chlorination pretreatment of a reverse osmosis system should have a fail-safe to ensure chlorinated water does not pass through to the membranes. (i.e. an

interlock to the R.O., multi-tank system, chlorine monitor). Special design criteria are required for chloramines removal. Consult your DURO® representative.

- MMF Multi-Media Filters - Suspended particulate matter, such as clay and silt, which gives water a cloudy appearance, is trapped in the filter bed to produce clean, clear water. Finer filtration may be required downstream with the use of cartridge filtration. Filters that are used for potable municipal filtration or reverse osmosis system pretreatment should have a fail-safe to ensure untreated water does not pass by during regeneration. (i.e. an interlock to the R.O., multi-tank system)

6. Flow Pattern

- Does the client require 24 hour per day uninterrupted filtered service that would warrant a commercial multi-tank system?
- When can the filter be 'out of service' and how long is the cycle?
- Is sufficient backwash water available?

7. Space Requirements

- What space is available for installation of the filter, associated piping and equipment?
- Is access to the area sufficient to get the equipment installed and serviced?

8. Electrical

- Check that the electrical supply is compatible with the filter control and pump motor (if applicable).
- A dedicated electrical service is preferable for the filter control.



Specifications - ACF, MMF & NF Automatic Water Filters

DUROclean ACF - Specifications

No.	Model Description	Carbon Cu Ft	Flow Rates USGPM			Installation Space Inches - W x D x H	Fiberglass Tank Size - Inches	Shipping Weight - Lbs
			Service	Peak	Backwash			
3290	DACF75	.75	4	5	3.5	10 x 10 x 57	8 x 47	45
3291	DACF10	1.0	5	7	5	12 x 12 x 57	10 x 47	65
3292	DACF15	1.5	7	10	7	14 x 14 x 62	12 x 52	93
3293	DACF20	2.0	10	12	10	16 x 16 x 60	14 x 50	105

DUROclean MMF - Specifications

No.	Model Description	Media Cu Ft	Flow Rates USGPM			Installation Space Inches - W x D x H	Fiberglass Tank Size - Inches	Shipping Weight - Lbs
			Service	Peak	Backwash			
3280	DMMF75	.75	4	5	4	10 x 10 x 57	8 x 47	95
3281	DMMF10	1.0	5	7	5	11 x 11 x 58	9 x 48	145
3282	DMMF15	1.5	7	10	7	12 x 12 x 64	10 x 54	213
3283	DMMF20	2.0	10	12	10	14 x 14 x 62	12 x 52	265

DUROclean NF - Specifications

No.	Model Description	Media Cu Ft	Flow Rates USGPM			Installation Space Inches - W x D x H	Fiberglass Tank Size - Inches	Shipping Weight - Lbs
			Service	Peak	Backwash			
3270	DNF75	.75	2	3.5	3.5	10 x 10 x 57	8 x 47	75
3271	DNF10	1.0	3	5	4	11 x 11 x 58	9 x 48	115
3272	DNF15	1.5	5	8	5	12 x 12 x 64	10 x 54	165
3273	DNF20	2.0	6	10	7	14 x 14 x 62	12 x 52	215

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Voltage = 115V Standard

- Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rates for commercial applications.
- At the stated flow rates, the pressure drop through these devices will not exceed 15 psig.
- For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.
- 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.

Econoflo Upflow Neutralizer



Econoflo UNF contains special media which raises the pH of acidic water and neutralizes its acidic characteristics. In addition to protecting pipes, plumbing fixtures and appliances, this filter also facilitates the removal of iron and manganese by raising the pH to enable an iron filter to be used. After a period of time, additional media may be required.

Features

- Heavy duty mineral tanks with a **10 year guarantee**
- Removable closure with internal screen allows refilling media without disconnecting plumbing
- Designed for simple operation and service



Specifications

Item No.	Model Description	Media cu.ft. (l)	Flow Rates usgpm (l)		Installation Space inches (mm) - W x D x H	Mineral Tank Size inches (mm)	Shipping Weight lbs (kg)
			Service	Peak			
9063	UNF10	1 (28)	3 (11.4)	5 (19)	11 x 11 x 50 (279 x 279 x 1270)	10 x 47 (254 x 1194)	100 (45.4)
9064	UNF20	2 (56)	6 (23)	10 (38)	13 x 13 x 55 (330 x 330 x 1397)	12 x 52 (305 x 1321)	200 (91)

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rates for commercial applications.

- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.
- 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.



Beautifully clean, clear water

Common water problems such as unpleasant taste and odor, acidity and sediment can be solved with DURO®'s mixed bed filters – ACN models clear up your taste and odor problem while neutralizing pH; MMN models remove sediment while neutralizing pH.

How the filters work

Unpleasant tastes and odors caused by chlorine and organic substances, such as decayed vegetation and run-off, are adsorbed by the top quality activated carbon in the ACN filter. Occasional backwashing is necessary to free the filter bed of impurities and ready it for operation again.

Suspended particulate matter, such as clay and silt, which gives water a cloudy appearance is trapped in the MMN filter bed to produce clean, clear water. A variety of gravel and sand facilitates more thorough backwashing and prevents channeling.

The ACN and MMN filters also contain special media which raises the pH of acidic water and neutralizes its acidic characteristics thus eliminating the bluish green stains often found on plumbing fixtures.

Standard 12 day calendar clock control valve

The control valve schedules regeneration to occur at preset intervals, based on your estimated water use.

Features

- Programmable composite control valve with a **7 year guarantee**
- Heavy duty mineral tank with a **lifetime guarantee**
- Bypass valve for ease of installation and service



Item #19502:
Optional 90° Elbow



Specifications

Item No.	Model No.	Media Cu Ft	Flow Rates - USGPM			Installation Space - Inches W x D x H	Fiberglass Tank Size Inches	Shipping Weight Lbs
			2005 / 2012	Peak	Backwash			
2005 / 2012	ACN-10C* / ACN-10C TYPE II**	1	4	5	5	12 x 12 x 57	10 x 47	75
2010 / 2013	ACN-15C* / ACN-15C TYPE II**	1.5	5	7	7	14 x 14 x 62	12 x 52	125
2011 / 2014	ACN-20C* / ACN-20C TYPE II**	2	7	10	10	16 x 16 x 60	14 x 50	145
2015 / 2022	MMN-10C* / MMN-10C TYPE II**	1	4	5	5	12 x 12 x 57	10 x 47	118
2020 / 2023	MMN-15C* / MMN-15C TYPE II**	1.5	5	7	7	14 x 14 x 62	12 x 52	180
2021 / 2024	MMN-20C* / MMN-20C TYPE II**	2	7	10	10	16 x 16 x 60	14 x 50	230

*Application must be based on analysis by an authorized DURO representative or distributor

** Type II mixed bed Multi-media or Taste and Odor filters with neutralizing capabilities should be applied on more aggressive pH water where a standard filter may have the tendency to overcorrect low pH. Consult your company representative for more details.

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Voltage = 115V Standard

- 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.

Organic Color Removal (Tannins) Filter



Beautifully clean, clear water

Tannins are decayed animal and vegetable matter which discolor your water and cause it to stain almost everything it comes in contact with. The new organic color removal (tannins) filter will restore your water's natural clarity.

How it works

The organic color removal filter works like a water softener. It contains a bed of specially formulated resin. As water passes through the bed, the organic color is held by the resin. Eventually the resin becomes saturated with tannins and must be cleaned and regenerated. A brine solution is drawn into the resin bed to release the accumulated minerals.

The minerals and brine are rinsed away with fresh water and the regenerated resin is ready to work again.

Demand regeneration control

The demand regeneration control valve includes a metering system which monitors your water use and initiates regeneration only when necessary - saving you money!

Features

- Programmable composite meter control valve with a **7 year guarantee**
- Heavy duty brine tank and mineral tank with a **lifetime guarantee**
- A choice of two different resins available to ensure proper color removal - OCR850 or OCR860
- Bypass valve for ease of installation and service
- Brine safety valve provides extra overflow protection



Item #19502:
Optional 90° Elbow

Specifications

Item No.	Model No.	Tannin Removal Capacity ppm	Salt per Regeneration Lbs	Flow Rate USGPM	Backwash Flow Rate USGPM	Resin Tank Size Inches	Brine Tank Size Inches	Resin Volume Cu Ft	Salt Capacity Lbs	Shipping Weight Lbs
2030	OCR15-850	3,000	15	4.5	1.2	10 x 54	21 x 36	1.5	300	110
2035	OCR20-850*	4,000	20	6	2.0	12 x 52	22 x 38	2	400	150
2040	OCR30-850*	6,000	30	9	2.4	14 x 65	22 x 38	3	400	200
2045	OCR15-860	3,000	15	4.5	1.2	10 x 54	21 x 36	1.5	300	110
2050	OCR20-860*	4,000	20	6	2.0	12 x 52	22 x 38	2	400	150
2055	OCR30-860*	6,000	30	9	2.4	14 x 65	22 x 38	3	400	200

Application must be based on analysis by an authorized DURO representative or distributor.

*Units includes brine tank grid.

- Maximum Water Temperature = 110°F (43°C)
- Maximum Operating Pressure = 100 PSIG (689 kPa)
- Pipe Size = 3/4"
- Voltage = 115V Standard

- 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.
- Regular use of Pro Neutra 7 soda ash resin cleaner is strongly recommended.



Use of chloramines to disinfect water by municipal water treatment plants is very common today. However, the use of chloramines leads to taste and odor issues, can cause skin irritations and can deteriorate some components of plumbing systems. Also, the chloramines must be removed from water used in the production of soft drinks and fisheries.

The Chloramines Removal Filter uses a special catalytically enhanced carbon media which efficiently removes the chloramines from water. Regular granular activated carbon media has less catalytic activity which will only partially remove chloramines. Controlled laboratory testing provides evidence of high chloramines removal capacity of the special media used in our products. The twelve day calendar clock control valve schedules regeneration to occur at preset intervals based on your estimated water use.

Features

- Heavy duty fiberglass resin tanks, **lifetime guarantee**
- Catalytically enhanced carbon media for chloramines removal
- 2510 Calendar Clock control valve for maximum backwash, **7 year guarantee**
- Designed for simple operation and service
- Bypass valve included for ease of installation and service



Specifications

Item No.	Model Description	Media cu.ft	Recommended * Flow Rate USGPM	Mineral Tank Size inches	Backwash usgpm	Installation Space WxDxH inches	Shipping Weight lbs
3995	CLF20	2	Up to 5	14 x 50	10	15 x 20 x 57	128
3996	CLF35	3.5	Up to 9	16 x 65	15	17 x 20 x 72	190

* Recommended flow rates are critical to filter performance

Maximum Water Temperature = 110°F (43°C)

Maximum Operating Pressure = 100 PSIG (689 kPa)

- At the stated flow rates, the pressure drop through these devices will not exceed 15 psig.
- 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.
- Chloramines removal capacity will depend on a variety of factors including influent chloramines concentration, pH and other factors, thus periodic sample testing is required.

Air Pump & Retention Tank Assembly

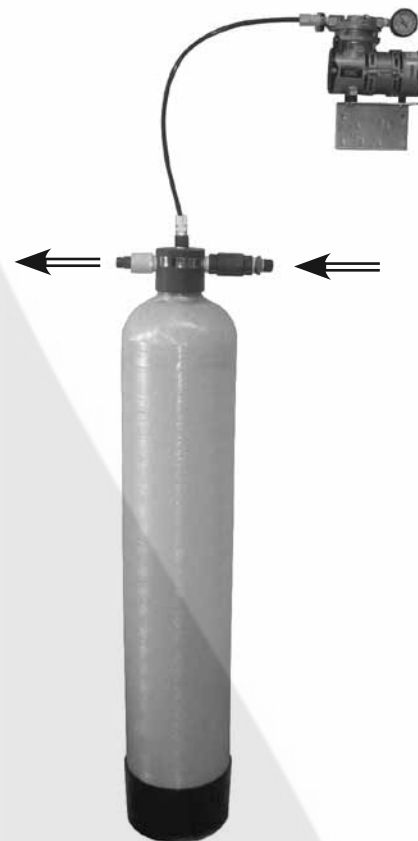
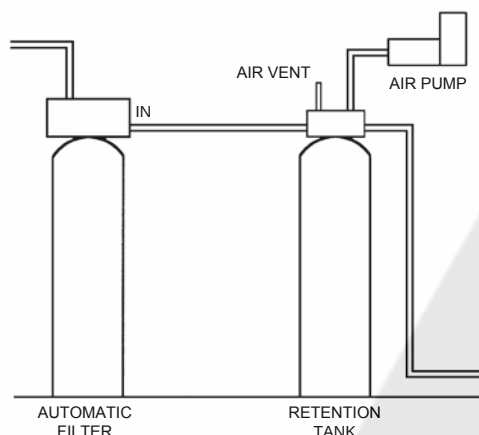


This component package is intended to be a supplementary device to be used with automatic oxidization filtration systems.

The air pump and retention tank can be used with either a standard pump and pressure tank system controlled by a pressure switch or a constant pressure system.

When applying this component package to a constant pressure system, additional control components may be required.

Typical Installation



Accessories

978005	AP1-115V Air Pump Compressor
978009	AP2-230V Air Pump Compressor
978011	Kit, Repair, 115-230V, Air Pump, #k769
978006	Install Kit
978007	Smart Vent Kit (Not Available in USA)
978008	Vent HD/Diffuser Kit (Not Available in USA)

Specifications

Item No.	Model Number	Electrical	Retention Tank Size	Maximum Pressure	Maximum Temperature
978003	AP1	115V / 1 ph / 60 Hz	9" x 48" (229mm x 1219mm)	75 psi (518 kPa)	100°F (38°C)
978004	AP2	230V / 1 ph / 60 Hz	9" x 48" (229mm x 1219mm)	75 psi (518 kPa)	100°F (38°C)
978010	Vent Tank Only	N/A	9" x 48" (229mm x 1219mm)	75 psi (518 kPa)	100°F (38°C)

OPERATING CONDITIONS: The Air Pump is water resistant, NOT water proof. The pump can operate with some room moisture, but should not be exposed to rain or very wet conditions. The Air Pump should not be used outdoors. The pump can withstand temperatures from 40° to 100° F as long as there is not a great amount of moisture. Humid locations should use air dryers to prevent moisture accumulation in pump.

Enjoy clean, stain-free laundry, spot-free dishes and fresher tasting water with the Super Filter Model NFF oxidizing filter. The Super Filter removes iron, manganese and hydrogen sulfide in a wide pH range of 5.0 to 9.0 with no chemicals needed for regeneration.

The Super Filter Model NFF uses an oxidizing filter media. The media uses the dissolved oxygen in the water supply to oxidize target contaminants. Through the use of an air eductor (not included), additional oxygen introduced to the water can greatly enhance the performance of the NFF filter models. We recommend the installation of either;

Item #33354 — Hydrocharger, PVC Plastic, 1" FNPT

Item #32393 — Micronizer, Noryl Composite Construction, 1" MNPT

The Hydrocharger or Micronizer assembly should be installed upstream of the NFF filter and adjusted to draw air for approximately one third of the pump cycle.

Conditions For Use

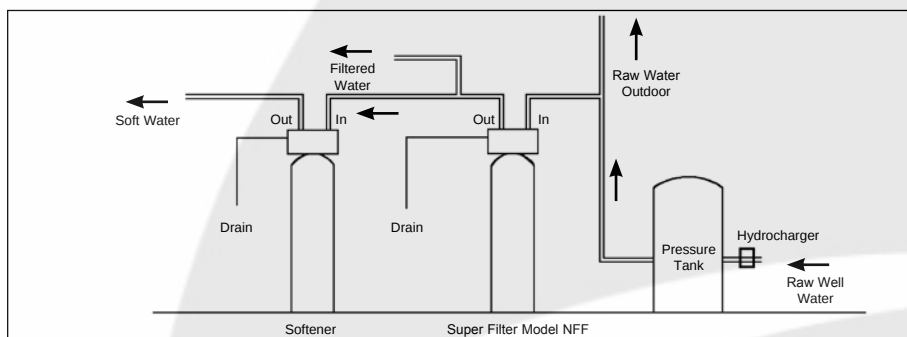
Recommended maximum contaminant concentrations in the well water to apply the Super Filter model on;

Iron - 30 ppm

Manganese - 10 ppm

Hydrogen Sulfide - 15 ppm

Typical Installation



Specifications

Item No.	Model Description	Media Cu Ft	Flow Rates USGPM		Installation Space Inches - W x D x H	Fiberglass Tank Size - Inches	Shipping Weight - Lbs
			Service	Backwash			
9069	NFF10	1.0	6	12*	14 x 14 x 62	12 x 52	180
9070	NFF20	2.0	12	15*	16 x 16 x 60	14 x 50	330
9082	NFF710	1.0	6	12*	14 x 14 x 62	12 x 52	180
9083	NFF720	2.0	12	15*	16 x 16 x 60	14 x 50	330

*For satisfactory operation, the pumping rate of the well system must equal or exceed the indicated backwash flow rate. Simply set the unit to backwash every day.

Maximum Water Temperature = 110°F (43°C)

Maximum Operating Pressure = 100 PSIG (689 kPa)

Pipe Size = 1"

Electrical = 110V / 60Hz (standard)

At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.

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

Ultra Micro Filter



Suspended particulate matter which gives water a cloudy appearance is trapped in this high performance silt, sediment and turbidity media filter bed to produce clean, clear water.

This filter uses Ultra Micro media which is based on a rare natural mineral that is highly processed and graded. Its unique properties allow it to radically alter the performance and cost of media filtration. The hardness, stability and micro-porous character of Ultra Micro filter makes it a perfect filtration media for virtually every application in the water and wastewater treatment industry.

Ultra Micro Media Features

- High filtration performance - 3-5 micron removal
- High capacity filtration throughout the entire Ultra Micro filter bed depth provides more than twice the capacity of multimedia filtration
- High flow – 3-4 times that of multimedia with superior filtration
- Long lasting media (>5 years) not consumed in the process
- Simple periodic backwash keeps the media clean and operating efficiently

Ultra Micro is a high-purity filter media that offers water filtration advantages over conventional sand, sand & anthracite, multimedia and other filter media products for pressure vessel applications. Ultra Micro provides higher solids loading, longer running times, superior performance and long bed life.

Ultra Micro filter media achieves approximately, twice the solids loading capacity per cubic ft. of media compared to conventional, granular, filter beds. This higher solids loading capacity translates to longer operational, running times, reduced backwash cycles and lower labor and energy costs.



Ultra Micro Filter Features

- 2510 control valve
- Ultra Micro media
- User friendly electronics and simple serviceability
- Adjustable cycles
- Heavy duty mineral tank
- Bypass valve for ease of installation and service

Warranty

The Ultra Micro filter is backed by a **7 year parts warranty** and a **limited lifetime warranty on the mineral tank**.

Specifications

Item No.	Model #*	Media Cu.Ft.	Flow Rates (For ultrafine particle removal 3-5 micron) USGPM			Flow Rates for Typical Application (8-15 micron) USGPM			Installation Space (inches)	Mineral Tank (inches)	Shipping Weight Lbs
			Service	Peak	Backwash	Service	Peak	Backwash			
4110	WGULTRAMF75	0.75	4	5	5	5.6	7	5	10 x 10 x 57	8 x 47	95
4111	WGULTRAMF100	1	5	7	7	7	8.7	7	11 x 11 x 58	9 x 48	145
4112	WGULTRAMF150	1.5	7	8	8	8.7	10.9	8	12 x 12 x 64	10 X 54	213
4113	WGULTRAMF200	2	10	12	12	12.6	15.7	12	14 x 14 x 62	12 X 52	265

*Available with a calendar clock control

Operating Temperature Range: 110°F (43°C)

Operating Pressure Range: 100 psi (689 kPa)

Pipe Size: 3/4"

Caution: These products are not intended to be used to treat water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

• Peak flow rates are intended for intermittent use only and are for residential application only.

• The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated therein, without obligation to change previously manufactured products or to note the change.

• For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.



Scaleless Scale Reduction Systems

Until now, water softeners have been virtually the only effective means of treating hard water.

Technology Breakthrough

A recent development, Scaleless media crystalizes dissolved calcium and magnesium in the water, which reduces scale build-up over time. Simply put, magnesium and calcium ions are collected on specially designed polymer beads, forming inert, microscopic crystals, which drop off and re-enter the water. These crystals are relatively insoluble, effectively isolating the hard water scale from the water chemistry and anything the water contacts.

Tested and Proven

Tested by an independent laboratory against the international protocol for scale prevention, WaterGroup's Scaleless Systems achieved a 96% effectiveness rating – the only technology to do so and far more effective than any other water softener alternative. Proven in over 6 years of successful use in homes and business.

Additional benefits

Green and Sustainable

Fully compliant with brine discharge regulations. Our systems are chemical-free and virtually maintenance-free.

Highly Flexible

Multiple media options allow system configurations that meet any water treatment requirements.

Proven Field Experience

This technology has been tested and proven –covering a wide range of applications with unparalleled success.

Scale Prevention

Template Assisted Crystallization has been proven as the most effective zero-discharge scale prevention alternative to other non-softening technologies.

Versatile

WaterGroup offers Scaleless system designs for residential, commercial, food service and specialty OEM applications.

Cost Effective

Direct Flow System¹

It saves water as it works.

NO regenerant

NO electricity

LOW maintenance

NO regeneration

Backwashing System²

Single tank, single valve system offers great performance in a small package. Carbon removes chlorine and scaleless media crystalizes dissolved hardness in the water to reduce scale build-up.

¹ Approximate bed life is 3 years.

² Approximate bed life is 3 years. Carbon bed should be replaced every year.



Direct Flow System

Backwashing System



Scaleless Media is tested and certified by WQA According to ANSI/NSF 61

See www.wqa.org listing for use limitations

Scaleless - Specifications



Scaleless Reduction Media	
Scaleless Reduction Media Specification	
Physical Properties	
Composition	Specially Treated Polymer
Size	0.550-.850 mm (12 X 40 mesh)
Color	Pale yellow-beige
Bulk Density	42 lbs per CF (0.67 kg/L)
Packaging	120 L (4.25 CF) Drum, 20 L (0.71 CF) Pail
Conditions for Use	
pH	6.5 to 8.5
Hardness, max	75 gpg
Temperature	41 to 140° F (5-60° C)
Chlorine	<3ppm
Iron, Ferrous	0.3 mg/L
Manganese	0.05 mg/L
Copper	1.3 mg/L
Oil & Polyphosphates	zero
H2S	zero

Operating Conditions	
Service Flow	4 gpm/liter of media
Bed Depth	4-10 inches typical depending on flow rate
Freeboard	20% of bed depth (minimum 20")
Backwash	Not Required
Empty Bed Contact Time	5 second
Service Flow Direction	Upflow
Regulatory Approval (WQA)	
Standard	NSF 61

CAUTION: The Scaleless unit must be the last stage in the treatment chain. Do not install any filters after Scaleless units or before any devices for which scale prevention is required. POU filters eg Carbon or Reverse Osmosis** are exempt from this requirement.

Do not apply phosphate or any other antiscalent either before or after scale reduction.

** Pre-treatment of scale for Reverse Osmosis units is one of the best applications of the Scaleless media. The recovery of the RO should be limited to 50% with NO recirculation of waste water. An automatic and periodic drain flush is recommended on the RO membrane..

POU Scaleless Systems							
Item #	Model #	Flow Rate (GPM)	Capacity gallons	Frequency of Replacement	Connections I/O	Dimensions (H x W x D)	Weight (lbs)
26171	SL10-1	1	525,000	1 Year	3/4"	15" X 5.5" X 5.5"	10
26172	SL20-2	2	1,050,000	1 Year	3/4"	25" X 5.5" X 5.5"	16
26173	SL20BB-5	5	2,100,000	1 Year	1-1/2"	28" X 7.5" X 9"	18

POE Scaleless Systems										
Item #	Item Description	Tank	Control Valve	Media (Litres)	Flow Rate (GPM)	Back-wash	Frequency of Replacement	Connections I/O	Dimensions (H x W x D)	Weight (lbs)
Scaleless, In/Out Systems										
7951	SL844-12	8 x 44	—	3	12	—	3 years	3/4"	48.5" x 8" x 8"	50
7952	SL948-16	9 x 48	—	4	16	—	3 years	3/4"	52.5" x 9" x 9"	55
7953	SL1054-20	10 x 54	—	5	20	—	3 years	1"	59.5" x 10" x 10"	80
7954	SL1252-30	12 x 52	—	7.5	30	—	3 years	1"	56.5" x 12" x 12"	95

Scaleless c/w Granular Activated Carbon Two-in-One Systems*										
7960	SL948-10-5600	9 x 48	5600SXT	1 CF	10	4	3 years	3/4"	15" x 10" x 17"	97
7961	SL1054-12-5600	10 x 54	5600SXT	1.5 CF	12	5	3 years	3/4"	16" x 10" x 17"	129
7962	SL1252-16-7000	12 x 52	7000SXT	2 CF	16	7	3 years	1"	18" x 13" x 18"	168

* The standard Two-in-One System come with Granular Activated Carbon Media. Other media options available upon request

Media and Scaleless distributor stack is recommended to be replaced every three years.

Scale Media operates in upflow condition,

These systems does not have a grain removal capacity, however, other contaminants present in the water will gradually degrade the effectiveness of this media. It is recommended to change the media/cartridge at least once a year,

Temperature Range: 350 F/20 C to 100° F/300 C

Maximum Pressure: 125 psi/8.6 bar

Do not use where water is microbiologically unsafe without adequately treating the water before or after the system.

"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."

At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig

Limited Warranty - 10 years on Mineral Tank, 5 years on Control Valves. For more information, please refer to Owner's Guide



Scaleless Media is tested and certified by WQA According to ANSI/NSF 61

See www.wqa.org listing for use limitations

Drinking Water Systems

Water Conditioning Products



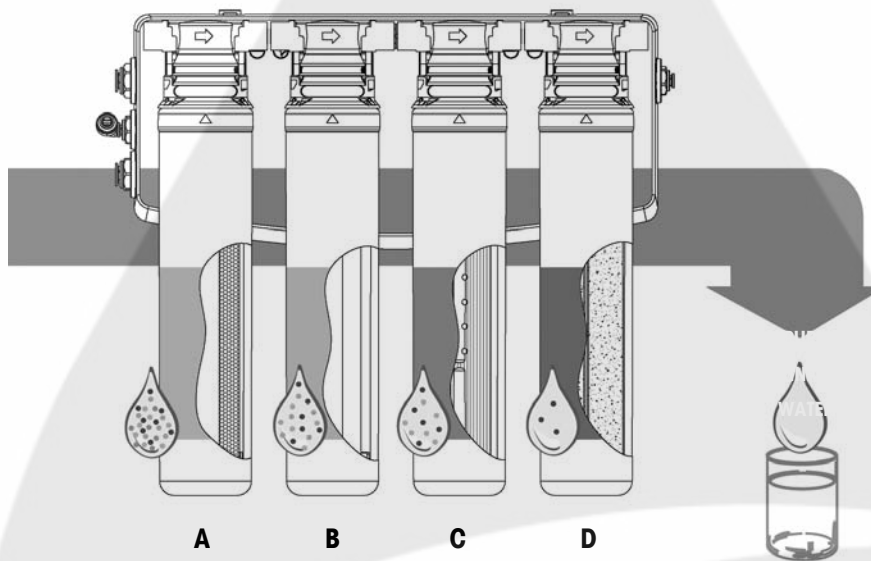
Customized drinking water

Water conditions can vary even in the same community. Our PURA High Performance Drinking Water System can be configured to meet your specific requirements. There are 10 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 lesser than RO and there is no waste.

The innovative PURA twist and lock design makes service simple. Twist off the old cartridge and twist on the new. No messy sump removal. PURA DWS makes 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.



Quick glance on how PURA works on water

- A Sediment Filters.** Screens out sediments and particles.
- B Carbon Filters.** Improve water's taste and odor, including chlorine odor reduction.
- C Reverse Osmosis or Ultra filtration.** Reverse Osmosis Membrane reduce dissolved substances. Several membranes capacities are available. Ultra Filtration membrane reduce undissolved solids down to 0.1 Micron
- D Several filter options are available depending on your local conditions and requirements.**



Model QCRO4V-50 is NSF/ANSI certified by WQA according to standard 58 for TDS reduction only, as verified and substantiated by test data.

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	Ultra filtration Membrane
Stage 4 (Post-Filter)	Activated Carbon Filter	Activated Carbon Filter	Activated Carbon Filter
Output (GPD)†	50	75	720

*Customized systems available upon request.



Conditions for Use

Feed Water Pressure *	276-690 kPa (40-100 psi)
Temperature	4-38° C (40-100° F)
Community/Private	Chlorinated/Non-Chlorinated
pH Range	3.0 - 11.0
Maximum TDS Level	2000 mg/L
Turbidity**	<1.0 NTU
Maximum SDI ***	<4.0
Hardness (CaCo3)	<171 mg/L (<10gpg)
Iron (Fe)	<0.1 mg/L
Manganese (Mn)	<0.05
Hydrogen Sulfide (H2S)	0
Residual Chlorine (Cl2)	<2.0

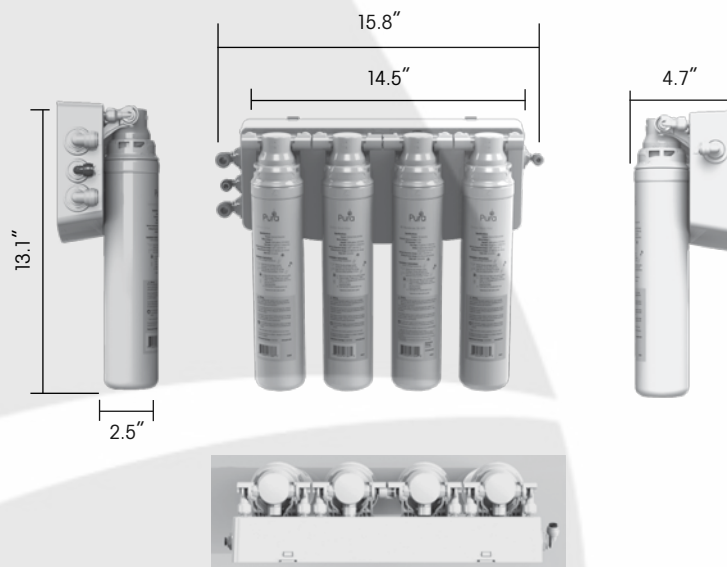
** Nephelometric Turbidity Unit

*** Silt Density Index: Value stated in SDI units

† Manufacturer's output specification only with inlet conditions of 345 kPa (50 psig), 25°C (77°F), going to atmosphere.

NOTES:

- * Pressure Regulator is recommended for feed water pressures exceeding 552 kPa (80 psig). The performance of a reverse osmosis membrane is highly dependent upon pressure, temperature and TDS. The actual volume of product water and rejection percentage will vary with differences from the test conditions that membrane ratings are based upon. These drinking water systems are not intended to be used for the treatment of water that is microbiologically unsafe or of unknown quality. Storage tank capacity is dependent on pressure. Example: with a 7 psi precharge, the drawdown volume is 2.16 gal at 60 psi, 1.79 gal at 40 psi for the storage tank shown



Model QCRO4V-50 is NSF/ANSI certified by WQA according to standard 58 for TDS reduction only, as verified and substantiated by test data.

PURA High Performance Drinking System



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.

Faucet. Standard faucet is shown - Designer Faucets are available in multiple styles and colors



Model QCRO4V-50 is NSF/ANSI certified by WQA according to standard 58 for TDS reduction only, as verified and substantiated by test data.

Filter Cartridge and Single Stage Standalone System Specifications

	Sediment 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		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		Granular Activated Carbon Filter	pH Booster and Remineralizer	Hollow Fiber Mechanical Filtration	Carbon Block	Scale Reduction
Micron	5	5	50	—	—	0.2	1	
Capacity*	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							
Single Stage System Model #**	SEDQC1/4	CBQC1/4	CB50QC1/4	GACQC1/4	PHQC1/4	UFQC1/4	CB1QC1/4	SCALE-QC1/4

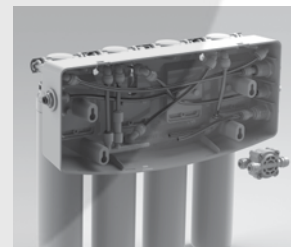
RO Membrane

* May vary depending on water quality

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

Purpose	TDS Reduction
Type	Thin film Composite Membrane
Recovery	25%
TDS Reduction %	95%
Rating	50 and 75 GPD
Minimum Flow Rate @ 60psi	0.5 gal/min
Quick Change Filter Dimensions	7.54 x 30.9 (2.96" x 12.17")
Inlet/Outlet Connections	1/4" Quick Connect
Working Temperature Range	4-38° C (40-100° F)
Working Pressure Range	207-828 kPa (30-120 psi)

Easy maintenance of service components including line check valve and autoshut off





1240 Series Reverse Osmosis Drinking Water Systems

DURO'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.

With almost 2/3's of us not drinking enough water each day, having delicious water conveniently on hand can help keep you properly hydrated and feeling great. Cut down on sugary beverages and avoid symptoms of mild dehydration such as headaches, dry skin and daytime fatigue. Use for all your cooking needs. Perfect for coffee, tea and soups. 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:

- High quality reverse osmosis membrane
- Choice of 25, 50 and 75 gallons per day
- 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 Storage Tank (optional plastic storage tank is available)

Choose a System Just Right for You

DURO is one of North America's largest suppliers of water treatment equipment. With over 40 years of experience, DURO has been the leader in reverse osmosis drinking water technology; designing and state of the art systems for residential and commercial applications. We offer a complete range of drinking water systems to fit your needs and your budget.

Series III - Premier Push Button Monitored Reverse Osmosis Systems

Our premier model is equipped with our patented Smartap® Push Button Monitor. At the touch of a button you can be assured that you are receiving top quality water or you will be alerted that it is time to change your membrane. This model also utilizes three dedicated sediment and carbon filters.



This model is tested and certified by WQA against NSF/ANSI 58 for the reduction of TDS. Tested and Certified by WQA against ORD0902 for "lead free" compliance



WQA Tested and Certified against CSA B483.1

Series II - Advanced Four-Stage Reverse Osmosis Systems

This model produces great tasting drinking water utilizing separate dedicated sediment and carbon pre-filters, allowing for longer run time between cartridge changes.

Series I - Standard Three-Stage Reverse Osmosis Systems

Series I utilizes a combination sediment/carbon pre-filter instead of dedicated sediment and carbon pre-filters. This system is great for installing in tight spaces or for those looking for the most economical solution.



Series III - Models 4VTFC75G-PB, 4VTFC50G-PB, 4VTFC25G-PB



Series II - Models 4VTFC75G, 4VTFC50G, 4VTFC25G



Series I - Model 3VTFC50G

NOTE: All units ship with metal storage tank.

1240 Series Models and System Configurations

Item Number	Model	Vessels	Sediment Filter	Pre-Filter	Membrane	Post-Filter	Output (GPD) [†]	Monitor
1240102-20	3VTFC50G	3	None	Dual-Purpose	Thin Film Composite	Activated Carbon	50	None
1240201-20	4VTFC25G	4	String Wound Polypropylene	Activated Carbon	Thin Film Composite	Activated Carbon	25	None
1240202-20	4VTFC50G	4	String Wound Polypropylene	Activated Carbon	Thin Film Composite	Activated Carbon	50	None
1240203-20	4VTFC75G	4	String Wound Polypropylene	Activated Carbon	Thin Film Composite	Activated Carbon	75	None
1240301-20	4VTFC25G-PB*	4	String Wound Polypropylene	Activated Carbon	Thin Film Composite	Activated Carbon	25	Push Button
1240302-20	4VTFC50G-PB*	4	String Wound Polypropylene	Activated Carbon	Thin Film Composite	Activated Carbon	50	Push Button
1240303-20	4VTFC75G-PB*	4	String Wound Polypropylene	Activated Carbon	Thin Film Composite	Activated Carbon	75	Push Button

* These models are tested and certified by WQA against NSF/ANSI 58 for the reduction of TDS. Tested and Certified by WQA against ORD0902 for "lead free" compliance. WQA Tested and Certified against CSA B483.1

† Manufacturer's output specification only with inlet conditions of 345 kPa (50 psig), 25°C (77°F), going to atmosphere.

Conditions for Use

Source Water Supply Profile		Chemical Parameters	Max mg/L*
Community / Private	Chlorinated / Non-Chlorinated	Hardness (CaCO ₃)	<256 (<15 gpg)
Feed Water Pressure ¹	242 - 690 kPa (35-100 psig)	Iron (Fe)	<0.1
Temperature	4° - 38°C (40° - 100°F)	Manganese (Mn)	<0.05
pH Range	3.0 - 11.0	Hydrogen Sulfide (H ₂ S)	0.00
Maximum TDS Level	2000 mg/L	Residual Chlorine (Cl ₂)	<2.0
Turbidity**	<1.0 NTU	** Nephelometric Turbidity Unit * mg/L = ppm	
Maximum SDI***	<4.0	*** Silt Density Index: Value stated in SDI units.	

Notes: ¹ Pressure Regulator is recommended for feed water pressures exceeding 552 kPa (80 psig).

The performance of a reverse osmosis membrane is highly dependent upon pressure, temperature and TDS. The actual volume of product water and rejection percentage will vary with differences from the test conditions that membrane ratings are based upon.

These drinking water systems are not intended to be used for the treatment of water that is microbiologically unsafe or of unknown quality.

Storage tank capacity is dependent on pressure. Example: with a 7 psi precharge, the drawdown volume is 2.16 gal at 60 psi, 1.79 gal at 40 psi for the storage tank shown.

This product is manufactured under one or more of the following U.S. patents: 5,045,197; 5,057,212; 5,221,473

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 #: 92325

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



See page 59 for details regarding this booster pump.



Economy Reverse Osmosis Drinking Water Systems

Economy RO Model Components

Reverse Osmosis Membrane - allows water molecules to pass while dissolved impurities are flushed to the drain.

Five Micron Pre-Filter - removes tiny particles of suspended dirt and sediment.

Activated Carbon Pre-Filter - protects TFC membrane from chlorine and removes organics.

Activated Carbon Post Filter - removes tastes and odors to give water a final "polish" prior to delivery.

Pressurized Storage Tank - holds purified drinking and cooking water ready for use.

Chrome Plated Faucet - mounts attractively on sink or counter to deliver pure water at the touch of a lever.

Economy RO Booster Pump Model Specific Components

Booster Pump - raises and maintains the water pressure at the optimum level to ensure the highest TDS rejection rate with maximum production.

Product Water Pressure Switch - shuts off system when pressure tank has been filled.

Feed Water Pressure Switch - protects pump against run dry situations.

All models include:

3/8" outlet tubing for higher flows, thin film composite (TFC) membranes, quick connect fittings for easy installation and servicing, heavy duty powder coated bracket, stainless steel product water check valve, automatic shut-off valve, storage tank and under counter installation kit.

The performance of a reverse osmosis membrane is highly dependent upon pressure, temperature and TDS. The actual volume of product water and rejection percentage will vary with differences from the test conditions that membrane ratings are based upon. These drinking water systems are not intended to be used for the treatment of water that is microbiologically unsafe or of unknown quality.

Economy Reverse Osmosis Systems



Model E50TFC-3SF features:

- Reverse osmosis membrane, nominally rated at 50 U.S. gallons per day.
- Pre-filters: 10" five (5) micron Sediment Cartridge and 10" Activated Carbon Cartridge
- Post filter: 10" Activated Carbon Cartridge
- Non air gap faucet
- Metal storage tank

Model E75TFC-3SF features:

- Reverse osmosis membrane, nominally rated at 75 U.S. gallons per day.
- Pre-filters: 10" five (5) micron Sediment Cartridge and 10" Activated Carbon Cartridge
- Post filter: 10" Activated Carbon Cartridge
- Non air gap faucet
- Metal storage tank

Specifications

Item Number	Model Description	Stages	Sediment Filter	Pre-Filter	Membrane	Post-Filter	Output GPD ⁽¹⁾	Rejection % ⁽²⁾	Storage Tank US Gallons ⁽³⁾
2870	E50TFC-3SF	4	Spun Polypropylene	Activated Carbon	TFC	Activated Carbon	50	up to	4.0
2871	E75TFC-3SF	4	Spun Polypropylene	Activated Carbon	TFC	Activated Carbon	75	99%	4.0

⁽¹⁾Nominal product water ratings are based on the following conditions: Supply TDS of 250 ppm softened tap water, 50 psi (0.36 Mpa), 77°F (25°C), pH 8 and 15% recovery with outlet to atmosphere.

⁽²⁾TDS rejection percentages are dependent on the supply conditions and the substance being measured.

⁽³⁾Storage tank capacity is dependent upon pressure. For example, with a 7 psi precharge, the drawdown volume is 2.16 gallons at 60 psi; 1.79 gallons at 40 psi.

Economy Reverse Osmosis Systems c/w Booster Pump



Model EBP75TFC-3SF features:

- Reverse osmosis membrane, nominally rated at 75 U.S. gallons per day.
- Booster Pump: Mounted on RO to maintain constant water pressure.
- Pre-filters: 10" five (5) micron Sediment Cartridge and 10" Activated Carbon Cartridge
- Post filter: 10" Activated Carbon Cartridge
- Non air gap faucet
- Metal storage tank

Specifications

Item Number	Model Description	Stages	Sediment Filter	Pre-Filter	Membrane	Post-Filter	Output GPD ⁽¹⁾	Rejection % ⁽²⁾	Storage Tank US Gallons ⁽³⁾
2876S	EBP75TFC-3SF	4	Spun Polypropylene	Activated Carbon	TFC	Activated Carbon	75	up to 99%	4.0

⁽¹⁾Nominal product water ratings are based on the following conditions: Supply TDS of 250 ppm softened tap water, 50 psi (0.36 Mpa), 77°F (25°C), pH 8 and 15% recovery with outlet to atmosphere.

⁽²⁾TDS rejection percentages are dependent on the supply conditions and the substance being measured.

⁽³⁾Storage tank capacity is dependent upon pressure. For example, with a 7 psi precharge, the drawdown volume is 2.16 gallons at 60 psi; 1.79 gallons at 40 psi.

Conditions for Use

Source Water Supply Profile		Chemical Parameters	Maximum mg/L
Community/Private	Chlorinated/Non-Chlorinated	Hardness (CaCO ₃)	< 10 gpg
Feed Water Pressure*	242 - 690 kPa (35 - 100 psig)	Iron (Fe)	< 0.1
Temperature	4 - 38°C (40 - 100°F)	Manganese (Mn)	< 0.05
pH Range	3.0 - 11.0	Hydrogen Sulfide (H ₂ S)	0.00
Maximum TDS Level	2000 mg/L	Residual Chlorine (Cl ₂)	< 2.0
Turbidity**	< 1.0 NTU		
Maximum SDI***	< 4.0		

*Pressure regulator is recommended for feed water pressures exceeding 552 kPa (80 psig)

**Nephelometric Turbidity Unit

***Silt Density Index: Value stated in SDI units.

- Ideal for home, farm or cottage use on microbiologically safe water supplies.
- Filters sediment, rust and unpleasant tastes and odors.
- Reduces levels of chlorine and sediment down to 0.5 micron.
- Easy do-it-yourself installation.
- Includes attractive chrome plated faucet.
- Cheaper and more convenient than bottled water.

Ultra 2 Under Sink Filter System

No. 26117

Replacement Cartridges

No. 26118

0.5 Micron Carbon Briquette Cartridge

No. 26006

Superior Taste Cartridge

Chrome Long Reach Faucet

No. 87511



Faucet comes with the system.



Aquatec - Reverse Osmosis Booster Pumps



Aquatec booster pumps are available for reverse osmosis system installations on low pressure water supplies. A booster pump raises and maintains the water pressure to the optimum level to ensure the highest rejection rate and maximum production.

Distinguishing Features

- Toughest, most durable pump on the market
- Adjustable maximum outlet psi (regardless of feed pressure)
- Expels trapped air (no more air locks)
- Can be mounted w/pump head up or down
- More flow at extremely low inlet pressures
- New motor venting system to remove moisture
- EMI/RFI electronic noise suppression
- 100% final performance tested
- 1 year limited warranty against manufacturing defects

Item # 92287 Aquatec Model CDP 6800 Series Booster Pump Package

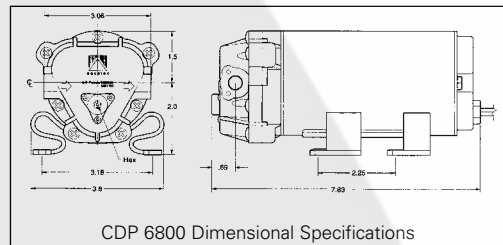
- complete with PSW Shutoff Switch and 115V Transformer • **suitable for R.O. Systems rated up to 50 GPD**



Key Operating Benefits:

- Maximum Pump Pressure - 120 PSI (827 kPa)
- Maximum Inlet Pressure - 40 PSI (275 kPa)
- Used with membranes 9 to 50 GPD
- Up to 30,000+ operating hours (estimated)
- Can run dry without damage
- Self priming - 60" lift
- Low voltage (12-24V) motor for maximum safety
- Corrosion resistant exterior
- Continuous or intermittent operation
- Supplied with 3/8" PSW Tank Shut-off switch

- Quiet - less than 45 DBA
- Pump inlet/outlet 1/4" QC
- Flexible mounting plate



Item # 92317 Aquatec Model CDP 8800 Series Booster Pump Package

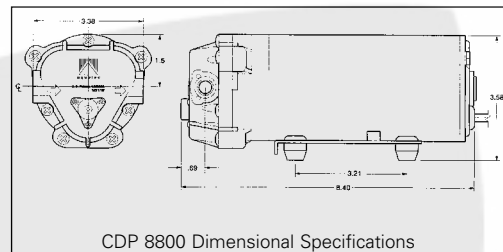
- complete with PSW Shutoff Switch and 115V Transformer • **suitable for R.O. Systems rated up to 120 GPD.**

Item # 92317-1 Aquatec Model CDP 8800 Package with 3/8" x 1/4" Connectors and Tubing



Key Operating Benefits:

- Maximum Pump Pressure - 120 PSI (827 kPa)
- Maximum Inlet Pressure - 40 PSI (275 kPa)
- Used with membranes 50 to 100 GPD
- Up to 15,000+ operating hours (estimated)
- Can run dry without damage
- Self-priming - 60" lift
- Low voltage (12-24V) motor for maximum safety
- Corrosion resistant exterior
- Continuous or intermittent operation
- Supplied with 3/8" PSW tank shut-off switch

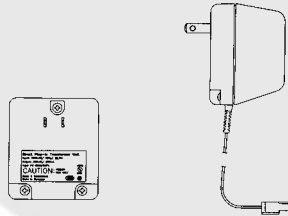


- Quiet - less than 52 DBA
- Pump inlet/outlet 3/8" QC
- Flexible mounting plate

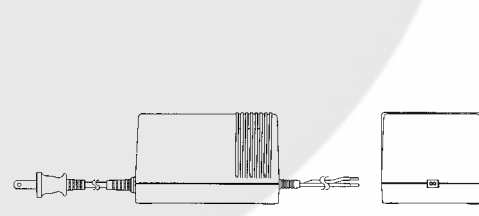
Accessories



Item # 92318:
3/8" PSW Tank Shut-off Switch



Item #92319:
CDP 6800 Transformer



Item #92323:
CDP 8800 Transformer

Item #92325



The Kemflo Reverse Osmosis Booster Pump can be used with the 1240 Series Reverse Osmosis systems from 9 to 75 GPD to provide increased pressure to the inlet of the system for increased production and higher quality water. The pump provides virtually noise free operation.

1 Year Limited Warranty against manufacturing defects

Nominal Maximum Flow Rate = 1.0 LPM (0.26 USGPM)
Maximum Pump Pressure = 758 kPa (110 PSI)
Maximum Inlet Pressure = 275 kPa (40 PSI)
Ambient Temperature Limits = 5 to 35°C (40 to 90°F)
Voltage = 24VDC

Pump comes complete with:

- 120VAC to 24VDC Class 2 Transformer, UL Approved for the US and Canada
- Pressure Switch with 3/8" QC Fittings (preset @ 40 PSI)
- Pump inlet / outlet with 1/4" QC Fittings
- Vibration Dampening Motor Mount



Item #92342
3/8" HP1000 Kemflo
Pressure Switch



Item #92344
Kemflo Transformer

Aquatec - Reverse Osmosis Demand Pumps

Item # 92341



R/O water DEMAND/TRANSFER PUMP to supply additional faucets or longer pipe runs.

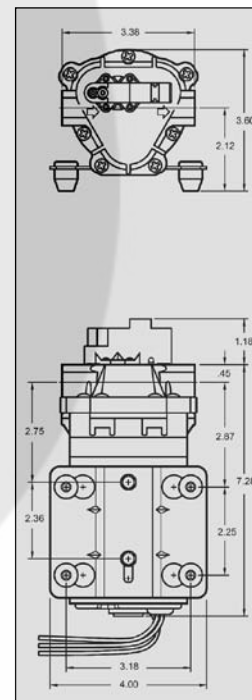
Aquatec DDP 5800 Series Delivery/Demand Pump Package

- complete with internal on/off pressure switch
- 115V/60 Hz
- Pressure regulated to approximately 60 psi at 1 GPM
- Pump inlet/outlet 3/8"

Key Operating Benefits:

- 0.25 to 1.5 GPM (5 lpm) flow
- Adjustable switch and bypass settings
- 7 year design life (estimated)
- Minimal pulsations
- Self priming
- Chemically resistant versions
- Up to 130 psi (9 bars) pressure
- Auto purging
- Highly efficient
- Whisper quiet at lower flows
- Can run dry without damage

1 Year Limited Warranty against manufacturing defects



Leak Controller



The first line of defense against water damage.

Leak Controller detects the water spill on the surface and engages a shut-off valve to cut-off the water supply. It also sounds an alarm to alert the customer until the valve is manually reset. By preventing the continuous water flow, equipment and property damage are restricted and the user liability is reduced.

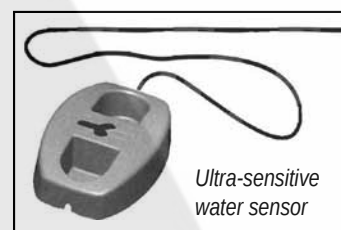
It can be connected to the water purification system, POU coolers, refrigerators, ice makers etc.

Features

- Available valve to tubing connection sizes: 1/4" for plastic and copper tubing
- LeakLogic™ RISC based management - state of the art microchip technology for sensitive controls, operation verification and long battery life
- Status test button
- Audio and LED status indicator
- Audio alarm
- Powered by 4 "AA" batteries - no external electrical connections required
- Pull-out battery holder for convenient battery replacement
- Programmable service reminder
- NSF approved automatic ball valve shut-off and plastic tubing
- Two screw mounting plate allows for quick and simple installation
- Sensor towel
- Built with superior impact resistant ABS plastic
- One sensor included with coin test slot and series connectors
- Built with reinforced nylon and glass materials on stressed components
- Water detection sensitivity down to 2 ppm TDS (Total Dissolved Solids)
- Programmable service reminder indicator
- Conformal coating on the printed circuit board
- One Year Limited Warranty from date of purchase against defects in material and workmanship



Item #92434



Ultra-sensitive
water sensor

Specifications

Power	4 "AA" size alkaline type batteries
Sensor	Electromechanical dual probe with series connectors
Temperature	System operating range: 40° to 100°F (4° to 37°C) Water operating range: 36° to 140°F (2° to 60°C)
Size (H x W x D)	6.75 x 3.25 x 2.5" (171 x 83 x 64 mm)
Weight	0.9 lbs (0.4 kg) with batteries
Solenoid	6V DC Push-Type
Alarm	85+dB at 5' @ 3.4 ± 0.5 kHz pulsing alarm
LED	Blue
Mounting	Accessories and bracket supplied for wall mounting
Battery Replacement	Replace annually or upon low battery indicator

- This product does not guarantee the prevention of water damage.

- Many factors increase the probability of preventing water damage including: Constant Leak Controller testing / Physical verification of all parts / Correct placement of the sensor(s)

Manufactured by Water Controller Products, Livermore, California

Leak Controller, LeakLogic are trademarks of Water Controller Products. Leak Controller is patent pending.

The Value Faucets are the best alternative to upgrade the existing basic faucets in your home. The Value Faucets are a unique quarter turn faucet that comes in two designs and six different finishes. These faucets are NSF approved and are lead-free.

Features:

- Elegant design complements today's high-end kitchens
- NSF listed to ANSI NSF Std. 61 and is lead free
- Retrofits most brands
- Internal ceramic disc provides smooth operation
- High Neck Design which swivels 360°
- Lever style quarter turn handle
- All mounting hardware is included
- Available in two designs, six different finishes
- Two-year warranty



These faucets are NSF 61 approved and are lead-free.

Series 888 Specifications

- Overall Height of 11.5" (292 mm)
- Swivels Easily, 360°
- Spout Reach: 5.7" (146 mm)
- Mounting Hole Diameter: ½" (12.5 mm)
- Base Diameter: 1.73" (44 mm)
- Connection*: ¼" compression nut fitting
- Operating pressure: 125 psi/8.3 bar
- Flow Rate: 1.0 gpm/3.785 lpm at 35 PSI/2.32 BAR
- Temperature Rating: 4°C/40°F to 70°C/158°F

Series 905 Specifications

- Overall Height of 11.075" (281.32 mm)
- Swivels Easily, 360°
- Spout Reach: 4.75" (120 mm)
- Mounting Hole Diameter: ½" (12.5 mm)
- Base Diameter: 1.76 (44.8 mm)
- Connection*: ¼" compression nut fitting
- Operating pressure: 125 psi/8.3 bar
- Flow Rate: 1.0 gpm/3.785 lpm at 35 PSI/2.32 BAR
- Temperature Rating: 4°C/40°F to 70°C/158°F



Item #	Description	Item #	Description
Series 888		Series 905	
87580	Faucet, Polished Chrome	87582	Faucet, Polished Chrome
87581	Faucet, Brushed Nickel	87583	Faucet, Brushed Nickel
87584	Faucet, Black	87586	Faucet, Satin Nickel
87585	Faucet, Satin Nickel	87587	Faucet, Oil Rubbed Bronze
87588	Faucet, Antique Brass		
87589	Faucet, Antique Wine		

* The standard faucets come with 1/4" compression nut fitting. The 3/8" quick connect faucet adapter fitting (#92407) can be purchased separately.

Remote Water Chiller



Stylish and unique water chiller that fits discretely under the kitchen sink...ready to plug in!

- Provides perfectly chilled drinking water at 39 - 42°F (4 - 6°C)
- All stainless steel waterways to use with RO system
- White powder coated galvanized steel cabinet with light gray plastic fascia
- Easy to install with quick-connect fittings
- Four foot insulated power cord with NEMA 5-15 plug-ready to plug in
- Adjustable water temperature control
- One gallon per hour cooling capacity; stainless steel storage tank
- Air cooled; no cabinet venting required
- Includes four feet of 1/4" diameter tubing, two quick-connect fittings, wall mounting clips and screws, instruction manual
- NSF approved



Cabinet: Powder coated galvanized steel cabinet with plastic front.

Cold Water Refrigeration Unit: Convection-cooled condenser. Internally spring mounted, hermetically sealed compressor with automatic overload protector. No lubrication needed. Refrigerant is controlled accurately by capillary tube. Air-cooled; designed to fit under a cabinet.

Cold Water Thermostat: Temperature is controlled by an adjustable thermostat with "OFF" position that is easily accessible on the front of the cabinet.

Cold Water Reservoir: Evaporator is made of copper tube on stainless steel water tank and both are encapsulated in insulation.

Capacity: 1 GPH cooling capacity.

Electrical: 115 volts, 60 Hz. Water cooler compressor hp 1/20. Insulated power cord with NEMA 5-15 polarized plug.

Limited One Year Warranty: One year on the sealed refrigeration system and most component parts. Detailed warranty certificate enclosed with each water cooler; sample copy available upon request.

Specifications

Item Number	Model Description	Cooling Capacity ¹ GPH (LPH)	115 volts, 60Hz		Dimensions W x D x H Inches	Net Weight Lbs.
			Full Load Amps	Rated Watts		
2878	R1P	1.0 (3.8)	1.3	135	10-5/16 x 8-3/4 x 14-5/8	30

¹Capacity is at industry standard rating conditions of 50°F (10°C) outlet water, 80°F (26.7°C) inlet water and 90°F (32.2°C) ambient air.

- Model covered by this specification complies with all known Plumbing Codes. Listed by Underwriters Laboratories Inc.
- Components in this cooler are lead free as defined by the safe Drinking Water Act Amendments of 1986, and the Lead Contamination Control Act of 1988.
- Drinking water cooler is Certified to NSF/ANSI 61.
- All specifications subject to change without notice.



Certified to
NSF / ANSI 61 / Section 9



PURA UV Disinfection Systems

Water Conditioning Products



PURA™ Ultraviolet Disinfection Systems

PURA is an advanced Ultraviolet Water Treatment System. It was designed with you, the customer, in mind. PURA Product's are lightweight, easy-to-use and simple to maintain. PURA Product's will provide you with clean, disinfected drinking water for years to come.

All PURA Product's feature

- Water disinfection
- Easy to change lamp and filters
- Lamp and ballast matched for quality assurance
- Simple installation

*PURA Product's are guaranteed to be free from defects in materials and workmanship for a period of three years under normal use with the exception of electrical components which are guaranteed for a period of one year.

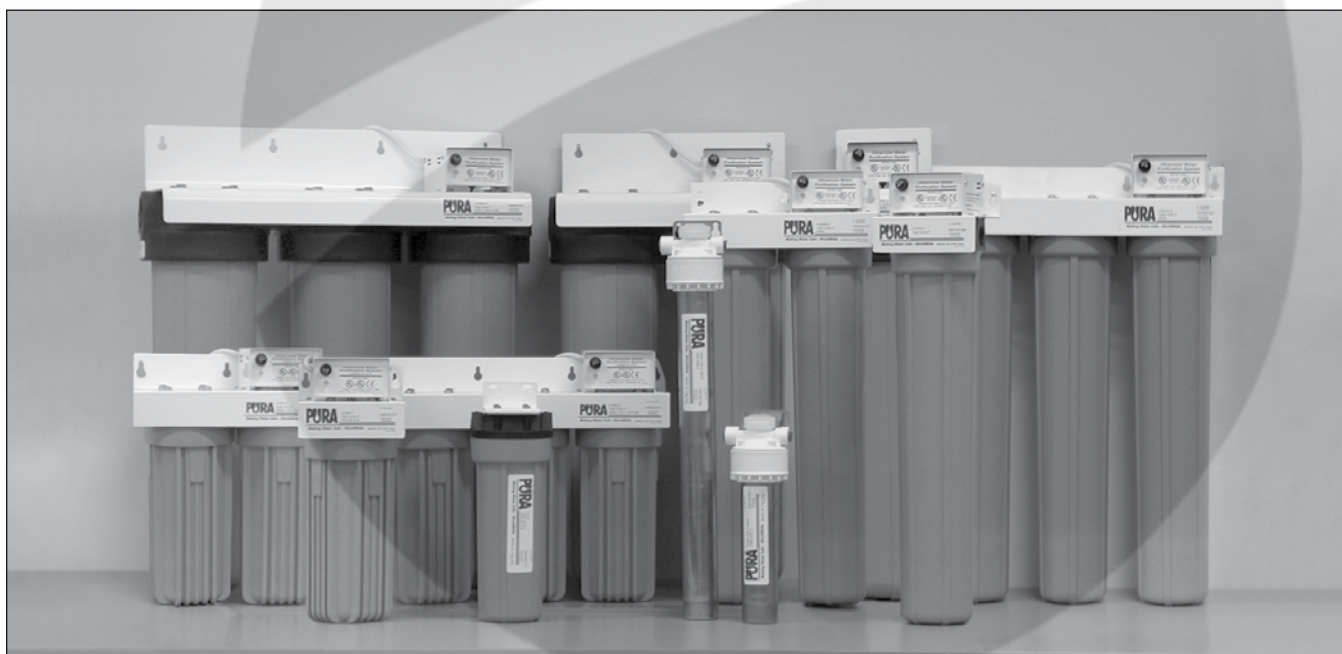
These systems are for the supplemental treatment of disinfected drinking water which has been treated or other drinking water which has been tested and deemed acceptable for human consumption by the state or local health agency having jurisdiction. These systems are designed to reduce normally occurring non-pathogenic nuisance organisms and is not intended for the treatment of contaminated water.

Conditions For Use - All Lines

Source Water Supply Profile		Chemical Parameters	Max mg/L
Feed Water Pressure [†]	20 – 75psig (138 – 517kPa)	Hardness (CaCO ₃)	< 120 (7 gpg)
Feed Water Temperature	38° – 105°F (3.3° – 40.5°C)	Iron (Fe)	< 0.3
pH Range	6.5 – 9.5	Manganese (Mn)	< 0.05
Total Dissolved Solids	< 1500 mg/L	[†] Water Pressure must not exceed 75 psig (517 kPa) or a pressure regulator must be installed.	
Total Suspended Solids	< 10 mg/L		
Turbidity	< 5 NTU		

The contaminants and other substances reduced by this water treatment device are not necessarily in your water. In addition, the presence of certain contaminants in your drinking water does not necessarily pose a health risk.

U.S. Patent #4,971,687



UVB Series™

PURA 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.

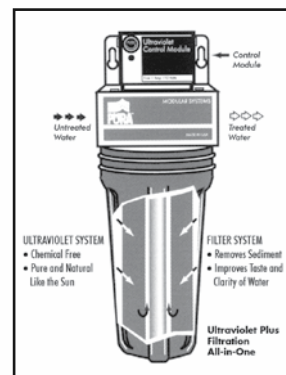
This compact All-in-One system installs with ease and can be used anywhere that clean, clear, good tasting disinfected water is needed. It is ideal for point-of-use applications like under the kitchen sink, office water coolers, water vending machines, boats, recreational vehicles, etc.

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



Specifications & Performance UVB Series

Item #	Model Description	# of sumps	Sump Type	Sump 1	Sump 2	Sump 3	Lamp #	Power Used	Flow Rates ⁽¹⁾ GPM (L/min)	Dimensions H x W x D In. (cm)	Shipping Weight Lbs. (Kg)	Inlet/ Outlet Size
15610111	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
15610411	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
15610511	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
15620121	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
15630131	UVB3-EPCB/GC/SD	3	#10	5 Micron Sed Filter	Granular Carbon Filter	EPCB Carbon/UV	#11	14 Watts	2 (7.6)	15 x 16 x 5.5 (38.1 x 40.6 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 $\mu\text{W-s/cm}^2$ or greater.

PURA™ Ultraviolet Disinfection Systems



UV20 Series™

The PURA 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.

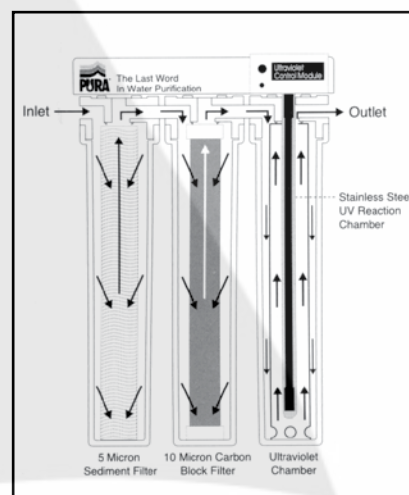
This ultraviolet water treatment system makes a perfect companion to water softeners, distillers, reverse osmosis and ozone systems. The UV20 Series has proven to be PURA Product's most popular product line and has created an industry standard in whole house disinfection.

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



Specifications & Performance UV20 Series

Item Number	Model Description	# of sumps	Sump Type	Sump 1	Sump 2	Sump 3	Lamp #	Power Used	Flow Rates ⁽¹⁾ GPM (L/min)	Dimensions H x W x D In. (cm)	Shipping Weight Lbs. (Kg)	Inlet/ Outlet Size
15710100	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
15710400	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
15710500	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
15720121	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
15720421	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
15720521	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
15730131	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
15730431	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
15730531	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 µW-s/cm² or greater.

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, to be 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

Specifications & Performance UV BigBoy Series

Item #	Model Description	# of sumps	Sump Type	Sump 1	Sump 2	Sump 3	Lamp #	Power Used	Flow Rates ⁽¹⁾ GPM (L/min)	Dimensions In. (cm) H x W x D	Shipping Wgt. Lbs. (Kg)	Inlet/Outlet Size
15810100	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
15810400	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
15810500	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
15820121	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
15820421	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
15820521	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
15830131	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
15830431	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
15830531	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

Specifications & Performance UV BigBoy Rack Series

Item #	Model Description	# of sumps	Sump Type	Sump 1	Sump 2	Sump 3	Sump 4	Lamp #	Power Used	Flow Rates ⁽¹⁾ GPM (L/min)	Dimensions In. (cm) H x W x D	Shipping Wgt. Lbs. (Kg)	Inlet/Outlet Size
15018001	UVBB-R1	4	#20BB	empty ⁽²⁾	empty ⁽²⁾	empty ⁽²⁾	UV	#20	22 Watts	15 (57)	45x34x18 (114x86x45)	65.0 (29.5)	1-1/2" NPT
15018201	UVBB-R2	4	#20BB	empty ⁽²⁾	empty ⁽²⁾	UV	UV	#20	44 Watts	30 (114)	45x34x18 (114x86x45)	75.0 (34.0)	1-1/2" NPT
15018401	UVBB-R4	4	#20BB	UV	UV	UV	UV	#20	88 Watts	60 (227)	45x34x18 (114x86x45)	91.0 (41.3)	1-1/2" NPT

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

⁽²⁾ Empty sumps on UVBB-Rack systems can be filled with a wide variety of optional cartridges.

UV1-EPCB Series™

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

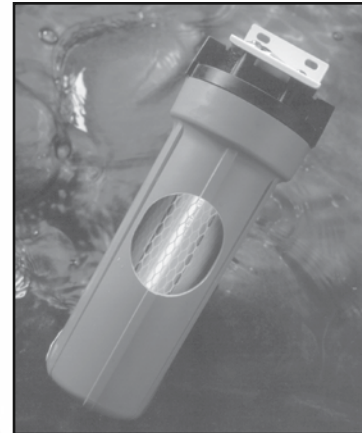
The UV-1 Series is rated for 1 gallon per minute and uses either a 0.5 micron (EPCB) carbon block filter or a 10 micron (EPCB 10) carbon block filter. This easy to install system can be used as a stand alone or in conjunction with other water treatment products.

Features:

- Compact Size
- Standard voltage 115V

Options:

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



Specifications & Performance UV1-EPCB Series

Item #	Model Description	# of sumps	Sump Type	Sump Content	Lamp #	Power Used	Flow Rates ⁽¹⁾ GPM (L/min)	Dimensions In. (cm) H x W x D	Shipping Wgt. Lbs. (Kg)	Inlet/Outlet Size
15910111	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 $\mu\text{W-s/cm}^2$ or greater.

UV ADDON Series™

PURA 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

Item #	Model Description	# of sumps	Sump Type	Sump Content	Lamp #	Power Used	Flow Rates ⁽¹⁾ GPM (L/min)	Dimensions In. (cm) H x W x D	Shipping Wgt. Lbs. (Kg)	Inlet/Outlet Size
15510100	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
15530100	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

Note: ⁽¹⁾ All flow rates shown will provide a UV dose of no less than 16,000 $\mu\text{W-s/cm}^2$ or greater.

The PURA® ABUV Series is an advanced Ultraviolet Water Disinfection System. It has been designed with you, the consumer, in mind. 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. The axial flow chamber design of the PURA® Stainless Steel Series, utilizes the energy from the Ultraviolet Lamp evenly across the water flow. Installation of the system is straight forward and simple. Maintenance includes changing the lamp once a year and cleaning the quartz sleeve periodically.

The PURA® BUV models are tested and certified by NSF against Standard 55 for Class B disinfection.



Standard Features:

- Lamp Failure Visual and Audible Alarm
- Lamp Change Reminder
- Countdown Lamp Timer
- Axial Flow Design
- 115V / 60Hz North American 3-Prong Grounded Plug

Specifications

			
Item No.	8880	8881	8882
Model No.	Buv-6	Buv-8	Buv-12
NSF Rated Flow Rate @ 16mJ/cm2 @ 70% UVT - usgpm (l/min)	5.5 (20.79)	7.8 (29.48)	12 (45.36)
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)
Replacement lamp item no.	89570	89571	89572
Replacement quartz sleeve no.	89573	89574	89575
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		

All models come with flow restrictors.

Lamp life: 8000-9000 hours of operation approximate 12 months of continuous service.



General operation and maintenance: Quartz sleeve is to be cleaned every 6-12 months and to be replaced every 24 months. UV lamp is to be replaced every year.

While testing was performed under standard laboratory conditions, actual performance may vary.

This Class B system or component conforms to NSF/ANSI 55 for the supplemental bactericidal treatment disinfected public drinking water or other drinking water that has been tested and deemed acceptable for human consumption by the state or local health agency having jurisdiction. The system is only designed to reduce normally occurring non-pathogenic nuisance microorganisms.

Class B systems are not intended for treatment of contaminated water.

The system and installation shall comply with applicable state and local regulations.

Limited Warranty: 7 years on reactor chamber, one year on lamp and sleeve, 2 years on other components. Check product manual for more details.



System Tested and Certified by NSF International against NSF/ANSI Standard 55 for Disinfection Performance, Class B

PURA™ Stainless Steel UV Disinfection Systems



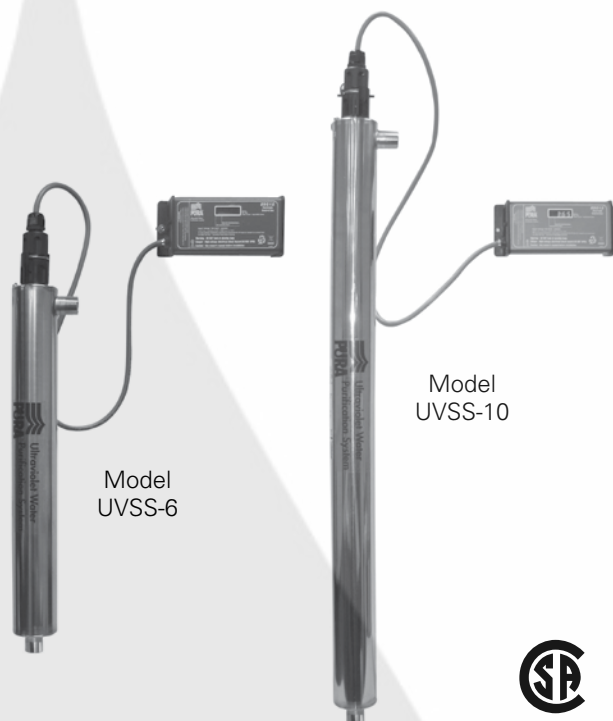
The PURA UVSS Series is an advanced Ultraviolet Water Disinfection System. It has been designed with you, the consumer, in mind. The system will provide you with disinfected drinking water for years to come.

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.

The axial flow chamber design of the PURA Stainless Steel Series, (in the bottom and out the side) utilizes the energy from the Ultraviolet Lamp evenly across the water flow.

Installation of the system is straight forward and simple. Maintenance includes changing the lamp once a year and cleaning the quartz sleeve periodically.



Model
UVSS-6

Model
UVSS-10

UVSS Models

The PURA UVSS models include the following;

Standard Features:

- LED Display
- Lamp Failure Visual and Audible Alarm
- Lamp Change Reminder
- Countdown Lamp Timer
- Axial Flow Design
- 115V / 60Hz North American 3-Prong Grounded Plug

UVSS-M Models

The PURA UVSS-M models are constructed with all the features of the UVSS models plus the following;

Additional Features:

- UV Sensor to Monitor the Disinfection Dosage
- Solenoid Output shuts down water flow using optional solenoid valve upon Lamp Failure, Power Failure or Low UV Intensity Alarm

Options:

- Solenoid Valves for UVSS-M models equipped with a Solenoid Output
- 220V / 50 Hz models equipped with 2-prong Euro plug

Specifications & Performance UVSS Series

Item Number	Model Number	Flow Rate* @ 16 mJ/cm ² usgpm (L/min)	Flow Rate* @ 30 mJ/cm ² usgpm (L/min)	Flow Rate* @ 40 mJ/cm ² usgpm (L/min)	Lamp Watts	Inlet/ Outlet Size	UV Chamber Size (D x L) inches (cm)	Control Box Size (L x W x H) inches (cm)	Weight lbs (kg)
8750	UVSS-6	11 (42)	6 (23)	4.5 (17)	25	3/4" NPT	2.5" x 22" (6 x 58)	7.3" x 3.2" x 2.5" (18.5 x 8 x 6.4)	7 (3.2)
8751	UVSS-10	20 (76)	10 (38)	7.7 (29)	37	3/4" NPT	2.5" x 36" (6 x 91)	7.3" x 3.2" x 2.5" (18.5 x 8 x 6.4)	11 (5.0)
8752	UVSS-15	29 (110)	15 (57)	11 (42)	39	1-1/2" NPT	3.5" x 38" (9 x 97)	7.3" x 3.2" x 2.5" (18.5 x 8 x 6.4)	14 (6.4)
8753	UVSS-6M	11 (42)	6 (23)	4.5 (17)	25	3/4" NPT	2.5" x 22" (6 x 58)	8.3" x 3.2" x 2.5" (21 x 8 x 6.4)	8 (3.6)
8754	UVSS-10M	20 (76)	10 (38)	7.7 (29)	37	3/4" NPT	2.5" x 36" (6 x 91)	8.3" x 3.2" x 2.5" (21 x 8 x 6.4)	12 (5.5)
8755	UVSS-15M	29 (110)	15 (57)	11 (42)	39	1-1/2" NPT	3.5" x 38" (9 x 97)	8.3" x 3.2" x 2.5" (21 x 8 x 6.4)	15 (6.8)

* All Flow Rates rated at 96% UVT at End of Lamp life
Maximum Operating pressure = 125psi (862 kPa)
Operating Temperature Range = 36 to 104°F (2 to 40°C)

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.

Water Conditioning Products



Pure, clean drinking water

Designed with the busy consumer in mind, Precision Water Systems distillers will provide years of easy, maintenance free convenience. There are several models to choose from, designed to fit a variety of different needs. Choose from a manually operated or convenient, automatic family size machine, up to a large commercial size water distiller. Precision water distillers allow you to go about your busy day, with the secure feeling that when you need it, steam distilled water is at your fingertips, without the inconvenience

of handling bottles. The outstanding features of this advanced design include: high quality easy to clean mirror finish stainless steel; a user friendly easy to change charcoal filter; and a 3/4" impurities drain system. Combine these outstanding features with the optional pump kit and automatic drain and your busy schedule has just become easier.

**For replacement parts, please call Customer Service.*



Model PWS 5-3

Item #: 4771

Distilling Capacity:
5.0 US gal. (18.9 L)/24 hrs.*

Holding Tank Capacity:
3.0 US gal. (11.3 L)

Shipping Weight:
36 lbs. (16.4 kg)

Height 17-1/4"/43.8 cm

Width 19"/48.3 cm

Depth 14-3/8"/36.5 cm

Weight 30 lbs/13.7 kg



Model PWS 8-8

Item #: 4773

Distilling Capacity:
8.0 US gal. (30.3 L)/24 hrs.*

Holding Tank Capacity:
8.0 US gal. (30.3 L)

Shipping Weight:
64 lbs. (29.1 kg)

Height 40"/101.6 cm

Width 17-5/8"/44.8 cm

Depth 14-1/2"/36.8 cm

Weight 52 lbs/23.6 kg



Model PWS 12-12

Item #: 4774

Distilling Capacity:
12.0 US gal. (45.0 L)/24 hrs.*

Holding Tank Capacity:
12.0 US gal. (45.4 L)

Shipping Weight:
76 lbs. (34.5 kg)

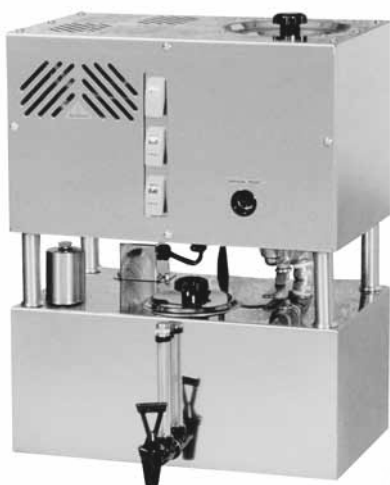
Height 41"/104.1 cm

Width 18-5/8"/47.3 cm

Depth 17-3/8"/44.1 cm

Weight 57 lbs/25.9 kg

*Performance is based on optimum conditions including water temperature, ambient temperature, line voltage, boiling tank cleanliness, boiler fill level, etc. Specifications are subject to change without notice.



Model PWS 8-5

Item #: 4772

Distilling Capacity:
8.0 US gal. (30 L)/24 hrs.*
Holding Tank Capacity:
4.0 US gal. (15.2 L)
Shipping Weight:
46 lbs. (21 kg)
Height 23"/58.4 cm
Width 17-5/8"/44.8 cm
Depth 15"/38.1 cm
Weight 39 lbs/17.7 kg



Model PWS 8-M

Item #: 4770

Distilling Capacity:
8.0 US gal. (30.0 L)/24 hrs.*
Shipping Weight:
30 lbs. (13.5 kg)
Height 13-3/4"/34.3 cm
Width 17-1/4"/43.8 cm
Depth 10-5/8"/27.0 cm
Weight 24 lbs/ 11.0 kg
Opt. Holding Tank Capacity:
3.0 US gal. (11.3 L)
Opt. Holding Tank:
10 lbs. (4.54 kg)
Height 13-1/2"/34.9 cm
Width 15-9/16"/39.7 cm
Depth 14"/35.6 cm
Weight 10 lbs/4.54 kg



Model PWS 12-20

Item #: 4775

Distilling Capacity:
12 US gal. (45.0 L)/24 hrs.*
Holding Tank Capacity:
20.0 US gal. (75.7 L)
Shipping Weight:
83 lbs. (37.7 kg)
Height 51-1/2"/130.8 cm
Width 18-5/8"/47.3 cm
Depth 18-1/8"/46.0 cm
Weight 66 lbs/30.0 kg

Commercial Size Convenience

Model PWS 45-75

Item #: 4776

Distilling Capacity:
45.0 US gal. (170 L)/24 hrs.*
Holding Tank Capacity:
75.0 US gal. (284 L)
Shipping Weight:
185 lbs. (84.0 kg)
Height 67-1/4" 170.8 cm
Height 90-3/4" 230.5 cm
(Including 24" Tower)
Width 26-1/4" 66.7 cm
Depth 21-1/2" 54.6 cm
Weight 152 lbs 77.3 kg

Available in 208, 220, 240v



Features and Benefits

- Trouble free float system
- Seal protected switching
- Highly efficient, stainless steel finned coil
- Advanced, worry free stainless steel water solenoid fill valve
- Large 5" boiling and storage tank opening
- Expanded 3/4" drain* for easy removal of impurities (except Model 8M)
- Stainless Steel Charcoal filter
- Available in all International Voltages
- **Warranty - 2 year parts**
- 15 year pro rated on stainless steel

*Performance is based on optimum conditions including water temperature, ambient temperature, line voltage, boiling tank cleanliness, boiler fill level, etc. Specifications are subject to change without notice.

The Precision Water Distiller is a result of over 25 years of water distillation manufacturing experience.

It's features and benefits provide the very best water system for steam distilled drinking water requirements. The Precision Pure Water Distiller provides safe pure water at home for a fraction of the cost of bottled water.

The Precision Water Distiller duplicates nature's own method of purifying water.

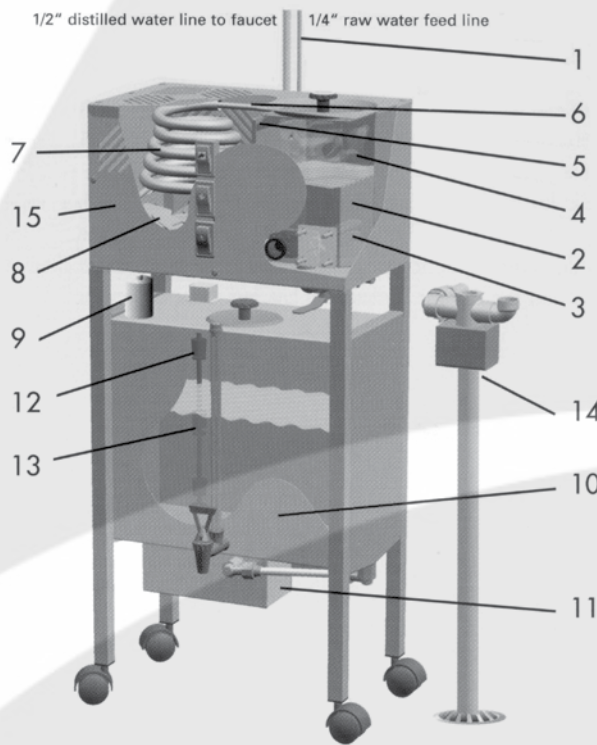
This highly reliable process for purifying water combines distillation with a high capacity activated carbon filter providing clean, great tasting water.

Precision Water Systems Have Been Tested And Certified To Eliminate 99% Of All Water Contaminants

A study by Enviro-Test Laboratories shows that the Precision Water Systems Precision Pure Model PWS 12-12 water distillation unit is a very effective water treatment system capable of removing both harmful pathogens, toxic chemicals, and E-Coli bacteria from water. In this study all pathogens tested were eliminated and were not found in the finished water. The water distillation system, effectively removed all of the soluble inorganic and organic chemicals tested. Removal efficiencies of 99% or greater were achieved for most of the chemicals tested.

Complete report available upon request

- Your water distiller is connected to your household water supply. The raw water feeds into the distiller through a 1/4" water line (1). This line is connected to a quick connect plumbing fitting. As the raw water enters the distiller it passes through a long life stainless steel sealed solenoid and then directly into the boiler chamber (2).
- After the water reaches a level over the heating element (3), the distiller starts the heating cycle and bring the water to boil. The pure steam (4) rises and enters the baffle system (5), which breaks down any foaming in the boiler should it occur.
- Any volatile gases are released through a special gas release vent at the highest point in the cooling system (6). The pure steam passes through the condenser coil (7). To support the cooling cycle a fan is used to properly cool the steam (8).
- Pure water enters the easy to change, high capacity, charcoal filter (9). This filter is designed to be changed with bulk charcoal after every 200-500 gallons of distilled water produced.
- Finally distilled water leaves the charcoal filter and runs into the high capacity stainless steel storage tank (10).



- As the distilled water enters the storage tank, the water level lifts the pump control switch and activates the optional pump (11) to deliver distilled water to any combination of accessory faucet, ice maker or humidifier.
- The distiller will continue to run until the water reaches to the top of the storage tank and lifts the upper float (12) and turns itself off. As soon as you have used approximately one third of the capacity of the tank, the float (13) will turn on the distiller to refill the boiling tank.
- The automatic electric drain valve system (Optional) (14), if equipped, automatically drains the impurities from the boiling tank each time the distiller completes the distillation cycle and as the valve closes the distiller boiling tank will refill with raw water and the distillation cycle will start again.
- The demand pump system (11) (Optional), connects to the bottom of the storage tank and electrically plugs into the bottom of the distiller head (15). A built in fuse protects the pump.

Warranty Information

Precision Design and Manufacturing Inc. offers a limited warranty against defects in material and workmanship to the original purchaser. The warranty includes full replacement on defective electrical components, other parts for a period of two years. A 15 year limited warranty applies to all stainless steel parts.

Precision Design and Manufacturing Inc. is not responsible for or obligated to pay costs of removal, installation, or any shipping charges in relation to the claimed warranty.

This warranty is the only expressed warranty. Any other warranty is not valid.

* Note: Performance based on optimum conditions including water temperature, ambient temperature, line voltage, boiling tank cleanliness, boiler fill level, etc

* Specifications are subject to change without notice.

AQUA FLO Point-of-Use Filtration Products

Water Conditioning Products



The Aqua Flo range of filters and replacement cartridges improves water quality in the home, farm or business. Requiring no special tools, Aqua Flo filters are easily installed and cartridge replacement is simple and worry-free. Aqua Flo replacement cartridges will fit most makes of filters with standard 10" and 20" housings.

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.

- 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)
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-30-10	4.5" X 10"	30	20 gpm

Pleated Polyester Cartridge (PPC) Filter



The PCP 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.

- 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 on 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-5-10BB	4.5" X 10"	5	18 gpm
26179	PPC-20-10BB	4.5" X 10"	20	20 gpm
26180	PPC-5-20BB	4.5" X 20"	5	20 gpm
26181	PPC-20-20BB	4.5" X 20"	20	35 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.

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

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

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 consists 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 closed-loop water stream systems. The netting and reinforced support provide strength to the filter.

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

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

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 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.

- 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



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.

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

- 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



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.

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

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

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, string-wound. They make an ideal sediment reduction choice for a wide range of residential, food service, commercial and industrial applications.

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-25-1-20BBV	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

- 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

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

- 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

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.

- 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	Mi-cron	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

Pleated Cellulose (PC) Filter Cartridges



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

- 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

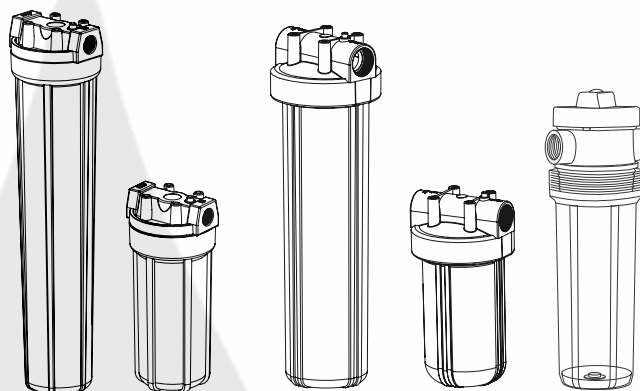
Aqua Flo Filter Housings



Model# H-PR-10BV-34, H-PR-10BV-1,
H-PR-20BV-34, H-PR-20BV-1, H-PR-20BV-15,
H-PR-10-34, WCT34SS, WVIH34SS, H-PR-20-34

NOTE: This filter housing does NOT include a filter cartridge.

Choose the appropriate filter cartridge for your needs and install in housing according to the Cartridge Replacement instructions before proceeding with installation. See cartridge selection chart.



Specification

Pressure Range	30–100 psi (2.1–6.9 bar)
Temperature Range:	40–100°F (4.4–37.7°C)
Housing Material	Polypropylene (blue) & AS (clear)
Housing O-Ring Material	EPDM

Parts Included

- filter housing
- housing wrench
- bracket with mounting hardware

Tools Required

- 2 adjustable wrenches
- file
- pipe threader
- 2 pipe wrenches
- pencil
- pipe cutter or hacksaw

Materials Required (not included)

Depends on type, size, and location of pipe on which filter will be installed. Measure the pipe to determine what size nipples, union, and valve you will need. Depending on the pipe size, you will also need to purchase the appropriate size fittings. Consult your local hardware store to learn more about your particular installation needs.

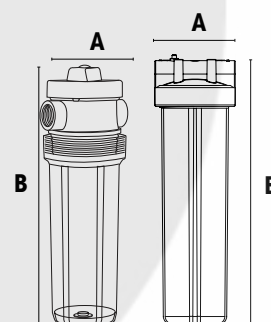
NOTE: Galvanized fittings must be used with galvanized pipe.

Optional Materials

- jumper wire

Filter Housing Specifications

	Housing #	Housing Model #	Filter Size	Inlet/Outlet Size (Inches)	Dimension (inches) A	Dimension (inches) B
	26262	H-PR-10BV-34	4.5" X 10"	3/4"	7.25"	14"
	26258	H-PR-10BV-1	4.5" X 10"	1"	7.25"	14"
	26261	H-PR-20BV-34	4.5" X 20"	3/4"	7.25"	24"
	26259	H-PR-20BV-1	4.5" X 20"	1"	7.25"	24"
	26263	H-PR-20BV-15	4.5" X 20"	1.5"	7.25"	24"
	26264	H-PR-10-34	2.5" X 10"	3/4"	5.25"	12.25"
	26066	WCT34SS*	2.5" x 10"	3/4"	5.25"	12.25"
	26065	WVIH34SS*	2.5" x 10"	3/4"	5"	13.5"
	26265	H-PR-20-34	2.5" x 20"	3/4"	5.25"	22.5"



*SS = stainless steel threads

Cartridge Selection (For Filter Housing Model # H-PR-10BV-34 and H-PR-10BV-1)			
			
Select the Cartridge Filter for your water needs	PR-50-10BV (Part# 26243)	PPC-5-10BV (Part# 26178)	RF-10BV (Part# 26255)
Filter Type	Pleated Polyester Reusable	Pleated Cellulose Cartridge - Polyester	Radial Flow Granular Activated Carbon
Scale and Rust Particles	X	X	
Coarse Sand	X	X	
Sand/Dirt/Silt		X	
Fine Dirt/Silt/Sand		X	
Extra Fine Dirt/Silt/Sand		X	
Bad Taste & Odor			X
Aesthetic Chlorine: Taste & Odor			X
Filter Life (in months)*	6	6	6
Micron Rating (Nominal) +	50	5	
Service Flow Rate gpm (lpm)**	10 (37)	18 (66)	4 (15)

*NOTE: Filter cartridge life varies depending on usage and water conditions

**NOTE: Flow rates measured at 60 psi (4.1 bar)

The smaller the micron rating, the smaller the size particle the cartridge will filter. For comparison purposes, the human hair has a diameter of approximately 70 microns. Particles smaller than 40 microns are not visible with the human eye.

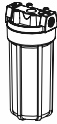
Cartridge Selection (For Filter Housing Model # H-PR-20BV-34, H-PR-20BV-1 & H-PR-20BV-15)			
			
Select the Cartridge Filter for your water needs	PR-30-20BV (Part# 26244)	PPC-5-20BV (Part# 26180)	RF-20BV (Part# 26256)
Filter Type	Pleated Polyester Reusable	Pleated Cellulose Cartridge - Polyester	Radial Flow Granular Activated Carbon
Scale and Rust Particles	X	X	
Coarse Sand	X	X	
Sand/Dirt/Silt		X	
Fine Dirt/Silt/Sand		X	
Extra Fine Dirt/Silt/Sand		X	
Bad Taste & Odor			X
Aesthetic Chlorine: Taste & Odor			X
Filter Life (in months)*	6	6	6
Micron Rating (Nominal) +	30	5	
Service Flow Rate gpm (lpm)**	20 (76)	20 (76)	4 (15)

*NOTE: Filter cartridge life varies depending on usage and water conditions

**NOTE: Flow rates measured at 60 psi (4.1 bar)

The smaller the micron rating, the smaller the size particle the cartridge will filter. For comparison purposes, the human hair has a diameter of approximately 70 microns. Particles smaller than 40 microns are not visible with the human eye.

Cartridge Selection (For Filter Housing Model # H-PR-10-34, WCT34SS & WVIH34SS) Cartridge Filter Size 2.5" X 10"

										
Select the Cartridge Filter for your water needs	PCC-5-10 (Part# 26175)	RF-10 (Part# 26254)	PC-20-10 (Part# 26276)	SW-10-10 (Part# 26246)	WSW30 or SW-30-10 (Part# 26247)	WSW05 or SW-5-10 (Part# 26273)	WC-10 or CGAC-10 (Part# 26277)	WT10 or ICC-5-10 (Part # 26278)	SPB-5-10 (Part# 26222)	SPB-1-10 (Part# 26213)
Filter Type	Pleated Cellulose Cartridge - Polyester	Radial Flow Granular Activated Carbon	Pleated Cellulose Cartridge	String Wound Polypropylene	String Wound Polypropylene	String Wound Polypropylene	Granular Activated Carbon	Dual Purpose - Carbon Impregnated Cellulose	Spun Poly Bonded	Spun Poly Bonded
Scale and Rust Particles	X		X	X	X	X		X	X	X
Coarse Sand	X		X	X	X	X		X	X	X
Sand/Dirt/Silt	X		X	X	X	X		X	X	X
Fine Dirt/Silt/Sand	X			X		X		X	X	X
Extra Fine Dirt/Silt/Sand	X					X		X	X	X
Bad Taste & Odor		X					X	X		
Aesthetic Chlorine: Taste & Odor		X					X	X		
Filter Life (in months)*	6	6	6	6	6	6	6	6	6	6
Micron Rating (Nominal) +	5		20	10	30	5	—	5	5	5
Service Flow Rate gpm (lpm)**	5 (26)	1 (3.7)	10 (37)	7 (26)	10 (37)	5 (18)			5 (5.6)	4 (5.6)

*NOTE: Filter cartridge life varies depending on usage and water conditions

**NOTE: Flow rates measured at 60 psi (4.1 bar)

The smaller the micron rating, the smaller the size particle the cartridge will filter. For comparison purposes, the human hair has a diameter of approximately 70 microns. Particles smaller than 40 microns are not visible with the human eye.

Cartridge Selection (For Filter Housing Model # H-PR-20-34)

				
Select the Cartridge Filter for your water needs	PCC-5-20 (Part# 26177)	RF-20 (Part# 26253)	PC-20-20 (Part# 26182)	SPB-5-20 (Part# 26221)
Filter Type	Pleated Cellulose Cartridge - Polyester	Radial Flow Granular Activated Carbon	Pleated Cellulose Cartridge	Spun Poly Bonded
Scale and Rust Particles	X		X	X
Coarse Sand	X		X	X
Sand/Dirt/Silt	X		X	X
Fine Dirt/Silt/Sand	X			X
Extra Fine Dirt/Silt/Sand	X			X
Bad Taste & Odor		X		
Aesthetic Chlorine: Taste & Odor		X		
Filter Life (in months)*	6	6	6	6
Micron Rating (Nominal) +	5		20	5
Service Flow Rate gpm (lpm)**	13 (49)	4 (15)	15 (55)	10 (37)

*NOTE: Filter cartridge life varies depending on usage and water conditions

**NOTE: Flow rates measured at 60 psi (4.1 bar)

The smaller the micron rating, the smaller the size particle the cartridge will filter. For comparison purposes, the human hair has a diameter of approximately 70 microns. Particles smaller than 40 microns are not visible with the human eye.



The Aqua Flo range of filters and replacement cartridges improves water quality in the home, farm or business. Requiring no special tools, Aqua Flo filters are easily installed and cartridge replacement is simple and worry-free.

Cartridge Selection Guide - See Pages 82 to 87 for Cartridge Descriptions

Problem	Solution
Cloudy or rusty water	WS10, WSW30
Water with fine sediment or turbidity	WSW05
Unpleasant taste, odor and cloudiness or rust color	WC10, WIM14
Unpleasant taste and odor	WT10, WFFRC

CAUTION: Do not use on drinking water supplies which are microbiologically unsafe or of unknown quality without first adequately disinfecting the water.

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.

Aqua Flo standard 10" water filters are packaged complete with housing, sump wrench, plastic adapter and fittings (cartridge not included). Sumps are manufactured from FDA Styrene-Acrilonitrile, stress relieved for extra clarity and strength. Clear sumps allow on-site examination of flow, cartridge performance and life. Heads are manufactured from reinforced polypropylene. Each unit is sealed with a top seated Buna O-ring. In addition, three specialty filters are available.



26001 WVIH34 Deluxe Water Filter

This model features a built-in bypass and shut-off for easy cartridge replacement. Standard 3/4" NPT inlet and outlet.

Construction FDA Styrene-Acrilonitrile
 Dimensions 4-13/16" x 13-3/4"
 Maximum Pressure 125 psig (862 kPa)
 Maximum Temperature 125°F (52°C)

Available in case lots of 12.

Available without individual cartons, fittings and accessories - 26036 WVIH34



26000 WCT34 Water Filter

This model, complete with pressure relief/bleed button, installs under the sink to take care of your water problems. Standard 3/4" NPT inlet and outlet.

Construction FDA Styrene-Acrilonitrile
 Dimensions 4-13/16" x 11-5/8"
 Maximum Pressure 125 psig (862 kPa)
 Maximum Temperature 125°F (52°C)

Available in case lots of 12.

Available without individual cartons, fittings and accessories - 26041 WCT34



Cartridge Type	Taste and odor
Cartridge Construction:	- Granular activated carbon
	- Polypropylene casing
Cartridge Temperature:	32°F to 125°F
Cartridge Dimensions	2-1/4" x 8"
Recom. Flow Rate:	0.1 - 0.5 USGPM
Micron Rating:	N/A



Cartridge Type	Taste and odor
Cartridge Construction:	- Granular activated carbon
	- Polypropylene casing
Cartridge Temperature:	32 - 125°F (0 - 52°C)
Dimensions:	2-1/4" x 8"
Recom. Flow Rate:	0.1 - 0.5 USGPM
Micron Rating:	N/A

26004 WWF Faucet Water Filter

Cartridge Type	Taste and odor
Cartridge Construction:	- Granular activated carbon
	- Polypropylene casing
Cartridge Temperature:	32 - 125°F (0 - 52°C)
Dimensions.....	2-3/4" W x 5-3/4" L x 4" H
Recom. Flow Rate:	0.1 - 0.5 USGPM
Micron Rating:	N/A

Single packing only.

Twin Pack - 26012 TWC10
Case of 24 - 26081 WCB10



Twin Pack - 26013 TWS10
Case of 24 - 15500143 WSB10



Twin Pack - 26014 TWT10
Case of 24 - 15500243 WTB10



Cartridge Type: Wound depth filter cartridge
Cartridge Construction: Polypropylene cord and core
Cartridge Temperature: 32 - 165°F (0 - 74°C)
Dimensions:..... 2-3/8" x 9-7/8"
Recom. Flow Rate: 10 USGPM
Micron Rating: Nominal 30

26011 WSW05 Extra-Fine Sediment Removal

Cartridge Type: Wound depth filter cartridge
Cartridge Construction: Polypropylene cord and core
Cartridge Temperature: 32 - 165°F (0 - 74°C)
Dimensions:..... 2-3/8" x 9-7/8"
Recom. Flow Rate: 7 USGPM
Micron Rating: Nominal 5

26005 WFFRC Faucet Water Filter Replacement

[illegible]

Cartridge Temperature: 32 - 125°F (0 - 52°C)
 Dimensions:..... 2" x 2-3/8"
 Recom. Flow Rate: 0.1 - 0.5 USGPM
 Micron Rating: N/A

Two cartridges per box



26007 Sump Wrench (new style)

Wrench with six notches. Fits Aqua Flo sumps manufactured since January 1993.

92289 Sump Wrench (old style)

Wrench with four notches. Fits Aqua Flo sumps manufactured prior to 1993.



26023 Mounting Bracket

Convenient bracket with eight screws for mounting the WC34 filter.



26049 Aqua Flo Sump and O-Ring

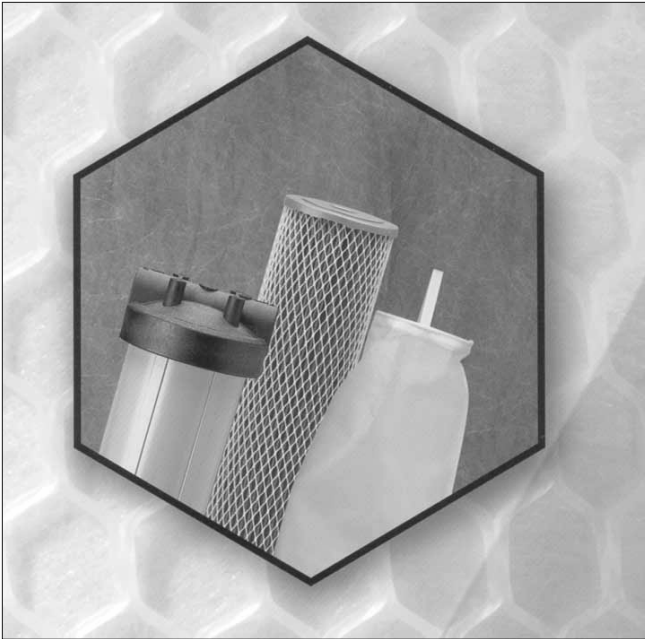
26022 O-Ring

Buna O-ring seals filter sump and head.

Point-of-Use Filtration Products

Water Conditioning Products





What kind of cartridge filter do I need?

You need to determine what specific concerns you have about your water (lead? chlorine? sodium? poor taste and odor?). If you're not sure, then find out the quality of the water entering your home. If you are on a community water supply, call your water company and ask them to send you a water quality report. If your water comes from a private well, you will need to have your water tested by a reputable laboratory. Once you have determined how your water can be improved, our Customer Service Department can help you determine what water filtration solution best fits your needs. Here are some general guidelines:

Sediment

3/4" standard or valve-in-head filter housing with sediment cartridge

Sediment, Whole House

1" and 1-1/2" Big Blue® Filter Housing with sediment cartridge

Chlorine, Whole House

1" and 1-1/2" Big Blue® Filter Housing with radial-flow carbon filter cartridge (RFC Series)

Taste/Odor/Chlorine

1/4", 3/8" or 1/2" SlimLine™ Filter Housing with carbon filter cartridge

Point-of-Use

Countertop Drinking Water Filter • Undersink

Drinking Water Filtration System • Faucet Filter

• Shower Filter

What can I do about iron stains?

To determine the correct method of removal, it is important to know which type of iron is present. Soluble Iron - also known as ferrous iron or clear-water iron - is clear in running water but will settle to the bottom as black or rust-colored particles when it is allowed to stand. When it contacts air, it may precipitate and stain. Soluble iron cannot be filtered out but may be reduced with a cation-exchange water softener.

Insoluble Iron - also known as ferric iron or visible iron - is suspended in water and is clearly visible as "rusty" water. You should be able to see small black or rust-colored particles in your water as soon as it comes out of your tap before you've allowed it to sit. Insoluble iron may be reduced with a sediment filter. If you have a water softener, be sure to place the sediment filter before the water softener.

My water smells like rotten eggs. Can I get a filter to improve this problem?

That "rotten egg" smell is actually caused by harmless bacteria which produce hydrogen sulfide gas. These bacteria can't be removed with a cartridge filter.

I have a well and I want to install a sediment filter. What filter cartridge can I use?

You will need to use a synthetic sediment filter cartridge such as a Pentek Filtration P5 and CW-F cartridge. Pleated cellulose cartridges such as the Pentek S1 Series cartridges are NOT resistant to the harmless bacteria that are found in many well water supplies.

- Ideal for a wide range of applications, including residential, commercial and industrial.
- Available in 10" and 20" sizes to meet your needs.
- Optional pressure-relief/bleed button on inlet side of cap.
- Thick walls for increased strength.
- Leak-proof sealing with top-seated Buna-N O-ring.
- Available with clear and blue sumps.

Standard filter housings are manufactured of a durable polypropylene or clear Styrene-Acrylonitrile (SAN). All are equipped with 3/4" NPT inlet and outlet ports.

Reinforced polypropylene housings have excellent chemical resistance and are ideal for many residential, commercial and industrial applications. Clear sumps are manufactured from a clear, FDA-approved Styrene-Acrylonitrile (SAN) and offer on-site examination of the cartridge.

Standard filter housings are available in both 10" and 20" lengths and will accommodate a wide range of 2-1/2" and 2-7/8" diameter cartridges.



MB=Mounting Boss Cap



COMPONENT

The 150001, 150002, 150067, 150068, 150072, 150435 and 150436 are Tested and Certified by NSF International under NSF/ANSI Standard 42 for material and structural integrity requirements only.

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
150067	#10 BLUE Standard, 3/4" In/Out, w/p.r., w/m.b.c.	12-1/4" x 5-1/8" (311 mm x 130 mm)	1 psi @ 10 gpm (0.1 bar @ 3.8 lpm)
150068	#10 BLUE Standard, 3/4" In/Out, wo/p.r., w/m.b.c.		
150071	#10 CLEAR/BLUE CAP Standard, 3/4" In/Out, w/p.r., w/m.b.c.	12-5/8" x 5-1/4" (321 mm x 133 mm)	1 psi @ 10 gpm (0.1 bar @ 3.8 lpm)
150072	#10 CLEAR/BLUE CAP Standard, 3/4" In/Out, wo/p.r., w/m.b.c.		
150435	#10 CLEAR/BLACK CAP Standard, 3/4" In/Out, w/p.r., w/m.b.c.		
150436	#10 CLEAR/BLACK CAP Standard, 3/4" In/Out, wo/p.r., w/m.b.c.	22-3/8" x 5-1/8" (568 mm x 130 mm)	1 psi @ 10 gpm (0.1 bar @ 3.8 lpm)
150069	#20 BLUE Standard, 3/4" In/Out, w/p.r., w/m.b.c.		
150070	#20 BLUE Standard, 3/4" In/Out, wo/p.r., w/m.b.c.		

Materials of Construction

- Housing Polypropylene (Blue)
Styrene-Acrylonitrile (Clear)
- Cap Reinforced Polypropylene
- Button Assembly 300-series Stainless Steel, EPDM and Polypropylene
- O-Ring Buna-N
- Maximum Temperature 125°F (51.7°C)
- Maximum Pressure 125 psi (8.62 bar)

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

Slim Line® Filter Housings



- Slim design reduces space required for installation without sacrificing capacity.
- FDA Grade
- Optional pressure relief button on inlet side of cap.
- Leak-proof seal with top-seated O-ring.
- Available with clear or opaque sumps.

Slim Line® filter housings are available in either reinforced polypropylene or clear Styrene-Acrylonitrile (SAN) in 5", 10" and 20" lengths. The black or blue reinforced polypropylene housing caps are available with 1/4", 3/8" or 1/2" NPT connections. Four bosses are molded into every cap for mounting purposes.

Slim Line® filter housings are an excellent choice for low-flow applications and when space and chemical compatibility are primary concerns.

Clear Slim Line® Filter Housings offer on-site examination of flow, performance and cartridge life. They are ideal for a variety of applications. Manufactured of clear Styrene-Acrylonitrile (SAN), the sumps are stress relieved for added clarity and strength. The blue polypropylene caps can be ordered with an optional pressure-relief button on the inlet side to relieve pressure inside the housing when changing filter cartridges.

Opaque Slim Line® Filter Housings are molded from rugged reinforced polypropylene. Opaque Slim Line® filter housings offer outstanding chemical compatibility and are ideal for use in a variety of low-flow applications. These applications include under-sink and countertop residential filtration, pre- and post-reverse osmosis filtration, recreational vehicle filtration, food service, humidifying systems. They are equipped with a black, reinforced polypropylene cap and can be ordered with an optional pressure-relief button on the inlet side to relieve pressure inside the housing when changing filter cartridges.



COMPONENT

The 158005, 158006, 158114, 158120, 158125, 158126, 158128, 158129, 158131, 158149, 158195, 158204 and 158205 are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material and structural integrity requirements only.



Slim Line® Filter Housings Specifications & Performance Data

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
158138	#5 BLUE/BLACK CAP Slim Line™, 1/4" In/Out, wo/p.r.	7" x 4-3/8" (178 mm x 111 mm)	2 psi @ 3 gpm (0.14 bar @ 11 lpm)
158133	#5 CLEAR/BLUE CAP Slim Line™, 1/4" In/Out, wo/p.r.	7-3/8" x 4-5/8" (187 mm x 118 mm)	
158002	#5 BLUE/BLACK CAP Slim Line™, 3/8" In/Out, w/p.r.	7" x 4-3/8" (178 mm x 111 mm)	2 psi @ 5 gpm (0.14 bar @ 19 lpm)
158003	#5 BLUE/BLACK CAP Slim Line™, 3/8 In/Out, wo/p.r.		
158110	#5 CLEAR/BLUE CAP Slim Line™, 3/8" In/Out, w/p.r.	7-3/8" x 4-5/8" (187 mm x 118 mm)	
158111	#5 CLEAR/BLUE CAP Slim Line™, 3/8" In/Out, wo/p.r.		
158115	#10 BLUE/BLACK CAP Slim Line™, 1/4" In/Out, w/p.r.	11-3/4" x 4-3/8" (299 mm x 111 mm)	2 psi @ 3 gpm (0.14 bar @ 11 lpm)
158114	#10 BLUE/BLACK CAP Slim Line™, 1/4" In/Out, wo/p.r.		
158117	#10 CLEAR/BLUE CAP Slim Line™, 1/4" In/Out, w/p.r.	12-1/8" x 4-5/8" (308 mm x 118 mm)	
158116	#10 CLEAR/BLUE CAP Slim Line™, 1/4" In/Out, wo/p.r.		
158326	#10 CLEAR/WHITE CAP Slim Line™, 1/4" In/Out, wo/p.r.	11-3/4" x 4-3/8" (299 mm x 111 mm)	
158120	#10 BLACK/BLACK CAP Slim Line™, 1/4" In/Out, wo/p.r.		
158182	#10 WHITE/WHITE CAP Slim Line™, 1/4" In/Out, w/p.r.		
158125	#10 WHITE/WHITE CAP Slim Line™, 1/4" In/Out, wo/p.r.		
158179	#10 WHITE/WHITE COUNTERTOP 1/4" In/Out		
158005	#10 BLUE/BLACK CAP Slim Line™, 3/8" In/Out, w/p.r.	11-3/4" x 4-3/8" (299 mm x 111 mm)	2 psi @ 5 gpm (0.14 bar @ 19 lpm)
158006	#10 BLUE/BLACK CAP Slim Line™, 3/8" In/Out, wo/p.r.		
158007	#10 CLEAR/BLUE CAP Slim Line™, 3/8" In/Out, w/p.r.	12-1/8" x 4-5/8" (308 mm x 118 mm)	
158008	#10 CLEAR/BLUE CAP Slim Line™, 3/8" In/Out, wo/p.r.		
158149	#10 WHITE/WHITE CAP Slim Line™, 3/8" In/Out, w/p.r.	11-3/4" x 4-3/8" (299 mm x 111 mm)	
158098	#10 WHITE/WHITE CAP Slim Line™, 3/8" In/Out, wo/p.r.		
158195	#10 BLUE/BLACK CAP Slim Line™, 1/2" In/Out, w/p.r.	11-3/4" x 4-3/8" (299 mm x 111 mm)	2 psi @ 5 gpm (0.14 bar @ 19 lpm)
158196	#10 BLUE/BLACK CAP Slim Line™, 1/2" In/Out, wo/p.r.		
158214	#10 CLEAR/BLUE CAP Slim Line™, 1/2" In/Out, w/p.r.	12-1/8" x 4-5/8" (308 mm x 118 mm)	
158215	#10 CLEAR/BLUE CAP Slim Line™, 1/2" In/Out, wo/p.r.		
158129	#20 BLUE/BLACK CAP Slim Line™, 3/8" In/Out, wo/p.r.	21-7/8" x 4-3/8" (556 mm x 111 mm)	2 psi @ 5 gpm (0.14 bar @ 19 lpm)
158204	#20 BLUE/BLACK CAP Slim Line™, 1/2" In/Out, w/p.r.	21-7/8" x 4-3/8" (556 mm x 111 mm)	2 psi @ 5 gpm (0.14 bar @ 19 lpm)
158205	#20 BLUE/BLACK CAP Slim Line™, 1/2" In/Out, wo/p.r.		

Materials of Construction

- Housing SAN (Clear) or Polypropylene (Opaque)
- Cap Reinforced Polypropylene
- Button Assembly 300-series Stainless Steel, EPDM and Polypropylene
- O-Ring Buna-N
- Maximum Temperature 125°F (51.7°C)
- Maximum Pressure 125 psi (8.62 bar)

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

3G Standard Filter Housings



We took our time-tested industry standard and made it even better. We started from the ground up, utilizing our 35 years of experience, to create the unique and innovative Third Generation (3G) design. This patent pending design features integral brackets, 20" clear housings, and caps for differential pressure gauges. The new patent pending 3G housing accepts standard double open end (DOE) and our Seal-Safe™ O-ring sealing cartridges (only available on Microguard Cartridges). The new Seal-Safe™ O-ring design offers enhanced cartridge sealing for critical cartridge applications. You can be assured the Third Generation Standard Filter Housing will set the new standard and keep you in the lead.

- Integral bracket versions available.
- Available in 10" and 20" sumps in clear and opaque.
- Buttress threads and uniform walls for easier cartridge change and improved strength.
- Accepts proprietary Seal-Safe™ double O-ring sealing cartridges as well as standard DOE cartridges.
- Cap is available with threaded ports for mounting differential pressure gauge.
- Choice of with or without pressure-relief/bleed button.
- Leak-proof sealing with top-seated floating Buna-N O-ring.

US Patent No. D 455,194 S and D 456,486 S.

3G Standard Filter Housings are manufactured from a durable polypropylene or clear Styrene-Acrylonitrile (SAN). All are equipped with 3/4" NPT inlet and outlet ports.

Reinforced polypropylene housings have excellent chemical resistance and are ideal for many residential, commercial and industrial applications. Clear sumps are manufactured from a clear, FDA compliant Styrene-Acrylonitrile (SAN). They offer on-site examination of the cartridge and have excellent chemical compatibility as well.

3G Standard Filter Housings are available in both 10" and 20" lengths and will accommodate a wide range of 2-1/4" to 3-1/8" diameter cartridges.



*Shown with differential gauge. Gauges sold separately.

Standard Mounting Boss Caps

- Can be used with MC-1A bracket kit.
- Differential pressure gauges cannot be used with these housings.



MB Cap W/PR



MB Cap W/PR



IB Cap W/PR



IB Cap W/PR

Integral Bracket Meter Mount Caps

- Optional screw kit for integral bracket sold separately.
- Cap contains predrilled and tapped holes for mounting differential pressure gauges.

CAUTION: Housing will not hold pressure without an installed differential pressure gauge.



MM Cap W/PR

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
Standard Mounting Boss Caps			
150542	3G #10 ST BK/BL $\frac{3}{4}$ " MB w/p.r., Blue Housing	12-3/4" x 5-3/8"	1 psi @ 10 gpm
150546	3G #10 ST BK/BL $\frac{3}{4}$ " MB, Blue Housing	(324 mm x 137 mm)	(0.07 bar @ 38 lpm)
150544	3G #20 ST BK/BL $\frac{3}{4}$ " MB w/p.r., Blue Housing	23" x 5-3/8"	1 psi @ 10 gpm
150548	3G #20 ST BK/BL $\frac{3}{4}$ " MB, Blue Housing	(584 mm x 137 mm)	(0.07 bar @ 38 lpm)
150558	3G #10 ST BL/CL $\frac{3}{4}$ " MB w/p.r., Clear Housing	12-3/4" x 5-3/8"	1 psi @ 10 gpm
150562	3G #10 ST BL/CL $\frac{3}{4}$ " MB, Clear Housing	(324 mm x 137 mm)	(0.07 bar @ 38 lpm)
150587	3G #10 ST BK/CL $\frac{3}{4}$ " MB w/p.r., Clear Housing		
150560	3G #20 ST BL/CL $\frac{3}{4}$ " MB w/p.r., Clear Housing	23" x 5-3/8"	1 psi @ 10 gpm
150564	3G #20 ST BL/CL $\frac{3}{4}$ " MB, Clear Housing	(584 mm x 137 mm)	(0.07 bar @ 38 lpm)
Integral Mounting Bracket Caps			
150550	3G #10 ST BK/BL $\frac{3}{4}$ " IB w/p.r., Blue Housing	13-1/4" x 5-3/4"	1 psi @ 10 gpm
150554	3G #10 ST BK/BL $\frac{3}{4}$ " IB, Blue Housing	(337 mm x 146 mm)	(0.07 bar @ 38 lpm)
150552	3G #20 ST BK/BL $\frac{3}{4}$ " IB w/p.r., Blue Housing	23-1/2" x 5-3/4"	1 psi @ 10 gpm
150556	3G #20 ST BK/BL $\frac{3}{4}$ " IB, Blue Housing	(597 mm x 146 mm)	(0.07 bar @ 38 lpm)
150566	3G #10 ST BL/CL $\frac{3}{4}$ " IB w/p.r., Clear Housing	13-1/4" x 5-3/4"	1 psi @ 10 gpm
150570	3G #10 ST BL/CL $\frac{3}{4}$ " IB, Clear Housing	(337 mm x 146 mm)	(0.07 bar @ 38 lpm)
150568	3G #20 ST BL/CL $\frac{3}{4}$ " IB w/p.r., Clear Housing	23-1/2" x 5-3/4"	1 psi @ 10 gpm
150572	3G #20 ST BL/CL $\frac{3}{4}$ " IB, Clear Housing	(597 mm x 146 mm)	(0.07 bar @ 38 lpm)
Integral Bracket Meter Mount Caps			
150574	3G #10 ST BK/BL $\frac{3}{4}$ " MM w/p.r., Blue Housing	13-1/4" x 5-3/4"	1 psi @ 10 gpm
		(337 mm x 146 mm)	(0.07 bar @ 38 lpm)
150576	3G #20 ST BK/BL $\frac{3}{4}$ " MM w/p.r., Blue Housing	23-1/2" x 5-3/4"	1 psi @ 10 gpm
		(597 mm x 146 mm)	(0.07 bar @ 38 lpm)

*Height does not include meter. Add 1-3/4" for 143549 gauge and 1/2" for 143550 gauge.

Key

ST = Standard
BK = Black
BL = Blue
CL = Clear

MB = Mounting Bosses for MC-1A bracket
IB = Integral Bracket
MM = Meter Mount for Differential Pressure Gauges
BT = British Threads

W/PR = With Pressure Release
(blank) = Without Pressure Release

Materials of Construction

- Housing Polypropylene (Opaque)
Styrene-Acrylonitrile (Clear)
- Cap Reinforced Polypropylene
- Button Assembly 300-series Stainless Steel,
polypropylene and EPDM
- O-Ring Buna-N
- Maximum Temperature 125°F (51.7°C)
- Maximum Pressure 125 psi (8.62 bar)

CAUTION: Filter must be protected against freezing, which can cause cracking of the filter and water leakage.

3G Slim Line® Standard Filter Housings



- 10-inch housings available with clear or opaque sump
- Buttress threads for additional strength and easier cartridge changes
- John Guest and NPT threaded connections offered in 1/4-inch, 3/8-inch, and 1/2-inch
- Cap styles include mounting boss, integral bracket, meter mount and optional pressure relief bleed valve
- Housing accepts our proprietary Seal-Safe™ double o-ring sealing cartridges as well as DOE (double open end) cartridges
- Leak-proof sealing with a top-seated floating Buna-N o-ring

Slim Line® housings are the perfect choice for low-flow filtration applications. Their slim design and high chemical compatibility make them ideal for those challenging applications.

Caps are manufactured from reinforced polypropylene in black, blue, and white. Standard NPT threaded and John Guest connections are available with 1/4-inch, 3/8-inch and 1/2-inch connections. Three different style caps add to the flexibility of these housings.

The mounting boss cap features bosses molded in to the cap. This allows the housing to be mounted to a single bracket or a multiple housing bracket.

The integral bracket cap does not require a separate bracket as the bracket is part of the cap. This feature saves valuable time during installation.

Take the guesswork out of when to change your cartridge by using the meter mount cap. These gauges indicate when the cartridge is dirty and allow you to get the most out of your cartridges.

Pressure relief buttons are another option with the Slim Line® 3G housings. Placed on the inlet side, the pressure-relief button helps reduce the pressure in the housing when changing the cartridge.

Housings are available with either clear or opaque sumps. The clear housings are manufactured of Styrene-Acrylonitrile (SAN) and are stress relieved through a special process for added strength and clarity. Clear housings offer on-site examination of the flow, cartridge life and performance.

Opaque housings are molded from reinforced polypropylene and offer outstanding chemical compatibility.

Typical applications for the 3G Slim Line® housings include, but are not limited to, undersink residential filtration, pre- and post reverse osmosis systems, recreational vehicle filtration, and food service.



U.S. Patent No. D 455,194 S and D 456,486 S



3G Slim Line® Standard Filter Housings

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
3G Slim Line® Housings (Cap Sump) - 1/4-inch NPT, Mounting Boss Housings			
158597	#10 3G Slim Line® Black/Blue 1/4" MB w/o pr	12-1/2" x 4-5/8" (318 mm x 118 mm)	2 psi @ 3 gpm (0.14 bar @ 11 L/min)
158598	#10 3G Slim Line® Black/Blue 1/4" MB w/pr		
158599	#10 3G Slim Line® Blue/Clear 1/4" MB w/o pr		
158600	#10 3G Slim Line® Blue/Clear 1/4" MB w/pr		
158601	#10 3G Slim Line® White/White 1/4" MB w/o pr		
3G Slim Line® Housings (Cap Sump) - 1/4-inch John Guest Quick Connect, Mounting Boss Housings			
158602	#10 3G Slim Line® Black/Blue 1/4" QC MB w/o pr	12-1/2" x 4-5/8" (318 mm x 118 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158603	#10 3G Slim Line® Black/Blue 1/4" QC MB w/pr		
158604	#10 3G Slim Line® Blue/Clear 1/4" QC MB w/o pr		
158606	#10 3G Slim Line® White/White 1/4" QC MB w/o pr		
158607	#10 3G Slim Line® White/White 1/4" QC MB w/pr		
3G Slim Line® Housings (Cap Sump) - 1/4-inch NPT, Integral Bracket Housings			
158636	#10 3G Slim Line® Black/Blue 1/4" IB w/pr	13-3/8" x 5-3/8" (340 mm x 137 mm)	2 psi @ 3 gpm (0.14 bar @ 11 L/min)
158637	#10 3G Slim Line® Blue/Clear 1/4" IB w/pr		
158638	#10 3G Slim Line® White/White 1/4" IB w/pr		
3G Slim Line® Housings (Cap Sump) - 1/4-inch John Guest Quick Connect, Integral Bracket Housings			
158639	#10 3G Slim Line® Black/Blue 1/4" QC IB w/pr	13-3/8" x 5-3/8" (340 mm x 137 mm)	2 psi @ 3 gpm (0.14 bar @ 11 L/min)
158640	#10 3G Slim Line® Blue/Clear 1/4" QC IB w/pr		
158641	#10 3G Slim Line® White/White 1/4" QC IB w/pr		
3G Slim Line® Housings (Cap Sump) - 3/8-inch NPT, Mounting Boss Housings			
158608	#10 3G Slim Line® Black/Blue 3/8" MB w/o pr	11-3/4" x 4-3/4" (298 mm x 121 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158609	#10 3G Slim Line® Black/Blue 3/8" MB w/pr		
158610	#10 3G Slim Line® Blue/Clear 3/8" MB w/o pr		
158611	#10 3G Slim Line® Blue/Clear 3/8" MB w/pr		
158613	#10 3G Slim Line® White/White 3/8" MB w/o pr		
158612	#10 3G Slim Line® White/White 3/8" MB w/pr		
3G Slim Line® Housings (Cap Sump) - 3/8-inch John Guest Quick Connect, Mounting Boss Housings			
158614	#10 3G Slim Line® Black/Blue 3/8" QC MB w/o pr	11-3/4" x 4-3/4" (298 mm x 121 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158616	#10 3G Slim Line® Blue/Clear 3/8" QC MB w/o pr		
158619	#10 3G Slim Line® White/White 3/8" QC MB w/o pr		
158618	#10 3G Slim Line® White/White 3/8" QC MB w/pr		
3G Slim Line® Housings (Cap Sump) - 3/8-inch NPT, Integral Bracket Housings			
158642	#10 3G Slim Line® Black/Blue 3/8" IB w/pr	13-3/8" x 5-1/4" (340 mm x 133 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158643	#10 3G Slim Line® Blue/Clear 3/8" IB w/pr		
3G Slim Line® Housings (Cap Sump) - 3/8-inch John Guest Quick Connect, Integral Bracket Housings			
158645	#10 3G Slim Line® Black/Blue 3/8" QC IB w/pr	13-3/8" x 5-1/4" (340 mm x 133 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158646	#10 3G Slim Line® Blue/Clear 3/8" QC IB w/pr		
158647	#10 3G Slim Line® White/White 3/8" QC IB w/pr		
3G Slim Line® Housings (Cap Sump) - 1/2-inch NPT, Mounting Boss Housings			
158620	#10 3G Slim Line® Black/Blue 1/2" MB w/o pr	11-3/4" x 4-3/4" (298 mm x 121 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158621	#10 3G Slim Line® Black/Blue 1/2" MB w/pr		
158622	#10 3G Slim Line® Blue/Clear 1/2" MB w/o pr		
158623	#10 3G Slim Line® Blue/Clear 1/2" MB w/pr		
3G Slim Line® Housings (Cap Sump) - 1/2-inch John Guest Quick Connect, Mounting Boss Housings			
158625	#10 3G Slim Line® Black/Blue 1/2" QC MB w/pr	12-1/2" x 4-5/8" (318 mm x 118 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158626	#10 3G Slim Line® Blue/Clear 1/2" QC MB w/o pr		
3G Slim Line® Housings (Cap Sump) - 1/2-inch NPT, Integral Bracket Housings			
158648	#10 3G Slim Line® Black/Blue 1/2" IB w/pr	13-3/8" x 5-3/8" (298 mm x 121 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158649	#10 3G Slim Line® Blue/Clear 1/2" IB w/pr		
3G Slim Line® Housings (Cap Sump) - 1/2-inch John Guest Quick Connect, Integral Bracket Housings			
158650	#10 3G Slim Line® Black/Blue 1/2" QC IB w/pr	13-3/8" x 5-3/8" (298 mm x 121 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158651	#10 3G Slim Line® Blue/Clear 1/2" QC IB w/pr		
3G Slim Line® Housings (Cap Sump) - 1/2-inch NPT or Quick Connect, Integral Bracket Meter Mount Housings			
158656	#10 3G Slim Line® Black/Blue 1/2" IB MM ¹ w/pr	13-3/8" x 5-3/8" (298 mm x 121 mm)	2 psi @ 5 gpm (0.14 bar @ 19 L/min)
158657	#10 3G Slim Line® Black/Blue 1/2" QC IB MM ¹ w/pr		

¹ Housing is not designed to operate without an installed differential pressure gauge. Gauge must be purchased separately. See Pentek Accessories page.

Big Blue® Filter Housings



- Large capacity housings suitable for high flow applications.
- Available in 10" and 20" sizes to meet your needs.
- Optional pressure relief/bleed on inlet side of cap.
- Accepts 4-1/2" diameter cartridges.

Big Blue® filter housings offer the versatility to meet all your large-capacity filtration needs, including high flow and heavy sediment applications. The extra large housing allows for greater cartridge capacity, reducing the number of vessels required for high flow rate applications. Sumps are constructed of durable reinforced polypropylene and are available in 10" and 20" lengths.

The high flow polypropylene (HFPP) cap is available with 3/4", 1" or 1-1/2" NPT inlet and outlet ports. The 1-1/4" internal port allows a greater volume of liquid to pass through the HFPP cap more rapidly.

Big Blue® housings are compatible with a broad range of chemicals and are available with or without an optional pressure relief button. They accept a wide variety of 4-1/2" diameter cartridges in either 10" or 20" lengths.



#10 Big Blue®

#20 Big Blue®



COMPONENT

The 150233, 150234, 150235, 150236, 150237, 150238, 150239, 150240, 150467 and 150469 are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material and structural integrity requirements only.

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
150469	#10BB Big Blue®, 3/4" In/Out, w/p.r.	13-1/8" x 7-1/4" (333 mm x 184 mm)	2 psi @ 15 gpm (0.1 bar @ 57 lpm)
150470	#10BB Big Blue®, 3/4" In/Out, wo/p.r.		
150237	#10BB Big Blue®, 1" In/Out, w/p.r.	13-1/8" x 7-1/4" (333 mm x 184 mm)	1 psi @ 15 gpm (0.1 bar @ 57 lpm)
150238	#10BB Big Blue®, 1" In/Out, wo/p.r.		
166219	#10BB Big Clear, 1" In/Out, w/p.r.	13- 5/8" x 7-1/4" (346 mm x 184 mm)	1 psi @ 20 gpm (0.1 bar @ 76 lpm)
150239	#10BB Big Blue®, 1 1/2" In/Out, w/p.r.		
150240	#10BB Big Blue®, 1 1/2" In/Out, wo/p.r.		
150233	#20BB Big Blue®, 1" In/Out, w/p.r.	23- 3/8" x 7-1/4" (594 mm x 184 mm)	1 psi @ 15 gpm (0.1 bar @ 57 lpm)
150234	#20BB Big Blue®, 1" In/Out, wo/p.r.		
166201	#20BB Big Clear, 1 1/2" In/Out, w/p.r.	23-7/8" x 7- 1/4" (606 mm x 184 mm)	1 psi @ 20 gpm (0.1 bar @ 76 lpm)
150235	#20BB Big Blue®, 1 1/2" In/Out, w/p.r.		
150236	#20BB Big Blue®, 1 1/2" In/Out, wo/p.r.		

Materials of Construction

- Housing Polypropylene
- Cap Polypropylene (HFPP)
- Button Assembly 300-series Stainless Steel, EPDM and Polypropylene
- O-Ring Buna-N
- Maximum Temperature 100°F (37.7°C)
- Maximum Pressure #10BB - 100 psi (6.9 bar)
#20BB - 90 psi (6.2 bar)

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

- Ideal for a wide range of applications, including residential, commercial and industrial.
- Available in 10" and 20" sizes.
- Optional pressure-relief/bleed button on inlet side of cap.
- Thick walls for increased strength.
- Leak-proof sealing with top-seated Buna-N O-ring.
- Available with clear and blue sumps.

Valve-in-head housings incorporate the same rugged design and application features as our Standard 3/4" NPT housings.

The internal valve-in-head allows both inlet and outlet ports to be simultaneously shut-off with a half turn of the handle. This eliminates the need for external shut-off valves. Radial sealing O-rings and sealing surfaces are continuously cleaned each time the valve is used, ensuring leak-proof operation.

Valve-in-head filter housings are available in 10" and 20" lengths, will accommodate a wide range of 2-3/8" and 2-7/8" diameter cartridges and are available with either reinforced polypropylene or clear FDA-compliant Styrene-Acrylonitrile (SAN) sumps.



COMPONENT

The 150164 and 150172 are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material and structural integrity requirements only.

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
150164	#10 BLUE Valve-In-Head, 3/4" In/Out, w/p.r.	12 1/2" x 5 1/8" (318 mm x 130 mm)	4 psi @ 8 gpm (0.3 bar @ 30 lpm)
150437	#10 CLEAR Valve-In-Head, 3/4" In/Out, w/p.r.	12 7/8" x 5 1/4" (327 mm x 133 mm)	4 psi @ 8 gpm (0.3 bar @ 30 lpm)
150166	#20 BLUE Valve-In-Head, 3/4" In/Out, w/p.r.	22 5/8" x 5 1/8" (575 mm x 130 mm)	4 psi @ 8 gpm (0.3 bar @ 30 lpm)

Materials of Construction

- Housing Polypropylene (Blue)
Styrene-Acrylonitrile (Clear)
- Cap Reinforced Polypropylene
- Button Assembly 300-series Stainless Steel, EPDM and Polypropylene
- Valve Parts Delrin
- O-Ring Buna-N
- Maximum Temperature 125°F (51.7°C)
- Maximum Pressure 125 psi (8.62 bar)

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

High Temperature Filter Housings



- Ideal for a wide range of industrial applications.
- Excellent alternative to stainless and carbon steel vessels.
- Durable glass-reinforced nylon construction.

Constructed of glass-reinforced nylon. High temperature filter housings are an economical alternative to stainless and carbon steel housings.

These 1/2" and 3/4" NPT housings can withstand temperatures up to a maximum of 160°F (71.1°C). Excellent chemical compatibility makes High Temperature housings an ideal choice for a wide variety of industrial applications including those involving organic solvents, sea water, alcohol, petroleum and vegetable oils. They should not be used with ketones.

A #241 Viton O-ring provides dependable sealing. Both 10" and 20" lengths are available to accommodate flow rates up to 20 gpm (76L/min.).



Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)
158319	#10 BLACK High Temperature Slim Line® 1/2" In/Out, wo/p.r.	11-3/4" x 4-3/8" (298 mm x 111 mm)	5 psi @ 8 gpm (<0.4 bar @ 30 lpm)
150015	#10 RED High Temperature Standard, 3/4" In/Out, wo/p.r.	12-1/8" x 5-1/8" (308 mm x 130 mm)	<1 psi @ 8 gpm (0.1 bar @ 30 lpm)
150111	#20 RED High Temperature Standard, 3/4" In/Out, wo/p.r.	22-1/4" x 5-1/8" (565 mm x 130 mm)	

Materials of Construction

- Housing Glass-Reinforced Nylon
- Cap Glass-Reinforced Nylon
- O-Ring Viton®
- Maximum Pressure 125 psi (8.6 bar)
- Maximum Temperature 160°F (High Temp.)
160°F (High Temp. Slim Line®)

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

- Lightweight, corrosion-resistant, polypropylene construction gives you strength without weight.
- Available in 1" and 1-1/2" NPT sizes.
- Comes complete with gauge, wrench and 3/8" drain valve.
- Choice of 10" and 20" housings.
- Light enough to be portable.

Pentek's standard bag vessel assemblies keep your system on stream longer by reducing bag filter change time.

The single large Acme thread closure ensures quick opening and positive sealing.

All PBH Series vessels come complete with gauge, wrench and 3/8" drain valve.

PBH Series bag vessel assemblies are made of lightweight, corrosion-resistant, polypropylene to give you all the strength you need without the weight.

Bag vessel assemblies are economically priced, allowing you to install a duplex system for totally uninterrupted flow rates.

Bags are available in polypropylene felt, absolute-rated high-efficiency polypropylene and nylon monofilament mesh - ideal for filtering and straining applications from 1 to 800 microns.



PBH-410
(shown with bag vessel stand)
Item #150370
PBH & BB Housing Stand

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rates (gpm)	Maximum Pressure
150360	PBH-410 (1")	13-1/8" x 7-1/4" (333mm x 184mm)	1 psi @ 15 gpm (0.1 bar @ 56.8 lpm)	100 psi (6.9 bar)
150338	PBH-410 (1 1/2")	13-5/8" x 7-1/4" (346 mm x 184 mm)	1 psi @ 20 gpm (0.1 bar @ 75.7 lpm)	100 psi (6.9 bar)
150367	PBH-420 (1")	23-3/8" x 7-1/4" (594mm x 184mm)	1 psi @ 15 gpm (0.1 bar @ 56.8 lpm)	90 psi (6.2 bar)
150337	PBH-420 (1 1/2")	23-7/8" x 7-1/4" (606mm x 184mm)	1 psi @ 20 gpm (0.1 bar @ 75.7 lpm)	90 psi (6.2 bar)

- PBH-410 accepts a standard 4" x 8-1/4" (102 mm x 210 mm) bag. Dimensions allow for 1" (25 mm) overlap on basket.
- PBH-420 accepts a standard 4" x 18-1/2" (102 mm x 470 mm) bag. Dimensions allow for 1" (25 mm) overlap on basket.

Materials of Construction

- | | | | |
|--------------------|----------------------------|-----------------------------|------------------|
| • Housing | Polypropylene | • Ball Valve | PVC/Buna-N Seals |
| • Cap | Polypropylene | • Basket..... | Polypropylene |
| • Gauge | Bismuth Brass (lead free) | • O-Ring and Gaskets..... | Buna-N |
| • Vent Plug | Polypropylene | • Maximum Temperature | 100°F (37.8°C) |
| • Drain Plug | High Density Polypropylene | | |

NOTE: Many standard bags with rings may be used in these vessels. Refer to Pentek Filtration's bag filter specifications sheet for 1 to 200 micron quick-install bags.

ST Series Stainless Steel Filter Housings



- 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.
- Accepts complete range of standard double open end (DOE) cartridges.

ST Series stainless steel filter housings effectively provide heavy-duty filtration for smaller filtration systems and point-of-use applications. Supplying flow rates of up to 20 gpm (76 L/min), at a maximum water temperature of 300°F (149°C). ST Series are ideal for hot water and high-pressure applications not suited for plastic housings. The brushed 304 stainless steel sumps are available with either a pipe plug or pet-cock in the bottom for draining. Heads are manufactured from nickel-plated cast-brass.

ST Series housings are easy to install and maintain. They are compatible with a complete range of filter cartridges, adding to their versatility.

The Model ST-1 is a single cartridge filter ideal for filtering water at a flow rate not exceeding 10 U.S. GPM (depending on cartridge selection).

The Model ST-2 is identical to the ST-1, but requires two 9-3/4" (248mm) cartridges or one 19-1/2" (495mm) cartridge to provide higher capacity for longer operations of the filter between cartridge change-over.

The Model ST-3 is again identical to the ST-1 and ST-2 with even higher flow rate and greater dirt holding capacity than the ST-1 or ST-2. Requires three 9-3/4" (248mm) cartridges or one 29-1/4" (743mm) cartridge.



ST-1

ST-2

ST-3

10 " Sediment Cartridges HOT WATER use:

item #	Description
26141	05 mic tin core non-potable
26134	10 mic tin core non-potable
26135	25 mic tin core non-potable
26136	50 mic tin core non-potable
26137	05 mic 304ss core non-potable
26138	10 mic 304ss core non-potable
26139	25 mic 304ss core non-potable
26140	50 mic 304ss core non-potable

Item #	Description	No. 9-3/4" (248 mm) Cartridges	Filter Height in (mm)	Shipping Weight lbs (kg)	Flow Rate* GPM (LPM)	Max. Pressure w/pipe plug psi (bar)	Max. Pressure w/pet-cock psi (bar)
15601702	ST-1	1	12 7/8 (327)	7 (3.2)	10 (38)	250 (17.2)	250 (17.2)
15601802	ST-2	2	22 3/4 (578)	10-1/2 (4.8)	15 (57)	250 (17.2)	250 (17.2)
15601902	ST-3	3	32 3/8 (822)	13-1/2 (6.1)	20 (76)	250 (17.2)	250 (17.2)

*When used with 20 micron (nominal) cartridge.

- Maximum cartridge diameter 3" (76 mm).
- Will not accept GAC, CC, CGAC, TSGAC, WS, PCF or PCC Series cartridges.

Also Available:

144128 Wall Bracket for ST-1, ST-2 and ST-3 156037 Mounting bracket for ST-1, ST-2 and ST-3



Materials of Construction

- Housing Brushed 304 Stainless Steel
- Head Brass/Nickel Plated
- Maximum Temperature 300°F (149°C)
- Pipe Size 3/4" NPT
- Sealing Gaskets Buna-N, Cellulose Fiber

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

NOTE: Not recommended for applications with TDS or chlorides >1000 and/or pH <5.0. Use of this product in these conditions will void the limited warranty. Consult factory for product modifications for these conditions.

- Heavy duty units for large scale commercial/industrial applications.
- Brushed 304 stainless steel construction with a gray-silver epoxy finish.
- Ideal for high-temperature applications.
- Accepts complete range of standard double open end (DOE) cartridges.

ST-BC Series stainless steel filter housings offer a variety of solutions for your large-scale, heavy-duty filtration needs. Simple to install and maintain, these housings are ideal for schools, restaurants, farms, institutions and industrial use. Holding from 4 to 20 cartridges, ST-BC Series housings provide flow rates from 28 - 125 gpm (106-473 L/min).

Housings are constructed of 304 stainless steel with a gray-silver epoxy finish. They include drains on both the "clean" and "dirty" sides of the sump.

ST-BC Series housings are compatible with a complete range of filter cartridges adding to their versatility.



Item #	Description	No.* Cartridges Dimensions	Filter Height in (mm)	Shipping Wgt. lbs (kg)	Flow Rate** GPM (LPM)	Max. Pressure psi (bar)	Pipe Size in (mm)
15602502	ST-BC-4	(4) 3" x 9-3/4" or 10" (76mm x 248mm or 254mm)	19 1/4 (489)	20 (9.1)	28 (106)	125 (8.62) to 300°F (149°C)	2 (50.8)
15602602	ST-BC-8	(8) 3" x 9-3/4" or 10" (76mm x 248mm or 254mm)	29 (737)	30 (13.6)	56 (212)	125 (8.62) to 300°F (149°C)	2 (50.8)
15602702	ST-BC-12	(12) 3" x 9-3/4" or 10" (76mm x 248mm or 254mm)	39 3/4 (1010)	40 (18.2)	84 (318)	125 (8.62) to 300°F (149°C)	2 (50.8)
15602802	ST-BC-16	(16) 3" x 9-3/4" or 10" (76mm x 248mm or 254mm)	49 3/4 (1264)	50 (22.7)	110 (416)	125 (8.62) to 300°F (149°C)	2 (50.8)
15603202	ST-BC-20	(20) 2-1/2" x 9-3/4" or 10" (64mm x 248mm or 254mm)	49 3/4 (1264)	50 (22.7)	125 (473)	125 (8.62) to 300°F (149°C)	2 (50.8)

Note: Will not accept model GAC, CC, CGAC, TSGAC, WS, PCF or PCC series cartridges.

*Number of cartridges refers to the number of 9-3/4" (248 mm) or 10" (254 mm) cartridges which are configured around the housing times the number of cartridges that may be stacked. Example 4 x 2 means that 9-3/4" (248 mm) cartridges are configured four around and two high.

**Above rated capacity based on sediment removal with a 25 micron filter cartridge and 1 PSIG initial clean pressure drop.

Materials of Construction

- Housing Brushed 304 Stainless Steel
- Finish Epoxy
- Maximum Temperature 300°F (149°C)
- Maximum Pressure 125 psi (8.6 bar)
- Pipe Size 2" (50.8 mm)
- Sealing Gasket Buna-N

NOTE: Maximum cartridge diameter 3" (76 mm).

WARNING: If pressure exceeds 125 psi (8.62 bar) at any time, a pressure regulator must be used. Do not use water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

NOTE: Not recommended for applications with TDS or chlorides >1000 and/or pH <5.0. Use of this product in these conditions will void the limited warranty. Consult factory for product modifications for these conditions.

MPST-1 Multi-Purpose Stainless Steel Filter Housing



- Unique design accepts either a 41/2-inch x 20-inch DOE cartridge or a PENTEK Model 420 bag filter (Conversion Kit #243111).
- 304 stainless steel construction with epoxy finish.
- Equipped with several ports for differential pressure gauges.
- Heavy-duty design for numerous commercial and industrial applications.
- Ideal for high temperature or high pressure applications.

The PENTEK MPST-1 Multi-Purpose Stainless Steel Filter Housing is designed to accept either a 41/2-inch x 20-inch DOE cartridge or a PENTEK 420 style bag filter. The housing comes standard as a cartridge filter housing but the optional bag filter kit converts it to a bag filter housing in seconds.

Simple to install, maintain, and convert from cartridge to bag filter and back, this housing is ideal for schools, restaurants, farms, institutions and numerous industrial applications.

The MPST-1 housing is constructed of 304 stainless steel and powder coated with two-part epoxy with flow rates up to 50 GPM and maximum temperature ratings at 250°F, making it ideal for hot water and high pressure applications. An adjustable stand is included which adds to its versatility.

It is supplied with two-inch inlet and outlet ports and a threaded drain port for easy servicing. It is also equipped with several pressure differential gauge ports to aid in cartridge or bag filter replacement.



MPST-1

Item #	Maximum Flow Rate	Dimensions (Height x O.A. Dia*)	Pipe Size (NPT)	Maximum Temperature	Maximum Pressure
156237	50 GPM (189 L/min)	29" x 6-3/8" (737 mm x 162 mm)	2" (50.8 mm)	250°F (121°C)	150 psi (10.34 bar)

Note: Will not accept model GAC 20BB, BBF1-20BB, WS-20BB or CRFC-20BB Cartridges.

*Height does not include stand

Materials of Construction

- Housing 304 Stainless Steel
- Finish Epoxy
- Sealing Gasket..... Buna-N

NOTE: Maximum cartridge diameter 43/4-inches (12 mm)

WARNING: If pressure exceeds 150 psi (10.34 bar) at any time, a pressure regulator must be used. Do not use water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

NOTE: Not recommended for applications with TDS or chlorides >1000 ppm and/or pH <5.0. Use of this product in these conditions will void the limited warranty. Consult factory for product modifications for these conditions.

- Multi-housing systems include wall-mounting bracket and hardware.
- Available with low-profile Slim Line® or large capacity Big Blue® housings.
- All systems are shipped completely pre-assembled.

BFS and BBFS Basic Filtration Systems consist of either two or three filter housings, which are mounted in series, a wall-mounting bracket and hardware.

The BFS-201 consist of a series of 3/8" NPT low-profile Slim Line® housings in series for installations where space is limited. The BBFS systems consist of a series of large-capacity 1" NPT #20 Big Blue® housings allowing for greater cartridge capacities and higher flow rates. All systems are equipped with a pressure relief button to relieve housing pressure during cartridge changes, and are shipped completely pre-assembled.

All of the housings are manufactured of a durable polypropylene, have excellent chemical resistance and are ideal for many residential, commercial and industrial applications.



Item #	Description	Maximum Dimensions	Maximum Pressure
160166	BBFS-22	15-1/4" x 8-1/2" x 26-1/2" (388mm x 216mm x 673mm)	90 psi (6.2 bar)
160168	BBFS-222	23-1/4" x 8-1/2" x 26-1/2" (591mm x 216mm x 673mm)	90 psi (6.2 bar)
160196	BFS-201	10-1/2" x 5-1/4" x 14" (267mm x 133mm x 356mm)	125 psi (8.6 bar)

Materials of Construction

- Cap Polypropylene
- Housing Polypropylene
- Bracket Powder Coated Carbon Steel
- O-Rings Buna-N
- Maximum Temperature 100°F (37.8°C)

NOTE: 20" (508 mm) Big Blue® sumps are interchangeable with 10" (254 mm) Big Blue® sumps.

NOTE: Big Blue® is a registered trademark of Pentek Filtration.

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

UMS-4 BB Housing Skid System



- Can be installed in series, parallel or combination of both.
- Manufactured from pultruded fiberglass for strength and fire resistance.
- Holds 4 Big Blue® filter housings or bag vessel assemblies.

The pultruded fiberglass is compatible with a wide range of organic and inorganic substances, but the UMS-4 is not compatible with all plating solutions. Assembly hardware is manufactured from 304 stainless steel for greater chemical resistance.

This system is capable of holding up to four Big Blue® filter housings or bag vessel assemblies. The housings can be assembled in series, parallel or a combination of both series and parallel to accommodate your filtration requirements.

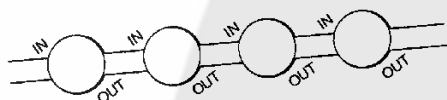
Item #160210



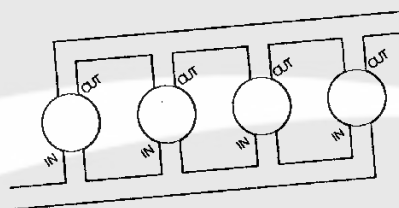
The UMS-4 can be installed in the following combinations:

Note: Sumps / Housings sold separately.

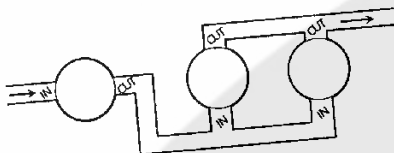
SERIES



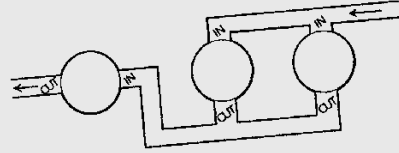
PARALLEL



COMBINATION - SERIES TO PARALLEL



COMBINATION - PARALLEL TO SERIES



Possible Flow Rates

- Parallel arrangement: up to 200 gpm (757 lpm) for filter bags
up to 100 gpm (378.5 lpm) for filter cartridges
- Series arrangement: up to 50 gpm (189 lpm) for filter bags
up to 25 gpm (94.6 lpm) for filter cartridges

Chemical	Temperature (°F)**	% Concentration**	Temperature (°F)**	Polypropylene TF	SAN	Nylon GF	Delrin	Buna-N	Silicone	Viton E-60	300 Series Stainless
Acetic Acid	125	50	A	A	D	A	D	C	--	C	--
Acetone	125	100	A	D	B	D	B	D	B	D	A
Ammonium Compounds	125	100*	A	A	A*	A	B	A	B	A	C
Ammonium Hydroxide	125	10	A	A	A	A	D	A	--	A	C
Beer	125	ANY	A	A	D	B	A	D	C	A	A
Benzene	72	100	B	D	A	D	B	D	--	A	B
Calcium Compounds	125	ANY*	A	A	A	A	A	A	C	A	B/C
Calcium Hypochlorite	68	20	A	--	D	--	D	B	C	A	D
Citric Acid	125	10	A	A	C	B	A	D	C	A	--
Cottonseed Oil	125	--	A	A	A	B	A	A	--	A	B
Detergents	125	2	A	A	A	A	A	A	--	A	--
Ethyl Alcohol	125	96	A	B	A	B	A	A	B	A	--
Freon	68	25	B	¹² / ₂₂	A	¹² / ₂₂	D	¹²⁻¹¹³ / _{TF}	D	¹²	II ONLY
Fruit Juices	125	--	A	A	A	A	A	A	--	A	A
Gasoline	125	100	C	A	A	D	B	A	D	A	A
Glucose	125	20	A	A	A	A	A	A	B	A	A
Glycerin	125	100	A	A	A	B	A	A	B	A	A
Glycol	125	--	A	D	--	D	A	A	--	A	--
Hexane	125	100	C	--	A	D	D	A	B	A	A
Hydrochloric Acid	125	20	A	A	D	B	D	C	--	A	--
Hydrofluoric Acid	68	40	A	--	D	A	D	D	--	A	--
Hydrogen Peroxide	68	30	A	--	D	--	-D	D	--	A	--
Inks	125	--	A	B	A	B	A	A	--	A	A
Ketones	68	--	D	D	B	--	C	D	--	D	A
Lubricating Oils	125	100	C	A	A	B	A	A	C	A	A
Mercury	125	100	A	--	A	--	A	A	--	A	A
Methyl Alcohol	125	100	A	D	A	D	A	B	--	C	--
Mineral Oil	100	100	B	A	A	A	A	A	--	A	A
Naphthalene	125	100	A	B	A	C	D	B	D	A	A
Nitric Acid	68	10	A	B	D	C	D	D	--	A	A
Olive Oil	125	100	A	A	A	A	A	A	C	A	A
Plating Solutions	125	--	A*	--	A/D*	--	--	A*	D	A	--
Sodium Compounds	125	ANY	A	A	A/C*	C	--	A	C	A	B
Sodium Hypochlorite	100	5	A	A	A	B	A	A	C	A	B
Sugar & Syrups	125	--	A	--	A	B	A	A	A	A	A
Sulfuric Acid	68	25	A	A	D	B	D	C	--	A	--
Toluene	100	--	D	D	A	D	D	D	D	C	A
Water (hot)	200	100	--	--	A	--	--	C	A	B	A
DI Water	125	100	B	A	A	A	A	A	A	A	--
Sea Water	125	100	A	B	A	A	C	A	--	A	--
Whiskey/Wines	125	--	A	A	A	A	A	A	--	A	A
Xylene	100	100	C	D	A	D	D	D	D	A	A

A = Negligible Effect
 B = Limited Absorption Attack
 C = Extensive Absorption and/or Rapid Permeation
 D = Extensive Attack

* Consult Factory for Specific Compound

** Maximum
 TF = Talc Filled
 GF - Glass Filled

NOTICE: We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination. Users are advised to make their own tests to determine the safety and suitability of each product combination for their own purposes and applications. Unless otherwise agreed in writing, or previously tested by Pentek Filtration on specific applications, we sell the product without warranty against chemicals listed above. Buyers and users assume all responsibility for liability performance or damage.

Pentek® Filter Housings Pressure Drop



PRESSURE/FLOW MODEL	NET PRESSURE DROP - psi (bar) @ FLOW RATE - gpm (lpm)														
	1 (4)	3 (11)	5 (19)	8 (30)	10 (38)	15 (57)	20 (76)	25 (95)	30 (114)	35 (132)	40 (151)	50 (189)	60 (227)	70 (265)	80 (303)
1/4" Slim Line™	<1 (.1)	2 (.1)	4 (.3)	10 (.7)	15 (1.0)										
3/8" Slim Line™	<1 (.1)	<1 (.1)	2 (.1)	5 (.4)	7 (.5)										
1/2" Slim Line™	<1 (.1)	<1 (.1)	2 (.1)	5 (.4)	7 (.5)										
3/4" Standard	<1 (.1)	<1 (.1)	<1 (.1)	<1 (.1)	1 (.1)	2 (.1)	3 (.2)								
3/4" V-I-H	<1 (.1)	1 (.1)	2 (.1)	4 (.3)	7 (.5)	16 (1.1)									
Big Blue® HFPP 3/4"	<1 (.1)	<1 (.1)	<1 (.1)	<1 (.1)	1 (.1)	2 (.1)	3 (.2)								
Big Blue® HFPP 1"	<1 (.1)	<1 (.1)	<1 (.1)	<1 (.1)	1 (.1)	1 (.1)	2 (.1)	3 (.2)	4 (.3)	5 (.4)	7 (.5)	11 (.8)	16 (1.1)		
Big Blue® HFPP 1-1/2"	<1 (.1)	<1 (.1)	<1 (.1)	<1 (.1)	<1 (.1)	1 (.1)	1 (.1)	2 (.1)	2 (.1)	3 (.2)	4 (.3)	7 (.5)	10 (.7)	13 (.9)	

CAUTION: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: The pressure drop values listed for flow rates higher than 10 gpm were extrapolated from curves, except in the case of the Big Blue® housings. All tests were performed on empty housings (no cartridges.)



For Big Blue® Housings

This bracket is made for the 10" and 20" Big Blue® housings only.

- | | |
|--------|---|
| 150061 | WB-SS Kit, Bracket and Screws, Powder-Coated Carbon Steel |
| 144092 | WB-SS, Bracket Only, Stainless Steel |



Standard Housing Brackets

For Mounting Caps with Bosses

The MC-1 bracket is made for the 3/4" (19mm) housings with bosses only. It is constructed of zinc-plated steel.

- | | |
|--------|--|
| 150578 | MC-1 Kit, Bracket and Screws, 3/4" CAPS only |
| 244043 | MC-1 Bracket Only, 3/4" CAPS only |



For 3/4" Housings

The UB-1 bracket is made for the 3/4" (19mm) inlet/outlet housings only. It is constructed of zinc-plated steel.

- | | |
|--------|--|
| 151011 | UB-1 Kit, Bracket and Screws, 3/4" CAPS only |
| 111012 | UB-1 Bracket Only, 3/4" CAPS only |



Slim Line™ Mounting Brackets

For 1/4", 3/8" and 1/2" Housings

For Slim Line™ Housings with 1/4", 3/8" and 1/2" inlet/outlet. It is constructed of zinc-plated steel. The kit includes bracket and screws.

- | | |
|--------|---|
| 244047 | Kit, Bracket and Screws, 1/4", 3/8" and 1/2" Slim Line™ |
| 244046 | Bracket Only, 1/4", 3/8" and 1/2" Slim Line™ |



CCF & RO System Brackets

- | | |
|--------|---|
| 244627 | Slim Line™ Bracket, Two-Housing, CCF & RO |
| 144169 | Slim Line™ Bracket, Three-Housing, CCF & RO |



Big Blue® System Bracket

For Big Blue® housings with 3/4", 1" and 1-1/2" inlet/outlet. 2 or 3 housing brackets available. Made of powder-coated carbon steel.

- | | |
|--------|----------------------------------|
| 144258 | Big Blue® Bracket, Two-Housing |
| 144259 | Big Blue® Bracket, Three-Housing |



- | | |
|--------|-------------------|
| 150370 | Bag Housing Stand |
|--------|-------------------|

For Big Blue® bag housings and Big Blue® cartridge housings. Made of SuperFlexon®



Cartridge Couplers

155003 Standard coupler available for standard double open end (DOE) cartridges
Material: polypropylene



Sump Extension

157209 Used for all natural polypropylene housings
Material: polypropylene



Big Blue® Coupler

144229 Available for Big Blue® (4-1/2" diameter) DOE cartridges
Material: Polypropylene



Cap Plug Kit

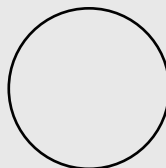
144457 For vents or gauges
Includes plug and O-ring



Spanner Wrenches

Used to loosen sump when changing cartridges.

150539 Wrench, Sump, SW-1A, Slim Line & 3G Housings
150295 Wrench, Sump, SW-2, Standard 3/4" Housings
150296 Wrench, Sump, SW-3, #10BB Housings
144368 Wrench, Sump, SW-4, #20BB Housings
144880 Wrench, Sump, Big Clear



O-Rings

Buna-N FDA Grade

151121 237 for #5 & #10 Slim Line™ Housings
151120 241 for #10, #12 & #20 Housings
151122 Big Blue® O-Ring

Silicone FDA Grade

158096 237 for #5 & #10 Slim Line™ Housings
151118 241 for #10, #12 and #20 Housings

Viton

157193 012 Kit for Vent Plugs
158095 237 for #5 & #10 Slim Line™ Housings
151117 241 for #10, #12 and #20 Housings

Differential Pressure Gauges

These gauges can be read from both sides. They tell the user when to change the cartridge while the filter is in operation. They are easily mounted directly to MM (Meter Mount) caps with screws provided. Both are constructed of glass-filled nylon, Buna-N O-rings, 304 SS spring. 143549 contains a ceramic magnet.

Color Change Differential Pressure Gauge

Green and red color indicate when cartridge should be changed.
Green (clean) 0-7 psid; Red (change) 7-10 psid.
Item # 143550

143550



Needle Differential Pressure Gauge

Needle points to international standard colors to determine when cartridge needs to be changed. Green (clean) 0-6 psid; Yellow (change) 6-9 psid; Red (dirty) 9-12 psid.
Item # 143549

143549



Item #	Description	Item #	Description
Filter Housing Caps		Filter Housing Sumps	
154049	1/4" Black Cap w/o pr for Slim Line® & #5 Blue Housings	153014	#5 Slim Line® Blue Sump
154053	1/4" Blue Cap w/o pr for Slim Line® & #5 Clear Housings	153056	#5 Slim Line® Clear Sump
154062	1/4" White Cap w/o pr for Slim Line® Housings	153049	#10 Slim Line® White Sump
154108	3/8" Black Cap w/pr for Slim Line® & #5 Blue Housings	153062	#10 Slim Line® Black Sump
154006	3/8" Black Cap w/o pr for Slim Line® & #5 Blue Housings	153017	#10 Slim Line® Blue Sump
154111	3/8" Blue Cap w/pr for Slim Line® & #5 Clear Housings	153018	#10 Slim Line® Clear Sump
154010	3/8" Blue Cap w/o pr for Slim Line® & #5 Clear Housings	153093	#10 Slim Line® Black Nylon Sump
154171	1/2" Black Cap w/pr for Slim Line® & #5 Blue Housings	153063	#10 Std Black Nylon Sump
154083	1/2" Black Cap w/o pr for Slim Line® & #5 Blue Housings	153005	#10 Std Red High Temp Sump
154175	1/2" Blue Cap w/pr for Slim Line® & #5 Clear Housings	153001	#10 Blue Sump
154503	1/2" Black Nylon Cap w/o pr for Slim Line® Black Nylon Housing	153128	#10 Clear Sump
		153013	#20 Blue Sump
154101	3/4" Black Cap w/pr for #10 & #20 Blue Housings	153058	#20 Slim Line® Blue Sump
154001	3/4" Black Cap w/o pr for #10 & #20 Blue Housings	153092	#20 Slim Line® Black Nylon Sump
154102	3/4" Blue Cap w/pr for #10 Clear Housings	153064	#20 Std Black Nylon Sump
154115	3/4" Black Mounting Bracket Cap w/pr for #10 & #20 Blue Housings	153029	#10 Big Blue® Sump
		153114	#10 Big Blue® Sump - White
154017	3/4" Black Mounting Bracket Cap w/o pr for #10 & #20 Blue Housings	153208	#10 Big Clear Sump
		153070	#20 Big Blue® Sump
154116	3/4" Blue Mounting Bracket Cap w/pr for #10 Clear Housings	153166	#20 Big Clear Sump
154018	3/4" Blue Mounting Bracket Cap w/o pr for #10 Clear Housings	153080	#20 Big Blue® Sump - White
		153042	#10 All Natural Std. Sump - No Drain Plug (style 2)
154134	3/4" Black VIH Cap w/pr for #10 & #20 VIH Blue Housings	153101	#10 All Natural Std. Sump w/Drain Plug
154138	3/4" Blue VIH Cap w/pr for #10 Clear VIH housing	153046	#12 All Natural Sump for 222 - No Drain Plug
154061	3/4" Black Nylon Cap w/o pr for #10 & #20 housings	153106	#12 All Natural Sump for 222 - With Drain Plug
154003	3/4" Red High Temperature Cap w/o pr	153040	#20 All Natural Std. Sump - No Drain Plug
154195	3/4" Black HFPP Cap w/pr for Big Blue® Housings	153102	#20 All Natural Std. Sump - With Drain Plug
154166	1" Black HFPP Cap w/pr for Big Blue® Housings	153055	#20 Ext All Natural Sump for 222 - No Drain Plug
154077	1" Black HFPP Cap w/o pr for Big Blue® Housings	153107	#20 Ext All Natural Sump for 222 - With Drain Plug
154291	1" Black Cap for Big Clear Housings	3G Filter Housing Sumps	
154167	1-1/2" Black HFPP Cap w/pr for Big Blue® Housings	153202	3G #10 SL Blue Sump
154078	1-1/2" Black HFPP Cap w/o pr for Big Blue® Housings	153203	3G #10 SL Clear Sump
154025	#10, #12, & #20 All Natural Cap, Std., No Plugs	153197	3G #10 ST Blue Sump
154135	#10, #12, & #20 All Natural Cap, Std., w/Two Vent Plugs	153194	3G #10 ST Clear Sump
154351	#10, #12, & #20 All Natural 222 Cap, Std., No Plugs	153200	3G #20 ST Blue Sump
154136	#10, #12, & #20 All Natural 222 Cap, Std., w/Two Vent Plugs	153195	3G #20 ST Clear Sump
154082	Countertop White Cap - 1/4" Inlet/Outlet (for #5 and #10 Units)		
3G Filter Housing Caps			
154638	3G 3/4" Black Mounting Bracket Cap w/pr		
154584	3G 3/4" Black Mounting Bracket Cap w/o pr		
154646	3G 3/4" Black Integral Bracket Cap w/pr		
154600	3G 3/4" Black Integral Bracket Cap w/o pr		
154622	3G 3/4" Black Integral Bracket Cap, Meter Mount w/pr		
154639	3G 3/4" Blue Mounting Bracket Cap w/pr		
154585	3G 3/4" Blue Mounting Bracket Cap w/o pr		
154647	3G 3/4" Blue Integral Bracket Cap w/pr		
154788	3G 3/8" Black Mounting Bracket Cap w/pr		
154790	3G 3/8" Blue Mounting Bracket Cap w/pr		
154737	3G 3/8" Blue Mounting Bracket Cap w/o pr		
154804	3G 3/8" Black Integral Bracket Cap w/pr		
154806	3G 3/8" Blue Integral Bracket Cap w/pr		

C Series Dual Purpose Powdered-Activated Carbon Cartridges



- Economically priced.
- Provides sediment filtration and bad taste & odor and chlorine taste & odor reduction.*
- High dirt-holding capacity.
- Available in 4 sizes and two micron ratings.
- Recommended for chlorinated water supplies.

C Series cartridges offer an economical solution for all of your general-purpose water filtration needs. Constructed of a carbon impregnated cellulose media, these dual-purpose cartridges filter out fine sediment particles and reduce unwanted taste, odor and chlorine taste and odor from your tap water.* A polyester reinforcement backing and external netting provide additional strength and dirt-loading capacity.

C Series cartridges are available in three different sizes and both the C-1 and C-2 are nominally rated at 5-microns

These dual-purpose cartridges are well suited for a wide range of residential applications, and make excellent polishing filters when used in process or closed-loop streams.

* Based on manufacturer's internal testing.



This C1 is Tested and certified by NSF International under ANSI/NSF Standard 42 for material requirements only.

COMPONENT



Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)
15500243	C1	2-1/2" x 9-3/4" (64mm x 248mm)	5	4 psi @ 5 gpm (0.3 bar @ 18.9 lpm)	>2,500 gallons @ 1 gpm* (>9,500 liters @ 3.8 lpm)
15502243	C2	2-1/2" x 4-7/8" (64mm x 124mm)	5	2.0 psi @ 2 gpm (0.1 bar @ 7.6 lpm)	>1,250 gallons @ 0.5 gpm* (>4,700 liters @ 1.9 lpm)
15559743	C1-20	2-1/2" x 20" (64 mm x 508mm)	5	1.0 psi @ 5 gpm (0.1 bar @ 19 lpm)	>5,000 gallons @ 2 gpm* (>18,900 liters @ 7.6 lpm)

Materials of Construction

- Filter Media.....PAC Impregnated Cellulose
- End CapsVinyl Plastisol (C1 & C2)
- Netting.....Polyethylene
- Reinforcement Backing..... Cellulose Polyester (C1 & C2)
- Core.....Polypropylene
- Temperature Rating 40°F to 125°F (4.4°C to 52°C)
(C1, C2, C1-20)

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: Some harmless bacteria will attack cellulose media cartridges. If your cartridge seems to disintegrate, or has a musty or moldy odor, switch to a synthetic media cartridge or consult the manufacturer.

*NOTE: Estimated capacity tested at given flow rate using 2 ppm free available chlorine at continuous flow to 0.5 ppm breakthrough.

NOTE: Increased flow rates may result in less effective chlorine reduction.

*Based on manufacturer's internal testing.

- Nominal 0.5-micron rating.
- 99.95% reduction of Cryptosporidium and Giardia cysts.
- Premium dirt-holding capacity.
- Outstanding chlorine taste and odor reduction.
- True depth filtration which offers greatest life of any cyst-capable carbon cartridge.

FloPlus™ cartridges utilize a revolutionary new technology that significantly enhances the traditional Fibredyne product, making it possible to obtain cyst reduction in a cartridge that functions like a nominal 10-micron cartridge.

This product boasts extremely low pressure drops and high flow rates – comparable to 10-micron (very open) carbon cartridges. Its efficiency is so high that a 0.5 micron rating is possible, which means that cysts and very small particles can be removed to create cleaner, safer water.

This product is ideal for applications where pressure drop and low flow have been chronic problems in the past, as well as whole house water treatment with the addition of cyst reduction. However, it will address the needs of any end user looking for a product that offers high flow, low pressure drop, infrequent cartridge changes and cyst-free water.



COMPONENT

The FPS-10 with the FloPlus 10, FPS-20 with the FloPlus 20, FPS-10BB and the FPS-20BB with the FloPlus 20BB are Tested and Certified by NSF International to NSF/ANSI Standard 53 for the reduction of Cysts.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)
45590343	FloPlus-10	2-7/8" x 9-3/4" (73mm x 248mm)	0.5	2.0 psi @ 1 gpm (0.1 bar @ 3.8 lpm)	>10,000 gallons @ 1 gpm (>37,800 liters @ 3.8 lpm)
45590443	FloPlus-20	2-7/8" x 20" (73mm x 508mm)	0.5	2.0 psi @ 2 gpm (0.1 bar @ 7.6 lpm)	>20,000 gallons @ 2 gpm (>75,700 liters @ 7.6 lpm)
45590543	FloPlus-10BB	4-5/8" x 9-3/4" (118 mm x 248mm)	0.5	4.0 psi @ 2 gpm (0.3 bar @ 7.6 lpm)	>25,000 gallons @ 2 gpm (>94,500 liters @ 7.6 lpm)
45590643	FloPlus-20BB	4-5/8" x 20" (118mm x 508mm)	0.5	4.0 psi @ 4 gpm (0.3 bar @ 15.2 lpm)	>50,000 gallons @ 4 gpm (>189,000 liters @ 15.2 lpm)

Materials of Construction

- Filter Media.....Bonded PAC
- End CapsPolypropylene
- NettingPolyethylene
- Gaskets.....Santoprene™
- Temperature Rating.....40°F to 180°F (4.4°C to 82.2°C)

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related reduction claims.

NOTE: A drinking water cartridge may contain carbon fines (very fine black powder). After installation and before using the water, follow the instructions for flushing the cartridge to remove fines.

NOTE: It is recommended that you run the tap for 20 seconds prior to using the water for drinking or cooking purposes.

- Non-cellulose media resists bacterial attack.
- Provides sediment filtration and chlorine taste & odor reduction.
- Pleated for maximum dirt-loading capacity.
- Nominal 10-micron rating.

NCP Series cartridges are constructed from a carbon-impregnated non-cellulose media. They offer sediment-filtration, as well as taste, odor and chlorine taste & odor reduction in one cartridge. Unlike cellulose cartridges, NCP Series cartridges are resistant to both bacterial attack allowing them to be used for municipal and non-chlorinated water applications.

Pleats provide additional surface area for high dirt-loading capacity, while maintaining minimal pressure drop. This combination of a pleated polyester media and carbon filtration produces an outstanding filter cartridge with extended service life.

NCP Series cartridges are excellent polishing filters, closed loop streams and are ideal for post reverse osmosis and well water applications.



Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)*
15536743	NCP-10	2-1/2" x 9-3/4" (764mm x 248mm)	10	2 psi @ 3 gpm (0.1 bar @ 11 lpm)	225 gallons @ 1 gpm (850 liters @ 3.8 lpm)
15539843	NCP-BB	4-1/2" x 9-3/4" (114mm x 248mm)	10	2 psi @ 8 gpm (0.1 bar @ 30 lpm)	500 gallons @ 2 gpm (1,890 liters @ 7.6 lpm)
15539743	NCP-20	2-1/2" x 20" (64mm x 508mm)	10	2 psi @ 5 gpm (0.1 bar @ 19 lpm)	450 gallons @ 2 gpm (1,700 liters @ 7.6 lpm)
15538243	NCP-20BB	4-1/2" x 20" (114mm x 508mm)	10	1 psi @ 10 gpm (<0.1 bar @ 38 lpm)	1,000 gallons @ 4 gpm (3,780 liters @ 15 lpm)

*Filtration efficiency and chlorine taste and odor reduction efficiency are reduced at higher flow rates. Chlorine taste and odor reduction based on greater than 50% reduction using 2ppm free chlorine feed concentration at 68°F (20°C) at continuous flow.

Materials of Construction

- Filter Media..... Pleated Carbon-Impregnated Polyester
- End Caps Vinyl Plastisol
- Core Polypropylene
- Netting Polyethylene
- Temperature Rating ... 40°F to 125°F (4.4°C to 52°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

- Nominal 10-micron rating.*
- Excellent dirt-holding capacity.*
- High chlorine taste & odor and bad taste & odor reduction.*
- Economic choice for high sediment applications leading to premature plugging.

CFB Series cartridges provide the effective chlorine taste & odor reduction found in traditional carbon block media while offering excellent sediment reduction capabilities.*

CFB Series products are a modified molded block created by use of our proprietary Fibredyne technology. This technology creates a unique filter media by attaching powdered activated carbon onto a cellulose-free synthetic fiber matrix. The result is a single cartridge that combines the benefits of both a sediment filter and a carbon block into a single cartridge. Fibredyne's carbon block technology also offers up to two times the chlorine taste & odor reduction and dirt-holding capacity of traditional blocks.* In addition, this technology will not release fines into the effluent stream due to a unique post-filtration layer that is fused to the carbon/fiber media blend.

CFB Series cartridges are manufactured entirely from FDA-compliant materials, making them an ideal choice for a wide range of residential, food service, commercial and industrial applications.

* Based on manufacturer's internal testing.



COMPONENT

Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.



Item #	Description	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Taste & Odor Reduction @ Flow Rate (gpm)
25567143	CFB-10	2-7/8" x 9-3/4" (73mm x 248mm)	10	3.0 psi @ 1 gpm (0.7 bar @ 3.8 Lpm)	>5,000 gallons @ 1 gpm (>18,900 L @ 3.8 Lpm)
25567243	CFB-20	2-7/8" x 20" (73mm x 508mm)	10	3.0 psi @ 2 gpm (0.7 bar @ 7.6 Lpm)	>10,000 gallons @ 2 gpm (>37,800 L @ 7.6 Lpm)
25567343	CFB-30	2-7/8" x 30" (73mm x 762mm)	10	3.0 psi @ 2 gpm (0.7 bar @ 11.4 Lpm)	>15,000 gallons @ 3 gpm (>56,700 L @ 11.4 Lpm)

Materials of Construction

- Filter Media Bonded PAC
- End Caps Polypropylene
- Netting Polyethylene
- Gaskets Santoprene™
- Temperature Rating 40°F to 180°F (4.4°C to 82.2°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related contaminant reduction claims.

NOTE: Cartridges will contain a very small amount of carbon fines (very fine black powder). After installation, a new cartridge should be flushed with sufficient water to remove all traces of fines prior to using the water.

NOTE: Micron ratings based on 85% or greater removal of given particle size. Estimated capacity using 2ppm free available chlorine at 0.5 ppm breakthrough.

CFB-Plus Series Modified Molded Block Cartridges



- Nominal 10-micron rating.
- Premium dirt-holding capacity.*
- Premium chlorine taste & odor and bad taste & odor reduction.*

The CFB-Plus Series cartridges are an enhanced version of our CFB product. It offers the same benefits with even greater chlorine taste & odor reduction and the highest sediment reduction found in a carbon cartridge.*

CFB-Plus Series products are modified molded blocks manufactured using our proprietary Fibredyne technology. This technology creates a unique filter media by attaching powdered activated carbon onto a cellulose-free synthetic fiber matrix. The result is a single cartridge that combines the benefits of both a sediment filter and a carbon block into a single cartridge.

Fibredyne's carbon block technology also offers up to two times the chlorine taste & odor reduction and dirt-holding capacity of traditional blocks.* In addition, this technology will not release fines into the effluent stream due to a unique post-filtration layer that is fused to the carbon/fiber media blend.

CFB-Plus Series cartridges are manufactured entirely from FDA-compliant materials, making them an ideal choice for a wide range of residential, food service, commercial and industrial applications.

* Based on manufacturer's internal testing.



Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

COMPONENT

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Taste & Odor Reduction @ Flow Rate (gpm)
25567443	CFB-Plus10	2-7/8" x 9-3/4" (73mm x 248mm)	5-10	1.6 psi @ 1 gpm (0.7 bar @ 3.8 Lpm)	>10,000 gallons @ 1 gpm (>37,800 L @ 3.8 Lpm)
25567543	CFB-Plus20	2-7/8" x 20" (73mm x 508mm)	5-10	1.6 psi @ 2 gpm (0.7 bar @ 7.6 Lpm)	>20,000 gallons @ 2 gpm (>75,700 L @ 7.6 Lpm)
25567643	CFB-Plus30	2-7/8" x 30" (73mm x 762mm)	5-10	1.6 psi @ 3 gpm (0.7 bar @ 11.4 Lpm)	>30,000 gallons @ 3 gpm (>113,500 L @ 11.4 Lpm)
25567743	CFB-Plus10BB	4-5/8" x 9-3/4" (118mm x 248mm)	5-10	2.5 psi @ 2 gpm (0.2 bar @ 7.6 Lpm)	>25,000 gallons @ 2 gpm (>94,600 L @ 7.6 Lpm)
25567843	CFB-Plus20BB	4-5/8" x 20" (118mm x 508mm)	5-10	2.5 psi @ 4 gpm (0.2 bar @ 11.4 Lpm)	>50,000 gallons @ 4 gpm (>189,000 L @ 15.1 Lpm)

Materials of Construction

- Filter Media Bonded PAC
- End Caps Polypropylene
- Netting Polyethylene
- Gaskets Santonprene™
- Temperature Rating 40°F to 180°F (4.4°C to 82.2°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related contaminant reduction claims.

NOTE: Cartridges will contain a very small amount of carbon fines (very fine black powder). After installation, a new cartridge should be flushed with sufficient water to remove all traces of fines prior to using the water.

NOTE: Micron ratings based on 85% or greater removal of given particle size. Estimated capacity using 2ppm free available chlorine at 0.5 ppm breakthrough.

- Nominal 0.5-micron rating.*
- 99.95% reduction of Cryptosporidium and Giardia Cysts.*
- Premium dirt-holding capacity.*
- High chlorine taste & odor and bad taste and odor reduction.*

CFBC Series cartridges offer the effective chlorine taste and odor reduction found in traditional carbon block media while providing superior sediment reduction with resistance to premature plugging. They are highly effective at reducing chlorine taste & odor, bad taste and odor, as well as some organic chemicals.*

CFBC Series products are modified molded blocks manufactured using our proprietary Fibredyne technology. This technology creates a unique filter media by attaching powdered activated carbon onto a cellulose-free synthetic fiber matrix. The result is a single cartridge that combines the benefits of both a sediment filter and a carbon block into a single cartridge.

Benefits of this technology include low pressure drop over the entire life of the cartridge and up to three times the chlorine taste & odor and dirt-holding capacity of traditional 0.5 micron carbon blocks.* In addition, Fibredyne's technology will not release fines into the effluent stream due to a unique post-filtration layer that is fused to the carbon/fiber media blend.

CFBC Series cartridges are manufactured entirely from FDA-compliant materials, making them an ideal choice for a wide range of residential, food service, commercial and industrial applications.

* Based on manufacturer's internal testing.



COMPONENT

Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Taste & Odor Reduction @ Flow Rate (gpm)
25567943	CFBC-10	2-7/8" x 9-3/4" (73mm x 248mm)	0.5	10.7 psi @ 1 gpm (0.7 bar @ 3.8 Lpm)	>20,000 gallons @ 1 gpm (>75,700 L @ 3.8 Lpm)
25568043	CFBC-20	2-7/8" x 20" (73mm x 508mm)	0.5	10.7 psi @ 2 gpm (0.7 bar @ 7.6 Lpm)	>40,000 gallons @ 2 gpm (>75,700 L @ 7.6 Lpm)

Materials of Construction

- Filter Media Bonded PAC
- End Caps Polypropylene
- Netting Polyethylene
- Gaskets Santoprene™
- Temperature Rating 40°F to 180°F (4.4°C to 82.2°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related contaminant reduction claims.

NOTE: Cartridges will contain a very small amount of carbon fines (very fine black powder). After installation, a new cartridge should be flushed with sufficient water to remove all traces of fines prior to using the water.

NOTE: Micron ratings based on 85% or greater removal of given particle size. Estimated capacity using 2ppm free available chlorine at 0.5 ppm breakthrough.

CFB-PB10 Lead Reduction Modified Molded Block Cartridges

- Nominal 0.5-micron rating.*
- 99.95% reduction of Cryptosporidium and Giardia cysts.*
- Lead reduction through 2000 gallons.*
- Premium dirt-holding capacity.*
- High chlorine taste & odor and bad taste and odor reduction.*

The CFB-PB cartridge offers the benefits of effective chlorine taste & odor, cyst and lead reduction found in traditional carbon block media while offering premium sediment filtration.*

The CFB-PB product is modified molded block manufactured using our proprietary Fibredyne technology. This technology creates a unique filter media by attaching powdered activated carbon and lead adsorbent material onto a cellulose-free synthetic fiber matrix. This results in higher reduction efficiencies that resist plugging, afford the longest life, and feature the lowest pressure drop over the effective life of the cartridge of any available 0.5 micron filter cartridge.*

Fibredyne's carbon block technology also offers up to two times the chlorine taste & odor reduction and dirt-holding capacity of traditional blocks.* In addition, this technology will not release fines into the effluent stream due to a unique post-filtration layer that is fused to the carbon/fiber media blend.

The CFB-PB cartridge is manufactured entirely from FDA-compliant materials, making it an ideal choice for a wide range of residential, food service, commercial and industrial applications.

* Based on manufacturer's internal testing.



COMPONENT

Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Taste & Odor Reduction @ Flow Rate (gpm)
25568143	CFB-PB10	2-7/8" x 9-3/4" (73mm x 248mm)	0.5	8.1 psi @ 1 gpm (0.6 bar @ 3.8 Lpm)	>5,000 gallons @ 1 gpm (>18,900 L @ 3.8 Lpm)

Materials of Construction

- Filter Media Bonded PAC
- End Caps Polypropylene
- Netting Polyethylene
- Gaskets Santoprene™
- Temperature Rating 40°F to 180°F (4.4°C to 82.2°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related contaminant reduction claims.

NOTE: Cartridges will contain a very small amount of carbon fines (very fine black powder). After installation, a new cartridge should be flushed with sufficient water to remove all traces of fines prior to using the water.

NOTE: Micron ratings based on 85% or greater removal of given particle size. Estimated capacity using 2ppm free available chlorine at 0.5 ppm breakthrough.

- Cellulose-free construction.
- Resistant to chemical breakdown in both acidic and alkaline solutions up to 180°F (82°C).
- Will not contribute to plating porosity or brittleness.
- Integrated post-filtration layer to ensure that no carbon fines are bled into the plating bath.
- End cap gaskets are permanently molded on to the end caps to ease filter cartridge change-out (gaskets cannot fall off into the filter housing during installation or removal of filter).

The ELPC Series is a premium line of activated carbon filter cartridges specifically designed for electroplating solutions. They represent the best technology available in cartridge filtration for use in a wide range of electroplating applications.

The unique technology used to manufacture this product ensures that there is no bleeding of carbon fines into the plating bath. In addition, the carbon that is used is an ultra-clean, highly purified carbon to ensure that sulfur is not leached into the plating bath.

ELPC Series products have a 10- micron nominal rating with superior dirt-holding ability.

The fibrous physical structure created by our proprietary Fibredyne technology produces a unique block with true depth filtration capability which allows for maximum treatment with minimal pressure drop through the cartridge.



Item #	Description	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
25566843	ELPC-10	2-7/8" x 9-3/4" (73mm x 248mm)	10	3.4 psi @ 1 gpm (0.2 bar @ 3.8 Lpm)
25566943	ELPC-20	2-7/8" x 20" (73mm x 508mm)	10	3.4 psi @ 2 gpm (0.2 bar @ 7.6 Lpm)
25567043	ELPC-30	2-7/8" x 30" (73mm x 762mm)	10	3.4 psi @ 3 gpm (0.2 bar @ 11.4 Lpm)

Materials of Construction

- Filter Media Bonded PAC
- End Caps Polypropylene
- Netting Polyethylene
- Gaskets Santonprene™
- Temperature Rating 40°F to 180°F (4.4°C to 82.2°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related contaminant reduction claims.

NOTE: Cartridges will contain a very small amount of carbon fines (very fine black powder). After installation, a new cartridge should be flushed with sufficient water to remove all traces of fines prior to using the water.

NOTE: Micron ratings based on 85% or greater removal of given particle size. Estimated capacity using 2ppm free available chlorine at 0.5 ppm breakthrough.

CBC Series Carbon Briquette Cartridges



- Nominal 0.5-micron rating.*
- 99.5% reduction of Cryptosporidium, Giardia, Entamoeba and Toxoplasma cysts.*
- Premium high capacity bad taste & odor and chlorine taste & odor reduction.*
- Enhanced dirt holding capacity.*

CBC Series cartridges are highly effective at reducing unwanted taste, odor and chlorine: taste and odor from potable drinking water. The unique structure of the carbon block enables it to reduce Giardia, Cryptosporidium, Entamoeba and Toxoplasma cysts and fine sediment particles down to 0.5 microns.*.

CBC Series cartridges are manufactured using a patented process and made entirely from FDA-approved materials. They are an ideal choice for a wide range of residential, food service, commercial and industrial applications. They also make excellent polishing filters or pre-filters in applications requiring fine filtration and high capacity.

* Based on manufacturer's internal testing.



COMPONENT

The CBC-10, CBC-20, CBC-BB and CBC-20BB are Tested and Certified by NSF International under ANSI/NSF Standard 42 for material requirements only.

Item #	Description	Micron Rating (Nominal)*	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)*	Chlorine Reduction @ Flow Rate (gpm)*†
15516943	CBC-5	0.5	2-7/8" x 4-7/8" (73 mm x 124 mm)	7.0 psi @ 1 gpm (0.48 bar @ 3.8 lpm)	>3,000 gallons @ 1 gpm >11,400 litres @ 3.8 lpm
15516243	CBC-10	0.5	2-7/8" x 9-3/4" (73 mm x 248 mm)	3.7 psi @ 1 gpm (0.26 bar @ 3.8 lpm)	>20,000 gallons @ 1 gpm >75,700 litres @ 3.8 lpm
15530943	CBC-20	0.5	2-7/8" x 20" (73 mm x 508 mm)	3.0 psi @ 2 gpm (0.21 bar @ 7.6 lpm)	>45,000 gallons @ 2 gpm >170,300 litres @ 7.6 lpm
15517043	CBC-BB	0.5	4-5/8" x 9-3/4" (117 mm x 248 mm)	4.6 psi @ 2 gpm (0.32 bar @ 7.6 lpm)	>50,000 gallons @ 2 gpm >189,300 litres @ 7.6 lpm
15531243	CBC-20BB	0.5	4-5/8" x 20" (117 mm x 508 mm)	8.5 psi @ 4 gpm (0.59 bar @ 15.1 lpm)	>150,000 gallons @ 4 gpm >567,800 litres @ 15.1 lpm

Materials of Construction

- Filter MediaBonded PAC
- End CapsPolypropylene
- Inner/Outer WrapsPolyolefin
- NettingPolyethylene
- GasketsBuna-N
- Temperature Rating40°F to 180°F (5°C to 83°C)

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related contaminant reduction claims.

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: Cartridges will contain a very small amount of carbon fines (very fine black powder) and a new cartridge after installation should be flushed with sufficient water to remove all traces of the fines from your water system before using the water. Each time you use your filtered water tap for drinking or cooking purposes it is recommended that you run (flush) the tap for at least 20 seconds prior to using water.

NOTE: Micron ratings based on 85% or greater removal of given particle size.

NOTE: CBC-Series cartridges are capable of reducing 99.9% of Cryptosporidium and Giardia cysts. Data obtained from actual particle counts using AC Fine Test Dust and Latex spheres.

* Based on manufacturer's internal testing.

†Estimated capacity using 2ppm free available chlorine (FAC) at continuous flow with greater than 90% reduction.

US Patent No. 5,976,432 & 5,823,668

- Nominal 1-micron rating.*
- Water-washed coconut-carbon formulation.*
- Premium high capacity bad taste & odor and chlorine taste & odor reduction.*
- Enhanced dirt-holding capacity.*

CCBC-10 cartridges are highly effective at reducing unwanted taste & odor and chlorine taste & odor from potable drinking water. With a nominal 1-micron rating, they are equally effective at reducing fine sediment.*

CCBC-10 cartridges are manufactured using a patented process and made from a water-washed, coconut-carbon formulation. This process and media yields a cartridge with high chlorine taste & odor reduction capacity.

These cartridges are protected by Endurawrap™, a uniquely formulated polyolefin bilaminate pre-filter, designed to significantly increase the useful life of the cartridge by trapping sediment that typically plugs carbon block cartridges.

They are an ideal choice for a wide range of residential, food service, commercial and industrial applications. They also make excellent polishing filters or pre-filters in applications requiring fine filtration and high capacity.

SCBC Series are silver impregnated versions of the standard CCBC to help inhibit the growth of bacteria.

* Based on manufacturer's internal testing.



CCBC-10



COMPONENT

This CCBC-10 is Tested and certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)*
15571343	CCBC-10	2-7/8" x 9-3/4" (73mm x 248mm)	1	3.3 psi @ 1 gpm (0.23 bar @ 3.8 lpm)	>20,000 gallons @ 1 gpm (18,900 liters @ 3.8 lpm)
15535043	SCBC-10	2-7/8" x 9-3/4" (73mm x 248mm)	1	3.3 psi @ 1 gpm (0.23 bar @ 3.8 lpm)	>20,000 gallons @ 1 gpm (18,900 liters @ 3.8 lpm)

Materials of Construction

- Filter Media..... Water-Washed Coconut Based Carbon
- End Caps Polypropylene
- Inner/Outer Wraps..... Polyolefin
- Netting Polyethylene
- Gaskets Buna-N
- Temperature Rating ... 40°F to 180°F (5°C to 83°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

US Patent No. 5,976,432 & 5,823,668

CBR2 Series Carbon Briquette Multimedia Cartridges

- Nominal 0.5-micron rating.*
- Lead reduction through 2000 gallons.*
- VOC and MTBE reduction.*
- 99.95% reduction of Cryptosporidium, Giardia, Entamoeba and Toxoplasma cysts.*
- Premium high capacity chlorine taste & odor reduction through more than 20,000 gallons.*
- Enhanced dirt holding capacity.*

The CBR2-10 and CBR2-10R are advanced multimedia cartridges designed to reduce chlorine taste & odor, dissolved and particulate lead, cysts, MTBE and certain volatile organic chemicals (VOCs).*

CBR2 Series cartridges are manufactured using a patented process, and combine powdered activated carbon (PAC) with a specially designed adsorbent medium for lead and mercury reduction.

These cartridges are protected by Endurawrap™, a uniquely formulated polyolefin bilaminate prefilter, designed to significantly increase the useful life of the cartridge by trapping sediment that typically plugs carbon block cartridges.

In addition to lead reduction, the unique structure

of the carbon block enables it to reduce Giardia, Cryptosporidium, Entamoeba and Toxoplasma cysts and fine sediment particles down to 0.5 microns.*

As with our standard CBC Series carbon block, both the CBR2-10 and CBR2-10R are more effective at reducing levels of chlorine taste & odor, MTBE and (VOCs).*

The CBR2-10R has a built-in flow restrictor (0.6 gpm) to allow for maximum contact time.

* Based on manufacturer's internal testing.



CBR2-10

CBR2-10R



COMPONENT

This CBR2-10 and CBR2-10R are Tested and certified by NSF International under ANSI/NSF Standard 42 for material requirements only.

Item #	Model	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)*
15526843 (use 26118)	CBR2-10	2-7/8" x 9-3/4" (73mm x 247mm)	0.5	15 psi @ 1.0 gpm (1.0 bar @ 3.8 lpm)	>20,000 gallons @ 1.0 gpm (>75,700 liters @ 3.8 lpm)
15540343	CBR2-10R	2-7/8" x 9-3/4" (73mm x 247mm)	0.5	Flow restricted to 0.6 gpm (2.3 lpm) with built-in flow restrictor	>20,000 gallons @ 0.6 gpm (>75,700 liters @ 2.3 lpm)

Materials of Construction

- Filter Media..... Bonded PAC
- End Caps Polypropylene
- Outer Wrap..... Polyolefin
- Netting Polyethylene
- Gaskets Buna-N
- Temperature Rating ... 40°F to 165°F (5°C to 74°C)

NOTE: Certain states require system registration or certification for health-related contaminant reduction claims.

NOTE: Chlorine and lead reduction tests conducted by Pentek Filtration at 0.6 gallons per minute with a Pentek Filtration Slim Line™ (SL) housing.

NOTE: Meets NSF Standard 42 for chlorine I taste & odor reduction*.

CAUTION: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: Giardia, Cryptosporidium, Entamoeba and Toxoplasma cyst claim based on actual tests showing greater than 99.95% reduction using NSF Standard 53 protocol.

US Patent No. 5,976,432 & 5,823,668

- Nominal 5-micron rating.*
- High dirt-holding capacity maximizes utilization of the carbon block.*
- Highly effective bad taste & odor and chlorine taste & odor reduction.*

EP Series cartridges are versatile and combine the long life of carbon block filtration with the higher dirt-holding capacity of wound, carbon-impregnated paper cartridges like our C-1.

EP Series cartridges are manufactured using a patented process that yields a cartridge with a nominal 5-micron filtration rating, high dirt-holding capacity. A high porosity design helps prevent the cartridge from plugging before its adsorption capacity is exhausted, maximizing the utilization of the carbon while maintaining low pressure drop.

These cartridges are protected by Endurawrap™, a uniquely formulated polyolefin bilaminate pre-filter, designed to significantly increase the useful life of the cartridge by trapping sediment that typically plugs carbon block cartridges.

EP Series cartridges are manufactured entirely from FDA-compliant materials making them an ideal choice for a wide range of residential, food service, commercial and industrial applications.

* Based on manufacturer's internal testing.



COMPONENT

The EP-10, EP-20, EP-BB and EP-20BB are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.



Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)*
25542403	EP-5	2-7/8" x 4-7/8" (73mm x 124mm)	5	3.4 psi @ 1 gpm (0.23 bar @ 3.8 lpm)	>3,000 gallons @ 1 gpm (11,350 litres @ 3.8 lpm)
15553143	EP-10	2-7/8" x 9-3/4" (73mm x 247mm)	5	3.4 psi @ 1 gpm (0.23 bar @ 3.8 lpm)	>6,000 gallons @ 1 gpm (22,700 litres @ 3.8 lpm)
15552943	EP-20	2-7/8" x 20" (73mm x 508mm)	5	3.4 psi @ 2 gpm (0.23 bar @ 7.6 lpm)	>12,000 gallons @ 2 gpm (45,400 litres @ 7.6 lpm)
15554843	EP-BB	4-5/8" x 9-3/4" (117mm x 248mm)	5	4.3 psi @ 2 gpm (0.30 bar @ 7.6 lpm)	>22,000 gallons @ 2 gpm (83,300 litres @ 7.6 lpm)
15558343	EP-20BB	4-5/8" x 20" (117mm x 508mm)	5	5.5 psi @ 5 gpm (0.38 bar @ 19 lpm)	>40,000 gallons @ 4 gpm (151,400 litres @ 15.1 lpm)

Materials of Construction

- Filter MediaBonded PAC
- End CapsPolypropylene
- Inner/Outer WrapsPolyolefin
- NettingPolyethylene
- GasketsBuna-N
- Temperature Rating40°F to 180°F (5°C to 82.2°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: The EP cartridges will contain a very small amount of carbon fines (very fine black powder) and a new cartridge after installation should be flushed with sufficient water to remove the fines from your water system before using the water.

NOTE: Micron ratings based on 85% or greater removal of given particle size. Data obtained from actual particle counts using AC Fine Test Dust and Latex spheres.

NOTE: Estimated capacity using 2ppm free available chlorine (FAC) at continuous flow with greater than 90% reduction.

US Patent No. 5,976,432 & 5,823,668

CEP-10E Series Coconut Based Carbon Block Cartridges



- Nominal 5-micron rating.*
- Acid-washed coconut-carbon formulation.
- Bad taste & odor and chlorine taste & odor reduction.*
- Low extractables, minimal pH rise for RO pre- and post-filter applications.*
- Enhanced dirt holding capacity.*

CEP-10E cartridges are manufactured from an acid-washed coconut-carbon based formulation that minimizes the pH rise and produces better tasting water.

Our patented manufacturing process yields a cartridge with a nominal 5- micron filtration rating, low extractables and a minimal pH rise ideal for RO pre- and post-filter applications. A thin-wall, high porosity design helps prevent the cartridge from plugging before its adsorption capacity is exhausted, maximizing the utilization of the carbon while maintaining low pressure drop.

These cartridges are protected by Endurawrap™, a uniquely formulated polyolefin bilaminate prefilter, designed to significantly increase the useful life of the cartridge by trapping sediment that typically plugs carbon block cartridges.

* Based on manufacturer's internal testing.



CEP-10E



COMPONENT

Tested and certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)
15571443	CEP-10E	2-7/8" x 9-3/4" (73mm x 247mm)	5	3.0 psi @ 1 gpm (0.2 bar @ 3.8 lpm)	>5,000 gallons @ 1 gpm (>18,900 liters @ 3.8 lpm)

Materials of Construction

- Filter Media..... Acid-Washed Coconut Based Carbon
- End Caps Polypropylene
- Inner/Outer Wraps..... Polyolefin
- Netting Polyethylene
- Gaskets Buna-N
- Temperature Rating ... 40°F to 125°F (5°C to 52°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

US Patent No. 5,976,432 & 5,823,668

- Nominal 10-micron rating.*
- Highest carbon block dirt holding capacity for maximum cartridge life.*
- Bad taste & odor and chlorine taste & odor reduction.*
- Lowest pressure drop.
- Economically priced.

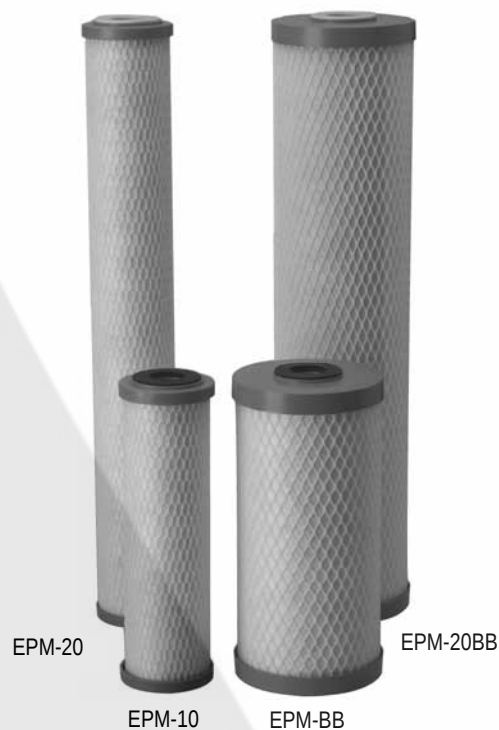
EPM Series cartridges are a modified version of our “EP Series” cartridge. An economical price makes this cartridge suitable for taste, odor and chlorine taste & odor reduction, as well as sediment filtration.*

EPM Series cartridges are manufactured using a patented process that yields a cartridge with a nominal 10-micron filtration rating, high porosity and greater chlorine removal capacity than competitive 10 micron carbon blocks. The high porosity design helps prevent the cartridge from plugging before its adsorption capability is exhausted, maximizing the utilization of the carbon while maintaining low pressure drop.

They are an ideal choice for a wide range of residential, food service, commercial and industrial applications. They also make excellent polishing filters or pre-filters in applications requiring fine filtration and high capacity.

EPM Series cartridges are manufactured entirely from FDA-compliant materials making them an ideal choice for a wide range of residential, food service, commercial and industrial applications.

* Based on manufacturer’s internal testing.



COMPONENT

Tested and certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction @ Flow Rate (gpm)*
15563443	EPM-10	2-7/8" x 9-3/4" (73mm x 247mm)	10	1.5 psi @ 1 gpm (0.10 bar @ 3.8 lpm)	>3,000 gallons @ 1 gpm (>11,400 liters @ 3.8 lpm)
15563543	EPM-20	2-7/8" x 20" (73mm x 508mm)	10	1.0 psi @ 2 gpm (0.07 bar @ 7.6 lpm)	>6,000 gallons @ 2 gpm (>22,700 liters @ 7.6 lpm)
15578243	EPM-BB	4-5/8" x 9-3/4" (117mm x 247mm)	10	5.0 psi @ 2 gpm (0.35 bar @ 7.6 lpm)	>15,000 gallons @ 2 gpm (>56,750 liters @ 7.6 lpm)
15578343	EPM-20BB	4-5/8" x 20" (117mm x 508mm)	10	4.0 psi @ 4 gpm (0.28 bar @ 15 lpm)	>30,000 gallons @ 4 gpm (>113,500 liters @ 15 lpm)

Materials of Construction

- Filter Media..... Bonded PAC
- End Caps Polypropylene
- Outer Wrap..... Polyolefin
- Netting Polyethylene
- Gaskets Buna-N
- Temperature Rating ... 40°F to 180°F (5°C to 83°C)

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions.

NOTE: When greater chlorine reduction is needed, use the standard EP series blocks.

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: EPM-Series cartridges will contain a very small amount of carbon fines (very fine black powder). After installation follow the instructions for flushing the cartridge to remove all traces of the fines before using the water. You should run (flush) the tap at least 20 seconds prior to using water for drinking or cooking purposes. This is particularly important if the tap has not been used daily.

US Patent No. 5,976,432 & 5,823,668

Chloramine Reduction Carbon Cartridges



- Utilizes advanced activated carbon technology which results in excellent chloramine as well as superior chlorine reduction.
- CRFC20BB Radial Flow Cartridge.
- CGAC-10 Granular Activated Carbon Cartridge.
- ChlorPlus Series Carbon Briquette Cartridges.

PENTEK® offers three different product solutions for chloramine reduction. Chloramine is increasingly becoming more common as an alternative to chlorine for water treatment.

The CGAC-10 cartridge utilizes traditional granular activated carbon and is used for basic applications where chloramine must be removed. The construction of this cartridge allows water to pass evenly over a large bed of carbon while minimizing channeling or bypass.

The ChlorPlus™ carbon block cartridges will help reduce sediment while providing greater chloramine performance capacities than granular carbon. They will also significantly reduce the carbon fines found in many granular canisters.

The CRFC20-BB heavy duty radial flow cartridge measures 4-1/2" in diameter and 20" long which is ideal for higher flow rate and capacity applications. This cartridge incorporates a 70 micron porous polypropylene outer shell and a spun polypropylene-wrapped core. The bed of granular activated carbon (GAC) between the outer shell and core creates a unique radial flow design which effectively removes chloramine, has a low pressure drop, and helps to reduce fines commonly seen in GAC style cartridges.

All three products utilize advanced activated carbon technology which allows excellent chloramine reduction as well as superior chlorine reduction. The variety of sizes and capacities offered by PENTEK chloramine reduction cartridges make them ideal solutions for both point-of-entry (POE) and point-of-use (POU) applications.



Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Taste & Odor Reduction @ Flow Rate	Chlorine Reduction @ Flow Rate (gpm)*
25541643	ChlorPlus10	2-7/8" x 9-3/4" (73mm x 248mm)	1	6 psi @ 1 gpm (0.41 bar @ 3.8 lpm)	>100,000 gallons @ 1 gpm (>378,500L @ 3.8 lpm)†	>3,000 gallons @ 1 gpm (>11,400 liters @ 3.8 lpm)
25541743	ChlorPlus20	2-7/8" x 20" (73mm x 508mm)	1	6 psi @ 2 gpm (0.41 bar @ 7.6 lpm)	>100,000 gallons @ 2 gpm (>757,000L @ 3.8 lpm)†	>6,000 gallons @ 2 gpm (>22,700 liters @ 7.6 lpm)
15566143	CGAC-10	2-7/8" x 9-3/4" (73mm x 248mm)	20	20 psi @ 1 gpm (1.38 bar @ 3.8 lpm)	>30,000 gallons @ 1 gpm (>113,500L @ 3.8 lpm)†	>15,000 gallons @ 2 gpm (>56,750 liters @ 7.6 lpm)
35505643	CRFC-BB	4-1/2" x 9-3/4" (114mm x 248mm)	20	2.5 psi @ 2.5 gpm (0.17 bar @ 9.5 lpm) <1 psi @ 1.5 gpm (<.07 bar @ 9.5 lpm)	>10,000 gallons @ 2 gpm (>37,900L @ 7.6 lpm)†	>30,000 gallons @ 4 gpm (>113,500 liters @ 15 lpm)
15596743	CRFC20-BB	4-1/2" x 20" (114mm x 508mm)	20	2.5 psi @ 2.5 gpm (0.17 bar @ 9.5 lpm) <1 psi @ 1.5 gpm (<.07 bar @ 9.5 lpm)	>200,000 gallons @ 4 gpm (>757,000L @ 15 lpm)†	>30,000 gallons @ 4 gpm (>113,500 liters @ 15 lpm)

Materials of Construction	ChlorPlus	CGAC-10	CRFC-BB/CRFC20-BB
• Filter Media.....	Advanced Bonded PAC	Advanced Granular Activated	Advanced Granular Activated
• End Caps	Polypropylene	Polystyrene	Polypropylene
• Inner Wrap/Core	Polyolefin	N/A	Spun Polypropylene
• Outer Wrap/Shells	Polyolefin	Polystyrene	Polyethylene
• Expansion Pad	N/A	Polypropylene	N/A
• Post Filter	N/A	Spun Polypropylene	Spun Polypropylene
• Netting	Polyethylene	N/A	N/A
• Gaskets.....	Buna-N	Buna-N (top) Santoprene (bottom)	Buna-N
• Temperature Rating.....	40°F to 125°F (5°C to 52°C)	40°F to 180°F (5°C to 83°C)	40°F to 125°F (5°C to 52°C)

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: Some harmless bacteria will attack cellulose media cartridges. If your cartridge seems to disintegrate, or has a musty or moldy odor, switch to a synthetic media cartridge or consult the manufacturer.

*NOTE: Estimated capacity tested at given flow rate using 2 ppm free available chlorine to 0.5 ppm breakthrough.

NOTE: Increased flow rates may result in less effective chlorine reduction.

- Effective bad taste & odor and chlorine taste & odor reduction.*
- Designed for maximum adsorption.
- Post-filter to reduce carbon fines.
- Available in a variety of sizes and flow rates.

GAC Series cartridges effectively reduce unwanted tastes, odor and chlorine from your drinking water.* They are designed to allow maximum contact between the water and carbon, ensuring maximum adsorption.

The construction of the cartridge allows water to enter at one end and pass through the entire length of the carbon bed before exiting the other end of the cartridge, while an internal expansion pad minimizes channeling or bypass. Before the water exits the cartridge, a 20-micron post-filter helps reduce carbon fines and other suspended particles from the filtered water. The post-filter is permanently fastened to an innovative support basket ensuring that it is firmly secured and eliminating any potential for bypass.

GAC Series cartridges are available in a variety of sizes and flow rates, and effectively provide good general purpose drinking water filtration.

* Based on manufacturer's internal testing.



COMPONENT

The GAC-10 and GAC-20BB are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Initial ΔP psi @ Flow Rate GPM	Chlorine Reduction @ Flow Rate GPM*
15511003	GAC-5	2-7/8" x 4-7/8" (73 mm x 124 mm)	3.0 psi @ 0.5 gpm (0.25 bar @ 1.9 lpm)	250 gallons @ 0.5 gpm (900 liters @ 1.9 lpm)
15510943	GAC-10	2-7/8" x 9-3/4" (73 mm x 248 mm)	7.0 psi @ 1.0 gpm (0.5 bar @ 3.8 lpm)	5,000 gallons @ 1.0 gpm (18,900 liters @ 3.8 lpm)
15511143	GAC-20	2-7/8" x 20" (73 mm x 508 mm)	16 psi @ 2.0 gpm (1.1 bar @ 7.6 lpm)	10,000 gallons @ 2.0 gpm (37,800 liters @ 7.6 lpm)
15515343	GAC-BB	4-1/2" x 9-3/4" (114 mm x 248 mm)	6.0 psi @ 2.0 gpm (0.4 bar @ 7.6 lpm)	12,500 gallons @ 2.0 gpm (47,000 liters @ 7.6 lpm)
15524943	GAC-20BB	4-1/2" x 20" (114 mm x 508 mm)	5.0 psi @ 4.0 gpm (0.3 bar @ 15 lpm)	25,000 gallons @ 4.0 gpm (95,000 liters @ 15 lpm)

Materials of Construction

- Filter Media..... Granular Activated Carbon
- End Caps Polystyrene
- Post-Filter Spun Polypropylene
- Outer Casing..... Polystyrene
- Expansion Pad Polypropylene
- Gasket Buna-N (top)
Santoprene (bottom)
- Temperature Rating..... 40°F to 125°F (4.4°C to 52°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: A drinking water cartridge may contain carbon fines (very fine black powder). After installation and before using the water, follow the instructions for flushing the cartridge to remove fines.

NOTE: It is recommended that you flush for 20 seconds prior to using the water for cooking purposes.

NOTE: Chlorine Reduction is estimated capacity using 2 ppm free available chlorine (FAC) at continuous flow with greater than 75% reduction.

- Effective bad taste & odor and chlorine taste & odor reduction.*
- Greater VOC reduction than standard GAC cartridges.*
- Post-filter to reduce carbon fines.
- Available in a variety of sizes and flow rates.

CC Series granular activated carbon cartridges are an excellent choice to reduce unwanted chlorine taste & odor, and certain VOCs from potable drinking water. CC Series cartridges also reduce MTBE. They contain coconut shell based activated carbon, which produces drinking water of exceptional taste and quality and provides better VOC reduction than standard GAC cartridges.*

The construction of the cartridge allows water to enter at one end and pass through the entire length of the carbon bed before exiting the other end of the cartridge, while an internal expansion pad minimizes channeling or bypass. Before the water exits the cartridge, a 20-micron post filter helps remove carbon fines and other suspended particles from the filtered water. The post filter is permanently fastened to an innovative support basket ensuring that it is firmly secured, eliminating any potential for bypass.

CC Series cartridges effectively provide good general-purpose drinking water filtration.

* Based on manufacturer's internal testing.



COMPONENT

This CC-10 and CC-20 are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP psi @ Flow Rate GPM	Chlorine Reduction @ Flow Rate GPM*
15515543	CC-10	2-7/8" x 9-3/4" (73 mm x 248 mm)	20	4.5 psi @ 1 gpm (0.3 bar @ 3.8 lpm)	7,500 gallons @ 1.0 gpm (28,000 liters @ 3.8 lpm)

Materials of Construction

- Filter Media..... Granular Activated Carbon
- End Caps Polystyrene
- Core Spun Polypropylene
- Outer Casing..... Polystyrene
- Expansion Pad Polypropylene
- Gasket Buna-N (top)
Santoprene (bottom)
- Temperature Rating..... 40°F to 125°F (4.4°C to 52°C)

NOTE: Performance capacity depends on system design, flow rate and certain other application conditions. Certain states require system registration or certification for health-related reduction claims.

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: A drinking water cartridge may contain carbon fines (very fine black powder). After installation and before using the water, follow the instructions for flushing the cartridge to remove fines.

NOTE: It is recommended that you flush for 20 seconds prior to using the water for cooking purposes.



TSGAC Specialty Granular Activated Carbon/Phosphate Cartridges

- Effective bad taste & odor and chlorine taste & odor reduction.*
- Phosphate crystals reduce rust stains and scale deposits.*
- Designed for maximum adsorption.
- Post filter to reduce carbon fines.

TSGAC cartridges contain granular activated carbon to effectively reduce unwanted taste & odor and chlorine taste & odor, as well as phosphate crystals to reduce rust stains and scale deposits.*

The construction of the cartridge allows water to enter at one end and pass through the entire length of the carbon bed before exiting the other end of the cartridge. An internal expansion pad minimizes channeling or bypass. This design allows for maximum contact between the water and carbon, ensuring maximum adsorption.

Before the water exits the cartridge, a 20-micron post filter helps remove carbon fines and other suspended particles from the filtered water. The post filter is permanently fastened to an innovative support basket ensuring that it is firmly secured and eliminating any potential for bypass.

TSGAC cartridges provide superior performance and outstanding protection for your water lines, fixtures, major appliances and commercial equipment.

* Based on manufacturer's internal testing.



COMPONENT

The TSGAC-10 Cartridge is tested and Certified by NSF International against ANSI/NSF Standard 42 - Conforms to material requirements.

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Reduction* @ Flow Rate (gpm)
15513143	TSGAC-10	2-7/8" x 9-3/4" (73mm x 248mm)	2.5 psi @ 1.0 gpm (0.2 bar @ 3.8 lpm)	>2,000 gallons @ 1 gpm (7,570 liters @ 3.8 lpm)

Materials of Construction

- Filter Media.....Granular Activated Carbon
- Expansion PadPolypropylene
- Hexametaphosphate Crystals
- Gasket.....Buna-N (top)
- End CapsPolystyrene
- Santoprene (bottom)
- Post-filterSpun Polypropylene
- Temperature Rating.....40°F to 125°F (4.4°C to 52°C)
- Outer Casing.....Polystyrene

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: A drinking water cartridge may contain carbon fines (very fine black powder). After installation and before using the water, flush the cartridge for 5 minutes to remove fines.

NOTE: It is recommended that you run the tap for 20 seconds prior to using the water for drinking or cooking purposes.

RFC Series Radial Flow Carbon Cartridges



- Provides effective chlorine taste & odor reduction.*
- BB cartridges are ideal for point-of-entry (POE) and other high flow rate applications.
- Unique design reduces carbon fines in filtered water.
- Available in a wide variety of sizes.

RFC Series cartridges are constructed with a 70-micron porous polyethylene outer shell and durable polypropylene end caps. The 2-3/4" OD cartridges have a polypropylene core and the 4-1/2" OD cartridges incorporate a spun polypropylene core. Sandwiched between the outer shell and the core is a bed of granular activated carbon (GAC).

The unique radial flow design offers the benefits of granular activated carbon (GAC) filtration, such as low pressure drop, while at the same time significantly reducing the release of carbon fines commonly associated with GAC style cartridges.

RFC Series cartridges are available in a wide variety of sizes and are ideal point-of-entry (POE) and other high flow rate applications.

* Based on manufacturer's internal testing.



The RFC20-BB is Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

COMPONENT

Item #	Description	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)	Chlorine Taste & Odor Reduction @ Flow Rate (gpm)*
15506543	RFC-20	2-3/4" x 20" (70 mm x 508 mm)	0.60 psi @ 2 gpm (0.04 bar @ 7.6 L/min)	> 6,000 gallons @ 2 gpm 22,700 liters @ 7.6 L/min
15514143	RFC-BB	4-1/2" x 9-3/4" (114 mm x 248 mm)	0.90 psi @ 2 gpm (0.06 bar @ 7.6 L/min)	> 35,000 gallons @ 2 gpm 132,500 liters @ 7.6 L/min
15524743	RFC20-BB	4-1/2" x 20" (114 mm x 508 mm)	0.90 psi @ 4 gpm (0.06 bar @ 15.1 L/min)	> 70,000 gallons @ 4 gpm 265,000 liters @ 15.1 L/min

Materials of Construction

- Filter Media Granular Activated Carbon
- Outer Shell Polyethylene
- End Caps Polypropylene
- Gasket Buna-N
- Inner Wraps/Core Polypropylene
- Temperature Rating..... 40°F to 125°F (4.4°C to 51.7°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: The granular activated carbon cartridges will contain a very small amount of carbon fines (very fine black powder). After installation, a new cartridge should be flushed with sufficient water to remove all traces of the fines from your water system before using the water. Each time you use your filtered water tap for drinking or cooking purposes it is recommended that you run (flush) the tap for at least 20 seconds prior to using water. This is particularly important if the water tap has not been used daily.

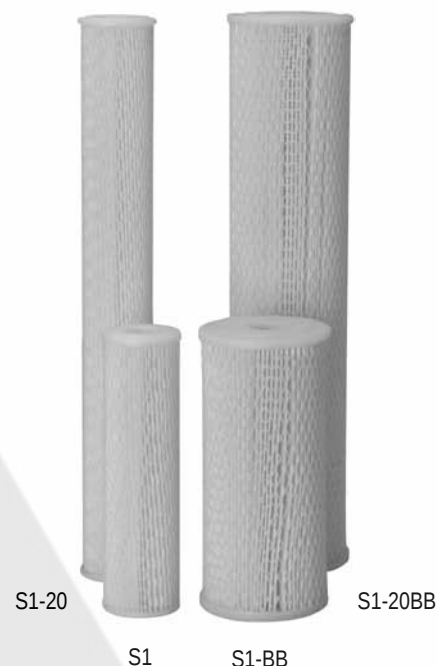
- Pleated design maximizes dirt-holding capacity.
- Designed for general water filtration purposes.
- Recommended for chlorinated water supplies.
- Economically priced.
- Nominal 20-micron rating.

S1 Series cartridges are manufactured from a pleated cellulose media and are designed for general water filtration purposes.

The media is pleated around a polypropylene core for added strength and the ends are immersed in a thermo-setting vinyl plastisol. Embedding and sealing each end of the pleat in this fashion fuses the three components together forming a unitized end cap and gasket.

An external netted sheath helps retain uniform pleat spacing in high flow and pulsating flow streams. The overlap seam is sonically welded to reduce bypass improving filtration efficiency.

S1 Series cartridges are economically priced and highly effective at reducing sediment particles down to 20-microns in size.



Item #	Description	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)	Dimensions	Surface Area	Recommended Flow Rates
15500143	S1	20	2.4 psi @ 10 gpm (0.17 bar @ 38 lpm)	2-5/8" x 9-3/4" (67x248 mm)	586.21 in. ² (1488.97 cm ²)	12 GPM (45 LPM)
15530343	S1-20	20	0.8 psi @ 10 gpm (0.06 bar @ 38 lpm)	2-5/8" x 20" (67 x 508 mm)	1119.09 in. ² (2842.49 cm ²)	15 GPM (57 LPM)
15540543	S1-BB	20	1.2 psi @ 10 gpm (0.08 bar @ 38 lpm)	4-1/2" x 9-3/4" (114 x 248 mm)	2079.63 in. ² (5282.26 cm ²)	20 GPM (76 LPM)
15530543	S1-20BB	20	1.2 psi @ 10 gpm (0.08 bar @ 38 lpm)	4-1/2" x 20" (114 x 508 mm)	4289.86 in. ² (10896.24 cm ²)	25 GPM (95 LPM)

Materials of Construction

- Filter Media.....Resin Impregnated Cellulose
- End CapsVinyl Plastisol
- CorePolypropylene
- NettingPolyethylene
- Temperature Rating.....40°F to 145°F (4.4°C to 63°C)

NOTE: S1-BB and S1-20BB are for use in 10" and 20" Big Blue® housings and BBFS systems only.

NOTE: Big Blue® (BB) is a registered trademark of Pentek Filtration.

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

R Series Pleated Polyester Cartridges



- Pleated design maximizes dirt-holding capacity.
- Versatile and reusable, allowing for a variety of uses.
- Durable polyester media is bacteria and chemical resistant.
- Nominal 30-micron rating (R-30) and nominal 50-micron rating (R-50).

R Series cartridges are manufactured from a durable, non-woven and reusable polyester fabric that is suitable for a wide range of filtration uses.

The media is pleated around a polypropylene core for added strength, and the ends are immersed in a thermo-setting vinyl plastisol. Embedding and sealing each end of the pleat block in this fashion fuses the three components, together forming a unitized end cap and gasket. The overlap seam is sonically welded to reduce internal bypass, improving filtration efficiency.

The standard 9-3/4" length cartridge has more than four square feet of polyester fabric, while the larger Big Blue® version has more than 16 square feet. The media is pleated to maximize dirt-holding capacity and extend the time period between changes or cleaning.

R Series cartridges are resistant to both bacteria and chemical attack making them suitable for a variety of residential, commercial and industrial applications.



This R50-BB is Tested and certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

COMPONENT

Item #	Description	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)
15503153	R30-478	2-5/8" x 4-7/8" (67mm x 124mm)	30	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15501743	R30	2-5/8" x 9-3/4" (67mm x 248mm)	30	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15503843	R50	2-5/8" x 9-3/4" (67mm x 248mm)	50	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15541643	R30-20	2-5/8" x 20" (67mm x 508mm)	30	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15510143	R30-BB	4-1/2" x 9-3/4" (114mm x 248mm)	30	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15505343	R50-BB	4-1/2" x 9-3/4" (114mm x 248mm)	50	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15543043	R30-20BB	4-1/2" x 20" (114mm x 508mm)	30	<1 psi @ 20 gpm (<0.1 bar @ 76 lpm)

*Based on manufacturer's internal testing.

Materials of Construction

- Filter Media..... Non-Woven Polyester
- End Caps Vinyl Plastisol
- Core Polypropylene
- Temperature Rating ... 40°F to 125°F (4.4°C to 52°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

- Pleated design maximizes dirt-holding capacity.
- Durable polypropylene media resists bacterial attack.
- Suitable for municipal or well water applications.
- Nominal 30-micron rating.

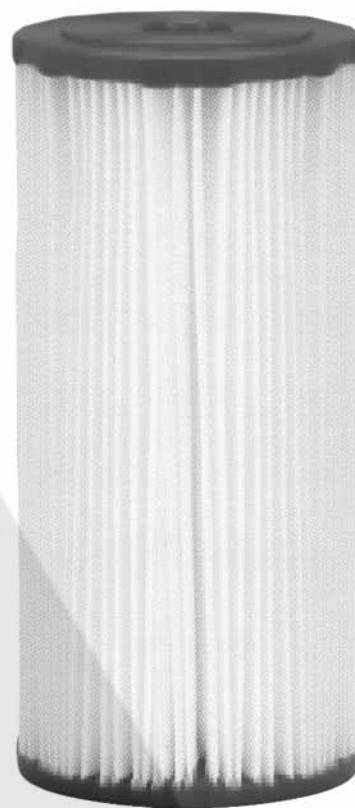
PP Series cartridges are manufactured from a durable polypropylene media. They are resistant to bacterial attack and compatible with a wide range of chemicals.

The high porosity of the media provides higher flow rates and dirt holding capacity, while maintaining extremely low pressure drop.

The media is pleated around a polypropylene core for added strength, and the ends are immersed in a thermo-setting vinyl plastisol. Embedding and sealing each end of the pleat block in this fashion fuses the three components together forming a unitized end cap and gasket.

An external netted sheath helps protect against particle migration in pulsating flow streams. The overlap seam is sonically welded to reduce internal bypass, improving filtration efficiency.

PP Series cartridges provide nominal 30-micron filtration and are highly effective at reducing medium/fine particles in a variety of residential, commercial and industrial applications.



Item #	Model	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
15512043	PP30-BB	4 1/2" x 9 3/4" (114mm x 248mm)	30	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)

Materials of Construction

- Filter Media..... Non-Woven Polypropylene
- End Caps Vinyl Plastisol
- Core Polypropylene
- Netting Polyethylene (PP30 only)
- Temperature Rating ... 40°F to 145°F (4.4°C to 63°C)

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

ECP Series Pleated Cellulose Polyester Cartridges



- Replaces CP and HFCP Series cartridges.
- Special formulation of resin-impregnated cellulose and polyester fibers. ECP1-20
- Provides higher wet strength than regular cellulose cartridges.
- Minimal unloading and media migration.

ECP Series cartridges are manufactured from a special formulation of resin-impregnated cellulose and polyester fibers.

This unique blend of materials provides a higher wet strength than regular cellulose cartridges. It also provides high flow rates and dirt-holding capacity, while maintaining extremely low pressure drop.

The media is pleated around a polypropylene core for added strength and the ends are immersed in a thermo-setting vinyl plastisol. Embedding and sealing each end of the pleat block in this fashion fuses the components together forming a unified end cap and gasket.

ECP Series cartridge end caps feature a color-coding system for easy identification of micron ratings: Tan (1-micron), White (5-micron), Blue (20-micron), Yellow (50-micron).

The new ECP cartridges contain more media surface area than most competitive cartridges. The standard 10" ECP cartridges contain six square feet of media, where most cartridges contain only 4.5 square feet. Additional ECP cartridges contain the following amount of media:

- Standard 20" cartridge – 12 ft²
- 10" BB cartridge – 18 ft²
- 20" BB cartridge – 36 ft²



Item #	Model	End Cap Color	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
25548143	ECP1-10	Tan	2-5/8" x 9-3/4" (67mm x 248mm)	1	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548243	ECP5-10	White	2-5/8" x 9-3/4" (67mm x 248mm)	5	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548343	ECP20-10	Blue	2-5/8" x 9-3/4" (67mm x 248mm)	20	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548443	ECP50-10	Yellow	2-5/8" x 9-3/4" (67mm x 248mm)	50	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548543	ECP1-20	Tan	2-5/8" x 20" (67mm x 508mm)	1	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548643	ECP5-20	White	2-5/8" x 20" (67mm x 508mm)	5	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548743	ECP20-20	Blue	2-5/8" x 20" (67mm x 508mm)	20	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548843	ECP50-20	Yellow	2-5/8" x 20" (67mm x 508mm)	50	<1 psi @ 10 gpm (<0.1 bar @ 38 Lpm)
25548943	ECP1-BB	Tan	4-1/2" x 9-3/4" (114mm x 248mm)	1	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549043	ECP5-BB	White	4-1/2" x 9-3/4" (114mm x 248mm)	5	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549143	ECP20-BB	Blue	4-1/2" x 9-3/4" (114mm x 248mm)	20	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549243	ECP50-BB	Yellow	4-1/2" x 9-3/4" (114mm x 248mm)	50	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549343	ECP1-20BB	Tan	4-1/2" x 20" (114mm x 508mm)	1	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549443	ECP5-20BB	White	4-1/2" x 20" (114mm x 508mm)	5	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549543	ECP20-20BB	Blue	4-1/2" x 20" (114mm x 508mm)	20	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)
25549643	ECP50-20BB	Yellow	4-1/2" x 20" (114mm x 508mm)	50	<1 psi @ 20 gpm (<0.1 bar @ 76 Lpm)

Materials of Construction

- Media.....Cellulose Polyester
- End CapsVinyl Plastisol
- CorePolypropylene
- Temperature Rating....40°F to 125°F (5°C to 52°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

- Manufactured from pure 100% polypropylene.
- Designed for purity and chemical compatibility.
- Spun fibers form a true gradient density from outer to inner surfaces.

Our new PS Series of poly spun-bonded filter cartridges are manufactured from pure 100% polypropylene fibers. The depth filtration cartridge construction offers greater performance flexibility in a broad range of solutions.

In water applications, polypropylene media will not impart taste, odor or colors into the solution. For industrial applications, polypropylene offers superior chemical resistance and is not prone to bacterial attack. The thermal bonding process of the media eliminates the need for a core support while offering resistance to collapse. This process also greatly reduces fiber migration.

PS Series cartridges are available in a wide range of lengths and micron sizes to accommodate a broad range of vessel sizes and applications.



Item #	Model	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)
25569043	PS1-10C	2-3/8" x 9-3/4" (60 mm x 248 mm)	1	2.9 psi @ 5 gpm (<0.2 bar @ 18.9 lpm)
25569143	PS1-20C	2-3/8" x 20" (60 mm x 508 mm)	1	1.45 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569243	PS1-30C	2-3/8" x 30" (60 mm x 762 mm)	1	0.97 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569343	PS1-40C	2-3/8" x 40" (60 mm x 1016 mm)	1	0.73 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569443	PS5-10C	2-3/8" x 9-3/4" (60 mm x 248 mm)	5	1.0 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569543	PS5-20C	2-3/8" x 20" (60 mm x 508 mm)	5	0.5 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569643	PS5-30C	2-3/8" x 30" (60 mm x 762 mm)	5	0.33 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569743	PS5-40C	2-3/8" x 40" (60 mm x 1016 mm)	5	0.25 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569843	PS20-10C	2-3/8" x 9-3/4" (60 mm x 248 mm)	20	0.7 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25569943	PS20-20C	2-3/8" x 20" (60 mm x 508 mm)	20	0.35 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25570043	PS20-30C	2-3/8" x 30" (60 mm x 762 mm)	20	0.23 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)
25570143	PS20-40C	2-3/8" x 40" (60 mm x 1016 mm)	20	0.18 psi @ 5 gpm (<0.1 bar @ 18.9 lpm)

*Based on manufacturer's internal testing.

Materials of Construction

- Filter Media..... Polypropylene Fibers
- Temperature Rating..... 40°F to 145°F (4.4°C to 62.8°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

P Series Spun Bonded-Polypropylene Cartridges



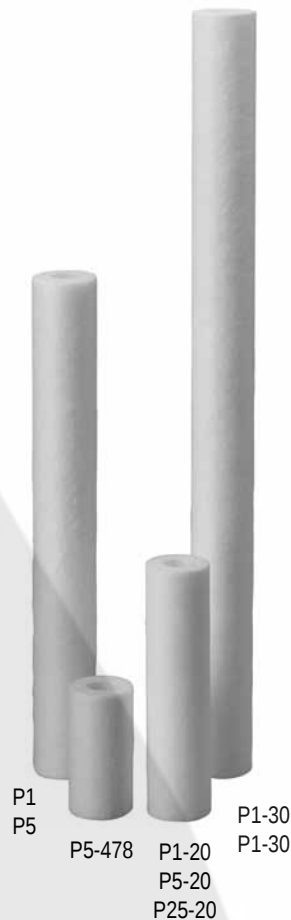
- Manufactured from pure 100% polypropylene.
- Designed for purity and chemical compatibility.
- Spun fibers form a true gradient density from outer to inner surfaces.

P Series cartridges are manufactured from pure 100% polypropylene fibers. The fibers have been carefully spun together to form a true gradient density from outer to inner surfaces.

P Series cartridges are designed for purity. They will not impart taste, odor or color to the liquid being filtered when used within the recommended temperature limit. Additionally, the polypropylene construction provides superior chemical resistance and is not prone to bacterial attack.

The coreless strength is achieved by sintering the many fibers into a solid matrix.

P Series cartridges are available in a wide array of sizes and micron ratings to accommodate all of your filtration needs.



COMPONENT

The P1, P5, P1-20 and P5-20 are Tested and Certified by NSF International to NSF/ANSI Standard 42 for material requirements only.

Item #	Model	Maximum Dimensions	Micron Rating (Nominal)*	Initial ΔP (psi) @ Flow Rate (gpm)
15503043	P5-478	2-3/8" x 4-7/8" (61 mm x 124 mm)	5	0.3 psi @ 2 gpm (<0.1 bar @ 7.6 lpm)
15522543	P1	2-3/8" x 9-7/8" (61 mm x 251 mm)	1	0.6 psi @ 5 gpm (<0.1 bar @ 19 lpm)
15501443	P5	2-3/8" x 9-7/8" (61 mm x 251 mm)	5	0.2 psi @ 5 gpm (<0.1 bar @ 19 lpm)
15530405	P1-20	2-3/8" x 20" (61 mm x 508 mm)	1	0.6 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15501605	P5-20	2-3/8" x 20" (61 mm x 508 mm)	5	0.6 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15522605	P25-20	2-3/8" x 20" (61 mm x 508 mm)	25	0.2 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15522706	P1-30	2-3/8" x 30" (61 mm x 762 mm)	1	0.5 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15522806	P5-30	2-3/8" x 30" (61 mm x 762 mm)	5	0.2 psi @ 10 gpm (<0.1 bar @ 38 lpm)

*Based on manufacturer's internal testing.

Materials of Construction

- Filter Media..... Polypropylene Fibers
- Temperature Rating..... 40°F to 145°F (4.4°C to 62.8°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.



POLYDEPTH® Polypropylene Sediment Cartridges

- Thermally bonded polypropylene micro-fiber construction for higher filtration efficiency.
- Consistent flow rate and superior filtration performance.
- Available in a wide range of micron ratings and lengths.
- Will not impart taste, odor or color to water being filtered.
- Ideal for a wide variety of industrial filtration.

The POLYDEPTH® filtration cartridge is constructed of thermally bonded polypropylene microfibers to ensure high efficiency. The filter media incorporates a rigid polypropylene center core for increased durability. This thermal bonded micro-fiber construction offers no fiber release, consistent flow rate and superior filtration performance. It also is not brittle or prone to breakage problems like resin-bonded cartridges.

Unique micro-grooves provide added surface area. The polydepth cartridge will not impart taste, odor or color to the liquid being filtered, which makes it ideal for food and beverage applications. The recommended temperature limit of 40°F to 175°F (4.4°C to 79.4°C) allows it to be used in many hot water applications. Additionally, the polypropylene construction provides superior chemical resistance and is not prone to bacterial attack.

Available in different lengths from 9-3/4" up to 40". Unlike competitive cartridges, the longer lengths are not manufactured from shorter cartridges that are glued together. They are continuous units that cannot separate during use. POLYDEPTH cartridges are available in various micron ratings including 1-, 5-, 10-, 25-, and 50-microns.



Item #	Model	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
15574843	PD-1-934	2- 1/2" x 9- 7/8" (64mm x 251mm)	1	All 9-7/8" cartridges are rated at <2 psi @ 2 gpm (<0.14 bar @ 7.6 lpm)
15575543	PD-1-20	2-1/2" x 20" (64mm x 510mm)	1	
15576243	PD-1-30	2-1/2" x 30" (64mm x 763mm)	1	
15576943	PD-1-40	2-1/2" x 40" (64mm x 1017mm)	1	
15574943	PD-5-934	2-1/2" x 9-7/8" (64mm x 251mm)	5	All 20" cartridges are rated at <2 psi @ 5 gpm (<0.14 bar @ 19 lpm)
15575643	PD-5-20	2-1/2" x 20" (64mm x 510mm)	5	
15576343	PD-5-30	2-1/2" x 30" (64mm x 763mm)	5	
15577043	PD-5-40	2-1/2" x 40" (64mm x 1017mm)	5	
15575043	PD-10-934	2-1/2" x 9-7/8" (64mm x 251mm)	10	All 30" cartridges are rated at <2 psi @ 7 gpm (<0.14 bar @ 26.5 lpm)
15575743	PD-10-20	2-1/2" x 20" (64mm x 510mm)	10	
15575143	PD-25-934	2-1/2" x 9-7/8" (64mm x 251mm)	25	
15575843	PD-25-20	2-1/2" x 20" (64mm x 510mm)	25	
15576543	PD-25-30	2-1/2" x 30" (64mm x 763mm)	25	All 40" cartridges are rated at <2 psi @ 9 gpm (<0.14 bar @ 34 lpm)
15577243	PD-25-40	2-1/2" x 40" (64mm x 1017mm)	25	
15575243	PD-50-934	2-1/2" x 9-7/8" (64mm x 251mm)	50	
15575943	PD-50-20	2-1/2" x 20" (64mm x 510mm)	50	

Materials of Construction

- Filter Media..... Polypropylene
- Maximum Temperature 40°F to 175°F (4.4°C to 79.4°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

DGD Series Dual-Gradient Density Cartridges



- Manufactured from 100% pure polypropylene.
- Designed for purity and chemical compatibility.
- Two separate gradient density layers enhance cartridge performance.
- Three times the dirt-holding capacity of similar sized sediment cartridges.

DGD Series cartridges are manufactured from 100% pure polypropylene and are sized for use in our Big Blue® filter housings.

DGD Series cartridges are designed for purity and will not impart taste, odor or color to the liquid being filtered. Additionally, the polypropylene construction provides superior chemical resistance and is not prone to bacterial attack.

The DGD Series advanced design combines selective “final filtration” with appropriate “pre-filtration” to achieve up to three times the dirt-holding capacity of similar size sediment cartridges and many more times that of standard spun or string-wound cartridges. This performance enhancement is achieved by combining two separate gradient layers in one filter.

The larger diameter of the pre-filter reduces the particle load to the post filter, allowing it to operate at higher velocities. The effective filter depth is increased to a full 233% of standard spun-polypropylene or string-wound filters. This increased depth provides for very high particulate reduction efficiencies and added loaded capacity.

The unique design and performance characteristics of the DGD Series cartridges make them an excellent choice for all residential, rural, municipal and commercial applications.



DGD-2501-20
DGD-5005-20
DGD-7525-20

DGD-2501
DGD-5005
DGD-7525

Item #	Model	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
15535943	DGD-2501	4-1/2" x 10" (114 mm x 254 mm)	Pre-filter: 25; Post-filter: 1	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15536043	DGD-2501-20	4-1/2" x 20" (114 mm x 508 mm)	Pre-filter: 25; Post-filter: 1	<1 psi @ 20 gpm (<0.1 bar @ 76 lpm)
15535743	DGD-5005	4-1/2" x 10" (114 mm x 254 mm)	Pre-filter: 50; Post-filter: 5	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15535843	DGD-5005-20	4-1/2" x 20" (114 mm x 508 mm)	Pre-filter: 50; Post-filter: 5	<1 psi @ 20 gpm (<0.1 bar @ 76 lpm)
15535543	DGD-7525	4-1/2" x 10" (114 mm x 254 mm)	Pre-filter: 75; Post-filter: 25	<1 psi @ 10 gpm (<0.1 bar @ 38 lpm)
15535643	DGD-7525-20	4-1/2" x 20" (114 mm x 508 mm)	Pre-filter: 75; Post-filter: 25	<1 psi @ 20 gpm (<0.1 bar @ 76 lpm)

Materials of Construction

- Filter Media..... Polypropylene
- Temperature Rating..... 40°F to 145°F (4.4°C to 62.8°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

- String-wound design reduces fine sediment from a variety of fluids.
- Withstands temperatures up to 165°F (73.9°C)
- Economically priced.
- Nominal 10, 30, 50-micron rating (CW) and nominal 5, 30-micron rating (WP).

CW and WP Series cartridges are manufactured from a durable polypropylene cord that is wound around a rigid polypropylene core. They are an economical solution to reduce fine sediment, including sand, silt, rust and scale particles.

CW cartridges are very economical and wound in a standard pattern around the core. They are available in 10, 30 and 50-micron ratings.

WP Series cartridges are wound in a precise pattern around the core providing greater surface area. The result is higher dirt-loading capacity and greater efficiency than standard wound cartridges like the CW.

Both of these string-wound cartridge styles are capable of withstanding temperatures up to 165°F (73.9°C), and will accommodate flow rates between 7 and 10 GPM with minimal pressure drop.

CW and WP Series cartridges are suitable for a wide variety of sediment filtration applications, including municipal and well water as well as many industrial fluids.



Item #	Model	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
15518643	CW-F	2-3/8" x 9-7/8" (60mm x 251mm)	10	<1 psi @ 7 gpm (<0.1 bar @ 27 lpm)
15518743	CW-MF	2-3/8" x 9-7/8" (60mm x 251mm)	30	<1 psi @ 10 gpm (<0.07 bar @ 38 lpm)
15521443	CW-50	2-3/8" x 9-7/8" (60mm x 251mm)	50	<1 psi @ 10 gpm (<0.07 bar @ 38 lpm)
15507143	WP-5	2-3/8" x 9-7/8" (60mm x 251mm)	5	<2.5 psi @ 10 gpm (<0.17 bar @ 38 lpm)
15507243	WP-30	2-3/8" x 9-7/8" (60mm x 251mm)	30	<1.4 psi @ 10 gpm (<0.10 bar @ 38 lpm)

Materials of Construction

- Filter Media..... Polypropylene Fiber Cord
- Core Polypropylene
- Temperature Rating..... 40°F to 165°F (4.4°C to 73.9°C)

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Big Blue Polypropylene Wound Cartridges



The WP-BB Series cartridges are constructed of fibrous polypropylene media which has been wound around a polypropylene core. Available in nominal micron ratings ranging from 0.5 to 10, and both 9-7/8" and 20" lengths.

The WPX-BB Series cartridges are constructed of fibrillated polypropylene wound on a polypropylene core. The fibrillated polypropylene should be used when pressures require minimization of extractables and/or fiber migration. They are available in nominal micron ratings ranging from 5 to 100, and in both 9-7/8" and 20" lengths.



WP5BB97P



WPX5BB97P

Item #	Model	Maximum Dimensions	Micron Rating (Nominal)	Max Recommended Flow Rate	Pressure Drop
26100/ 35521243	WP5BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	0.5	10 gpm (38 lpm)	5 psi (0.3 bar)
150100/ 35521343	WP1BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	1	15 gpm (57 lpm)	4 psi (0.3 bar)
26101/ 35521443	WP5BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	5	20 gpm (76 lpm)	3 psi (0.2 bar)
26102/ 35521543	WP10BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	10	20 gpm (76 lpm)	1 psi (0.1 bar)
26103/ 35521643	WP25BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	25	20 gpm (76 lpm)	1 psi (0.1 bar)
26127/ 35522243	WP1BB20P	4-1/2" x 20" (114 mm x 508 mm)	1	30 gpm (114 lpm)	6 psi (0.4 bar)
70004/ 35522343	WP5BB20P	4-1/2" x 20" (114 mm x 508 mm)	5	40 gpm (151 lpm)	6 psi (0.4 bar)
26128/ 35522543	WP25BB20P	4-1/2" x 20" (114 mm x 508 mm)	25	40 gpm (151 lpm)	5 psi (0.3 bar)
26104/ 35521743	WPX5BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	5	10 gpm (38 lpm)	16 psi (1.1 bar)
26123/ 35521843	WPX10BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	10	15 gpm (57 lpm)	12 psi (0.8 bar)
26124/ 35521943	WPX25BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	25	20 gpm (76 lpm)	10 psi (0.7 bar)
26125/ 35522043	WPX50BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	50	30 gpm (114 lpm)	8 psi (0.6 bar)
26126/ 35522143	WPX100BB97P	4-1/2" x 9-7/8" (114 mm x 251 mm)	100	40 gpm (151 lpm)	8 psi (0.6 bar)
26129/ 35522643	WPX100BB20P	4-1/2" x 20" (114 mm x 508 mm)	100	65 gpm (246 lpm)	8 psi (0.6 bar)

Materials of Construction

- Construction Fibrous Polypropylene, Polypropylene Core
- Temperature Rating 40°F to 165°F (4.4°C to 73.9°C)

WARNING: Filter must be protected from freezing which can cause cracking of the filter and water leakage. For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection or after the unit.

- Thermally welded unique design results in consistent filtration efficiencies.
- Semi-rigid cylindrical design is easily crushed and incinerated.
- Higher productivity - faster bag "change-outs."

Polypropylene bags are compatible with a broad range of corrosive fluids including organic solvent, oils, acids, alkalis and micro-organisms.

BP Series (Polypropylene Felt) Bags

An assortment of filtration ratings is offered - from 1 to 200 microns - to comply with any filtration requirement.

The bags are manufactured from felt because of its high solids loading capabilities, in comparison to 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.

BPHE Series (High Efficiency) Bags*

High efficiency bags are offered for those critical applications when high efficiency combined with high dirt-holding capacity is required. Polypropylene materials are processed into microfibers with diameters of 1-10 microns or more. These fibers are converted into filter material. Microfiber media are covered with spun-bonded polypropylene.

BN Series (Strainer) Bags*

Woven monofilament materials are offered in nylon with micron rates of 50-800 and efficiencies from 75 to 95 percent. The materials are cleanable and reusable.

* Call for availability



Item #	Model	Dimensions	Filter Media	Micron Rating	Case Quantity
15538303	BP-410-1 (10")	BP-410 4" x 8-5/8" (102 mm x 218 mm)	Glazed Polypropylene Felt	1	20
15538403	BP-420-1 (20")			1	20
15538503	BP-410-5 (10")			5	20
15538603	BP-420-5 (20")			5	20
15538703	BP-410-10-(10")			10	20
15538803	BP-420-10 (10")			10	20
15538903	BP-410-25 (20")	BP-420 4" x 18" (102 mm x 457 mm)		25	20
15539003	BP-420-25 (10")			25	20
15539103	BP-410-50 (10")			50	20
15539203	BP-420-50 (20")			50	20
15539303	BP-410-100 (10")			100	20
15539403	BP-420-100 (20")			100	20
15539503	BP-410-200 (10")			200	20
15539503	BP-420-200 (20")			200	20

Materials of Construction

- Maximum Temperature200°F (93.3°C) (bags only)

See application literature for housing rating.

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: This information is for general guidance. Users should test bag materials with media involved to determine compatibility.

CAUTION: Protect against freezing which can cause cracking of the filter and water leakage.

Quick-Change Filtration Systems



- Easy to install, easy filter change.
- Unique cover for single unit for a more appealing look.
- Reversible metal brackets for 1, 2 or 3 cartridges†
- 1/4-inch or 3/8-inch John Guest® push-fit connections available.
- 1/4-inch compression connections available for flex hose connections.
- Seven cartridge models to choose from to meet specific application needs.

†The Twin and Triple systems are not performance tested or certified by NSF.

PENTEK® Quick Change Filtration Systems are designed for easy installation and cartridge change. 1/4-inch or 3/8-inch push fittings, as well as 1/4-inch compression fittings, on the inlet and outlet sides of the filter head allow effortless installation. Many single systems are NSF Certified.

The cartridge filter is easily changed with a quarter-turn of the filter. Water is automatically shut off during the change of the filter through the auto shut-off feature built into the filter head. This feature eliminates the need for additional shut-off valves to and from the filter system.

The PENTEK quick-change filter system offers several cartridge options to meet the demands of varying water conditions. The granular activated carbon cartridge offers extended chlorine taste and odor performance with low pressure drop.* The EP carbon block filter offers superior chlorine taste and odor performance with 5 micron sediment reduction.* The CBR carbon block cartridge has enhanced performance capabilities for chlorine taste & odor, cyst, lead, atrazine and lindane reduction.

The new cartridges include carbon/phosphate cartridge, chloramine reduction cartridge, sediment only cartridge, a high performance 1-micron carbon block cartridge, and the soon to be released membrane filter cartridge for bacteria and virus reduction.*

*Not performance tested or certified by NSF.



* Shown with optional designer cover



COMPONENT

The QC10-CBR is Tested and Certified by NSF/ANSI to Standard 42 for the reduction of Chlorine Taste & Odor and Particulate Class 1. Standard 53 Atrazine, Cyst, Lead, Lindane and Turbidity.

QC10-EP is Tested and Certified by NSF/ANSI to Standard 42 for the reduction of Chlorine Taste & Odor.

QC10-GAC is Tested and Certified by NSF/ANSI to Standard 42 for the reduction of Chlorine Taste & Odor.

Item #	Description
144842	QCH 1/4" Threaded Replacement Head
244426	QCH 1/4" PF Replacement Head
244427	QCH 3/8" PF Replacement Head
244435	QC Replacement Head 1/4" JGPF New Design
244436	QC Replacement Head 3/8" JGPF New Design
15578543	QC-210-CBR-RP Replacement Cartridge
15596243	QC-210-EP-RP Replacement Cartridge
15590143	QC-210-GAC-RP Replacement Cartridge
25570643	QC10-TSGACR Replacement Cartridge
25570443	QC10-CGACR Replacement Cartridge
25570543	QC10-CB1R Replacement Cartridge
25568843	QC10-Sed1R Replacement Cartridge

Item #			Model	Cartridge Color	Claims	Filter Life	Flow Rate	Micron Rating
1/4" Threaded	1/4" JG Push Fit	3/8" JG Push Fit						
158667	158682	158691	QC10-CBR	White	chlorine taste & odor, sediment, lead, atrazine, lindane, cyst & turbidity	500 gallons (1890 L)	0.5 gpm (1.9 lpm)	0.5
–	158683	–	QC10-EP	White	chlorine taste & odor	1,500 gallons (5670 L)	0.5 gpm (1.9 lpm)	5*
–	158684	–	QC10-GAC	Blue	chlorine taste & odor	2,500 gallons (9460 L)	0.75 gpm (2.8 lpm)	–
–	158723	158724	QC10-TSGAC†	Blue	chlorine taste & odor with phosphate crystals†	1,700 gallons (6435 L)*	0.75 gpm (2.8 lpm)	–
–	158719	158720	QC10-CGAC†	Blue	chloramine taste & odor and chlorine taste & odor†	500 gal. (1890 L) chloramine* 10,000 gal. (37850 L) chlorine*	0.6 gpm (2.3 lpm)	–

*Filter life based on chlorine reduction as tested by Pentek.

†Not Performance Tested or Certified by NSF.

CAUTION: Protect against freezing to prevent cracking of the filter housing and water leakage.

NOTE: Cartridge will contain a very small amount of carbon fines (a very fine black powder). After installation and before using the water follow the instructions for flushing the cartridge to remove fines.

U.S. Patent Numbers: 5,976,432 and 5,823,668

Gold In-Line Filtration Systems



- 5 body styles of in-line filters in multiple media configurations.
- Injection molded and pressure rated to 125 psi (8.62 bar).
- All in-line filters include a pre- and post-filter.

The new PENTEK Gold Series® in-line filters offer an extensive variety of products to meet your most challenging applications. PENTEK in-line filters are designed for use on any point of use drinking water appliance including reverse osmosis (RO) systems, distillation systems, coffee and espresso brewers, food service equipment, ice machines, misters, bottleless water coolers, water fountains, refrigerators and other water dispensing devices.

Gold Series® in-line filtration features coconut shell granular activated carbon. Various combinations of media are used to support a wide range of filtration applications. These combinations include FDA compliant hexametaphosphates, KDF® 55 and KDF® 85 media, gradient depth sediment filters, calcite media, cation softening resins and mixed bed deionization (DI) resins to meet the wide variety of aesthetic improvements required.

The in-line filtration systems also offer a wide variety of end termination and fitting options including 1/4" and 3/8" female NPT, 1/4" and 3/8" female Quick Connect (John Guest® style), 1/4" OD Stem and 1/4" male Jaco thread.



Item #	Model	Microns (nominal)	Volume (cubic ft)	Weight (lbs)	Case Quantity
Bituminous Granular Activated Carbon					
255499-43	GS-6-B-1/4" FPT 2" x 6"	20	0.24	6	12
255501-43	GS-6-G-1/4" John Guest® 2" x 6"	20	0.24	6	12
255502-43	GS-6-H-3/8" John Guest® 2" x 6"	20	0.24	6	12
255503-43	GS-10-B-1/4" FPT 2" x 10"	20	0.37	9	12
255505-43	GS-10-G-1/4" John Guest® 2" x 10"	20	0.37	9	12
255506-43	GS-10-H-3/8" John Guest® 2" x 10"	20	0.37	9	12
255507-43	GS-210-B-1/4" FPT 2.5" x 11"	20	0.61	10	12
255508-43	GS-210-C-3/8" FPT 2.5" x 11"	20	0.61	10	12
255514-43	GS-215-H-3/8" John Guest® 2.5" x 14"	20	0.61	12	12
Coconut Shell Granular Activated Carbon					
255515-43	GS-6RO-B-1/4" FPT 2" x 6"	5	0.24	6	12
255519-43	GS-6RO-G-1/4" John Guest® 2" x 6"	5	0.24	6	12
255521-43	GS-10RO-B-1/4" FPT 2" x 10"	5	0.37	12	12
255522-43	GS-10RO-C-3/8" FPT 2" x 10"	5	0.37	12	12
255525-43	GS-10RO-G-1/4" John Guest® 2" x 10"	5	0.37	12	12
255526-43	GS-10RO-H-3/8" John Guest® 2" x 10"	5	0.37	12	12
255528-43	GS-210RO-C-3/8" FPT 2.5" x 11"	5	0.61	14	12
255531-43	GS-215RO-B-1/4" FPT 2.5" x 14"	5	0.61	18	12
pH Stabilizer (Calcite & Coconut Shell Carbon) Post RO					
255541-43	GS-10CAL/RO-B-1/4" FPT 2" x 10"	20	0.37	13	12
255546-43	GS-10CAL/RO-H-3/8" John Guest® 2" x 10"	20	0.37	13	12
Bacteriostatic (KDF & Coconut Shell Carbon)					
255547-43	GS-6EXTRA.25-B-1/4" FPT 2" x 6"	5	0.24	10	12
255548-43	GS-6EXTRA.25-C-3/8" FPT 2" x 6"	5	0.24	10	12
255551-43	GS-6EXTRA.25-G-1/4" John Guest® 2" x 6"	5	0.24	10	12
255553-43	GS-10EXTRA.5-B-1/4" FPT 2" x 10"	5	0.37	15	12
255554-43	GS-10EXTRA.5-C-3/8" FPT 2" x 10"	5	0.37	15	12
255557-43	GS-10EXTRA.5-G-1/4" John Guest® 2" x 10"	5	0.37	15	12
255559-43	GS-210EXTRA1-B-1/4" FPT 2.5" x 11"	5	0.61	24	12
255560-43	GS-210EXTRA1-C-3/8" FPT 2.5" x 11"	5	0.61	24	12
255561-43	GS-210EXTRA1-G-1/4" John Guest® 2.5" x 11"	5	0.61	24	12



Gold In-Line Filtration Specifications

Item #	Model	Microns (nominal)	Volume (cubic ft)	Weight (lbs)	Case Quantity
Sediment & Rust Particulate					
255569-43	GS-6SED/5-B-1/4" FPT 2" x 6"	5	0.24	5	12
255573-43	GS-6SED/5-G-1/4" John Guest® 2" x 6"	5	0.24	5	12
255576-43	GS-10SED/5-C-3/8" FPT 2" x 10"	5	0.37	7	12
255579-43	GS-10SED/5-G-1/4" John Guest® 2" x 10"	5	0.37	7	12
255582-43	GS-210SED/5-C-3/8" FPT 2.5" x 11"	5	0.61	14	12
255587-43	GS-215SED/5-G-1/4" John Guest® 2.5" x 14"	5	0.61	18	12
255588-43	GS-215SED/5-H-3/8" John Guest® 2.5" x 14"	5	0.61	18	12
Lime, Scale, & Chlorine Taste & Odor (Hexametaphosphate & Coconut Shell Carbon)					
255589-43	GS-6ALS-B-1/4" FPT 2" x 6"	20	0.24	6	12
255590-43	GS-6ALS-C-3/8" FPT 2" x 6"	20	0.24	6	12
255593-43	GS-6ALS-G-1/4" John Guest® 2" x 6"	20	0.24	6	12
255595-43	GS-10ALS-B-1/4" FPT 2" x 10"	20	0.37	10	12
255596-43	GS-10ALS-C-3/8" FPT 2" x 10"	20	0.37	10	12
255599-43	GS-10ALS-G-1/4" John Guest® 2" x 10"	20	0.37	10	12
255600-43	GS-10ALS-H-3/8" John Guest® 2" x 10"	20	0.37	10	12
Lime & Scale (Hexametaphosphate Feeder)					
255601-43	GS-6PH-B-1/4" FPT 2" x 6"	–	0.24	13	12
255603-43	GS-10PH-B-1/4" FPT 2" x 10"	–	0.24	22	12
255604-43	GS-10PH-G-1/4" John Guest® 2" x 10"	–	0.24	22	12
Chlorine Taste & Odor - 1 Micron Carbon Block Filters					
255609-43	GS-6CB-1-G-1/4" John Guest® 2" x 6"	1	0.24	5	12
255615-43	GS-10CB-1-G-1/4" John Guest® 2" x 10"	1	0.37	9	12
255616-43	GS-10CB-1-H-3/8" John Guest® 2" x 10"	1	0.37	9	12
255617-43	GS-210CB-1-B-1/4" FPT 2.5" x 11"	1	0.61	11	12
255618-43	GS-210CB-1-C-3/8" FPT 2.5" x 11"	1	0.61	11	12
Chlorine Taste & Odor - 5 Micron Carbon Block Filters					
255625-43	GS-6CB-5-B-1/4" FPT 2" x 6"	5	0.24	5	12
255626-43	GS-6CB-5-C-3/8" FPT 2" x 6"	5	0.24	5	12
255629-43	GS-6CB-5-G-1/4" John Guest® 2" x 6"	5	0.24	5	12
255630-43	GS-6CB-5-H-3/8" John Guest® 2" x 6"	5	0.24	5	12
255631-43	GS-10CB-5-B-1/4" FPT 2" x 10" 5 0.37	9	12		
255632-43	GS-10CB-5-C-3/8" FPT 2" x 10" 5 0.37	9	12		
255635-43	GS-10CB-5-G-1/4" John Guest® 2" x 10"	5	0.37	9	12
255636-43	GS-10CB-5-H-3/8" John Guest® 2" x 10"	5	0.37	9	12
255637-43	GS-210CB-5-B-1/4" FPT 2.5" x 11"	5	0.61	11	12
255639-43	GS-210CB-5-G-1/4" John Guest® 2.5" x 11"	5	0.61	11	12
255641-43	GS-215CB-5-B-1/4" FPT 2.5" x 14"	5	0.61	13	12
255642-43	GS-215CB-5-C-3/8" FPT 2.5" x 14"	5	0.61	13	12
255643-43	GS-215CB-5-G-1/4" John Guest® 2.5" x 14"	5	0.61	13	12
255644-43	GS-215CB-5-H-3/8" John Guest® 2.5" x 14"	5	0.61	13	12
Lead, Cyst, Particulate, & Chlorine Taste & Odor Filters					
255649-43	GS-10LS-G-1/4" John Guest® 2" x 10"	0.5	0.37	9	12
255651-43	GS-210LS-B-1/4" FPT 2.5" x 11"	1	0.61	15	12
TDS Reduction - High Capacity DI Resin Filters					
255655-43	GS-210DI-B-1/4" FPT 2.5" x 11"	20	0.61	17	12
255659-43	GS-215DI-B-1/4" FPT 2.5" x 11"	20	0.61	24	12
INLINE FILTER CLIPS					
244454	HF-CLIP1 – 2" Single Inline Filter Clip	–	–	–	100
244455	HF-CLIP2 – 2.5" Single Inline Filter Clip	–	–	–	100

Sealed In-Line Series



- Provide bad taste & odor and chlorine taste & odor reduction.
- Injection molded and pressure rated to 125 psi.
- All in-line filters include a pre- and post-filter.

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

The TS-101L contains a combination of GAC and polyphosphate crystals to inhibit lime/scale build-up.

All Sealed In-Line filters include a durable, injection molded polypropylene body and cap, pre- and post-filter and are pressure rated to 125 psi. Available with 1/4" NPT connections.

Sealed In-Line filters are an ideal choice for post-RO, under-sink, ice-maker and food service applications.

Contact factory regarding availability of other sizes and media.



COMPONENT

The IC-101L and TS-101L are Tested and Certified by NSF International.

Item #	Model	Media	Maximum Dimensions	Estimated Life	Flow Rate (gpm)
15507020	IC-100 (c/w fittings)	17 cu. in.	(51 mm x 270 mm)	(9,460 liters)	(2.8 L/min)
15508301	TS-100 (c/w fittings)	16 cu. in.	(51 mm x 270 mm)	(6,450 liters)	(2.8 L/min)

Materials of Construction

- Body Polypropylene
- Cap Polypropylene
- Pre-filter and Post-filter Polypropylene
- Carbon Coconut Shell GAC
- Maximum Temperature 100°F (37.8°C)
- Operating Pressure 125 psi (8.62 bar)

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: Cartridges will contain a very small amount of fines (very fine powder) and new cartridges, after installation, should be flushed with sufficient water to remove all traces of fines from your water system before use. Each time you use your filtered water tap for drinking or cooking purposes, it is recommended that you run (flush) the tap for at least 10 seconds prior to using water. This is particularly important if the water tap has not been used daily.

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

- Specially designed for cyst reduction and fine sediment filtration applications.
- 1/2" thick ceramic wall allows for many cleanings, extending cartridge life.
- Nominal 1-micron rating.

CRE-1 cartridges are manufactured from a sintered ceramic filtration media. They are designed and tested for the reduction of Cryptosporidium and Giardia cysts, and are ideal for fine sediment filtration applications.

The fine ceramic media will effectively trap dirt, sediment, and cysts down to 1-micron in diameter. A proper fit is ensured and water bypass is prevented through the use of a knife-edge seal.

CRE-1 cartridges are easily cleaned with water and a damp cloth, sponge or stiff nylon brush. They can be cleaned several times until the diameter at the smallest point is 1-1/2" or the circumference is 4-3/4", extending cartridge life.

Not for residential sale in the state of California.



Item #	Model	Maximum Dimensions	Micron Rating (Nominal)	Initial ΔP (psi) @ Flow Rate (gpm)
15515943	CRE-1	1 7/8" x 9 3/4" (48 mm x 248 mm)	1 (3-4 @ 99.95%)	19 psi @ 1 gpm (1.3 bar @ 3.8 lpm)

Materials of Construction

- Filter Media..... Sintered Ceramic
- End Caps Thermoset Polymeric
- Gaskets Buna-N
- Temperature 40° to 125°F (4.4° to 52°C)

NOTE: Performance depends on system design, flow rate, feed water quality and certain other application conditions. Certain states require system registration or certification prior to sale if health-related contaminant reduction claims are made. Not for residential sale in the state of California.

NOTE: Only a thin layer of ceramic is removed with each cleaning. It is not necessary to clean the cartridge until the original color is restored as water in some locations may stain or discolor the ceramic. Good hygiene and house keeping practices should always be used when cleaning the CRE-1 cartridge.

HANDLE CARTRIDGE WITH CARE! Sharp blows, dropping, or freezing can cause cracks in the ceramic. If the cartridge should be cracked or frozen, discard the damaged cartridge and replace it with a new cartridge.

CAUTION: Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. Cartridge is specifically designed for sediment filtration and the reduction of Giardia and Cryptosporidium cysts, not to kill or filter bacteria.

Microguard™ Membrane Filter Cartridges



- Absolute 0.15 micron particle retention for bacteria and protozoan cyst reduction.
- 99.9999% bacteria reduction (>6 Log).
- 99.9999% cyst reduction (>6 Log).
- Combined carbon block and sediment pre-filtration for extended life and chlorine taste and odor reduction.
- Utilizes patented* highly asymmetric polyethersulfone membrane with proprietary hydrophilic formulation for immediate wetting and high flow.
- Double O-ring end cap seals for absolute sealing in PENTEK Seal-Safe™ 3G housings.

The Microguard™ membrane filters provide reliable bacteria and protozoan cyst reduction for safer and cleaner drinking water without incorporating chemicals into the media or adding chemicals to the filtered water. The Microguard carbon block membrane cartridge, MG-10MCB, is uniquely designed with integral carbon block and sediment pre-filtration for the reduction of chlorine taste and odor and for providing extended life of the internal membrane element. This cartridge has 2.5 times greater filtration surface area than some anti-microbial carbon blocks and operates at a higher flow rate with lower pressure drop. This makes the MG-10MCB ideal for Point-of-Use (POU) applications. The Microguard cartridges do not require USEPA registration and their effectiveness is not susceptible to common substances normally found in some waters, e.g., hydrogen sulfide (H₂S), natural organic matter (NOM) and total dissolved solids (TDS).

The Microguard triple-element cartridge, MG-10T, is uniquely constructed with three membrane elements integrally sealed into one common cartridge design. This unique design allows for higher flow rates and longer life while still providing bacteria and cyst reduction, and is ideal for applications up to five gallons per minute. The life of the MG-10T can be extended using PENTEK carbon block or sediment pre-filtration options.



MG-10T

MG-10MCB

Item #	Model	Description	Maximum Length	Maximum Diameter	Micron Rating
25542043	MG-10MCB	Carbon Block/ Membrane	10.283" (261.18 mm)	2.875" (73 mm)	0.15 absolute rating
25541943	MG-10T	Triple Element (membrane only)	10.294" (261.47 mm)	3.0" (76 mm)	0.15 absolute rating
25568243	MG-CCBR	Coconut Carbon Lead/Cyst Reduction	10.294" (261.47 mm)	3.0" (76 mm)	0.15 absolute rating

Materials of Construction

- Membrane Polyethersulfone
- Membrane Assembly Polystyrene, epoxy resin
- Carbon Pre-Filter MG-10MCB with Fibredyne™ technology contains activated carbon with synthetic Polymeric fibers and binders
- End Caps/Body Polystyrene, excluding the bottom of the MG-10MCB which is Polypropylene
- O-ring Seals EPDM
- Netting Polyolefin (10MCB only)

NOTE: These cartridges are not intended for converting wastewater or raw sewage into drinking water.

*U.S. Patent No. 5,240,862

Not certified for sale in California, Iowa, Massachusetts and Wisconsin.

- Modified cellulose-based filter chemically bonds specifically with hydrocarbons and other pollutants such as dissolved and dispersed oils from water.
- Instantaneous adsorption, more effective than activated carbon.
- Up to 90 percent of total hydrocarbons are removed in a single pass.
- For use in 20-inch Big Blue® filter housings.

The OAC-20BB, made from modified cellulose-based filter media, is processed into sheets and assembled into cartridges for use in standard 20" Big Blue® filter housings.

Features

- Instantaneous adsorption - up to 90 percent of total hydrocarbons removed in a single pass.
- High flow rates.
- Removed dissolved and dispersed oils.
- Low pressure drop.
- Media can hold 250-300 percent of its own weight, with no release of removed hydrocarbons.

Applications

- Gas and oil facilities • Leisure/commercial shipping bilge water • Surface water runoff (truck stops, airports, parking lots) • Auto service stations
- Machine shops • Industrial processes • Factories and repair shops • Car and truck washes

Installation

Certain applications may require pre-filtration

Change-Out Frequency

Change-out frequency will depend on the oil burden they have to handle. Because no appreciable increase in pressure drop is observed during service life, the filter must be changed when its adsorption capacity is exhausted.



Item #	Model	Maximum Dimensions	Pressure Drop (at 5-10 gpm)	Recommended Flow Rate
15559603	OAC-20BB	Length: 20.125" (511 mm) Outside Diameter: 4.5" (114 mm) Core ID: 1.110" (28 mm)	0.2 - 1.0 psi (0.01-0.07 bar)	5-10 gpm (19-38 lpm)

Materials of Construction

- Media..... Modified Cellulose
- End Caps PVC Plasticsol
- Center Core Natural Polypropylene
- Temperature Rating..... 40°F to 125°F (4.4°C to 52°C)
- Outer Net..... Polyethylene
- Media Area 18 sq.ft. (1.6 sq.m.)
- Weight 1.75 lbs (0.8 kg)

NOTE: Operating flow will vary based on applications, type of pollutants, flow rates, level of contamination.

DISPOSAL: Safe and acceptable method to meet all local and EPA regulations is recommended. End user is responsible for safe disposal of used cartridge at user's costs. Consult factory for additional information

PCC Series Hexametaphosphate Crystal Cartridges



- Effective at treating scale, corrosion and iron problems.
- Ideal for a variety of food service equipment, as well as other types of water processing equipment.

PCC Series cartridges contain food-grade hexametaphosphate that dissolves slowly in water to inhibit scale and rust build-up.

This type of treatment is recommended for use with ice machines, coffee and vending machines, food service equipment, water heaters, air conditioning equipment and many other types of water processing equipment.

To best meet your needs, cartridges are available in four feeder sizes and all materials are FDA grade.

They are highly effective at treating scale, corrosion and iron problems for up to six months at various flow rates and feed concentrations.

The PCC212 and PCC218 cartridges are designed to fit #10 Standard or Slim Line® filter housings.

The PCC106 is an insert element that is placed in the center core of the cartridge. It is designed for use with standard 10" and 20" radial flow, sediment and carbon block filter cartridges.



Item #	Model	Dimensions	Recommended Flow Rate (gpm)
15510043	PCC1	2-7/8" x 9-5/8" (73mm x 244mm)	Up to 5 gpm (19 lpm)
15524803	PCC212	2-5/8" x 9-3/4" (67mm x 248mm)	1 to 1.5 gpm (4 to 6 lpm)
15525103	PCC218	2-5/8" x 9-3/4" (67mm x 248mm)	1.5 to 2.5 gpm (6 to 10 lpm)

Materials of Construction

- Filter Media..... Food Grade Polyphosphate
- Shell..... Polypropylene
- Post-filter Polypropylene (PCC212 & 218)
- Gasket..... Buna-N (PCC212 & 218)
- Temperature Rating.....40°F to 100°F (4.4°C to 37.85°C)

CAUTION: Eye irritant. Contains sodium calcium hexametaphosphate. Avoid contact with eyes. In case of eye contact, flush with water for 15 minutes, get medical attention. Keep out of reach of children.

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTE: PCC212 and PCC218 cartridges are not recommended for main line water applications with flow rates exceeding 3.0 gpm (11.4 lpm).

NOTE: With steamers, the water should be flushed daily.

CAUTION: Do not use this cartridge on water that will be carbonated.



RFFE20-BB Radial Flow Iron Reduction Cartridges

- Easily and effectively reduces up to 3 ppm of dissolved iron from water.
- Improves flavor and reduces the metallic taste caused by iron.
- Reduces the possibility of pipe and water heater damage.
- For use in 20-inch Big Blue® filter housings.

The RFFE20-BB cartridge is designed to provide an easy and effective method of reducing iron from water, which greatly improves the taste.

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

RFFE20-BB reduces the possibility of damage to pipes and water heaters and reduces up to 3 ppm dissolved iron.

It adds no harmful chemicals to the water, making it completely safe for drinking water applications.

The RFFE20-BB cartridge should be installed on the main cold water line after the pressure tank or water meter. For best results, pre-sediment and post-carbon treatment is recommended.



Approximate Life of System*

Iron Level in Water	Total Gallons Water Used	250 GPD (4 People)	125 GPD (2 People)	75 GPD (1 Person)
3 ppm	26,000 gal.	104 days	208 days	416 days
2 ppm	40,000 gal.	160 days	320 days	640 days
1 ppm	80,000 gal.	320 days	640 days	1280 days
0.5 ppm	160,000 gal.	640 days	1280 days	N/A

*Test results were obtained by using the RFFE20-BB in combination with an RFC20-BB cartridge.

Recommended Operating Conditions

Item #	Model	pH	Manganese	Iron Bacteria	Silica	Iron	Hydrogen Sulfide
15526303	RFFE20-BB	>7.0	<1 ppm	None	<100 ppm	<3 ppm	None

*Typical Iron Filtration System

- Approximate Cartridge Life 3 to 6 Months (family of four)
- Maximum Operating Pressure** 90 psi (6.2 bar)
- Maximum Water Temperature.. 100°F (37.8°C)
- Inlet/Outlet Connections 1" (2.54 cm)
- Replacement Cartridges - Iron Filter..... RFFE20-BB
- Recommended Filter - Sediment..... R30 BB (two)
- Carbon RFC20-BB

*When used in a BBFS-222 system

**CAUTION: If you suspect your water pressure will at any time exceed the maximum rating of 90 psi (6.2 bar), a pressure regulator must be installed before the system. This will guard against the pressure exceeding the maximum rating at any time. It is recommended that the pressure regulator be set at 75 psi (5.2 bar) or less.

NOTE: Water conditions outside of the above specified limits may lead to a shortened filtration life. If your water contains Iron Bacteria, shock chlorination is recommended.

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

NOTE: The RFFE20-BB and RFC20-BB cartridges will contain a very small amount of fines (very fine powder) and new cartridges, after installation, should be flushed with sufficient water to remove all traces of fines from your water system before use.

PCF Series Mixed Bed Deionization Cartridges



- Designed for deionizing water up to 16 megohms.
- All materials and construction are FDA-compliant.
- Three sizes and capacities.

PCF Series cartridges have been developed in response to the requirements for deionized water in many industries.

They have been manufactured using an FDA-compliant resin that has been subjected to additional post-production steps to minimize the total organic carbon (TOC) level.

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

PCF Series cartridges are available in three sizes, flow rates and capacities. They are convenient and cost-effective for many applications where low levels of total organic carbon (TOC) and total dissolved solids (TDS) levels are required.

Applications:

- Circuit board printing • Pharmaceutical use • Steam and humidification
- Cosmetics • Steam processors • Humidification systems • Recirculating/cooling towers • Power generating equipment • Medical/laboratory use
- Lasers • Jet water sprayers • Boiler make-up water



Item #	Model	Maximum Dimensions	Capacity Grains (mg TDS as CaCO ₃)	Initial ΔP (psi) @ Flow Rate (gpm)	Suggested Flow Rate
15527303	PCF1-10MB	2-2/3" x 9-3/4" (68 mm x 248 mm)	270 (17,500)	1.5 psi @ 0.25 gpm (0.1 bar @ 0.95 lpm)	0.25 gpm (0.95 lpm)
15527403	PCF1-20MB	2-2/3" x 20" (68 mm x 508 mm)	600 (38,800)	3.4 psi @ 0.5 gpm (0.23 bar @ 1.9 lpm)	.50 gpm (1.9 lpm)
15528103	BBF1-20MB	4-1/2" x 20" (114mm x 508 mm)	1,850 (120,000)	1.1 psi @ 1.25 gpm (0.76 bar @ 4.7 lpm)	1.25 gpm (4.7 lpm)

Materials of Construction

- Filter Media..... Mixed Bed DI resins
- End Caps Polypropylene
- Shell..... Polypropylene
- Pre-filter Polypropylene
- Post Filter Polypropylene
- Gaskets..... Buna-N
- Temperature Rating... 40°F to 100°F (4.4°C to 37.8°C)

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection or after the unit.

NOTE: The above resin data is based on information obtained by Pentek Filtration. This data does not imply any warranty or performance guarantee. We recommend that the user determine performance by testing on his own processing equipment. We assume no liability or responsibility for patent infringement resulting from the use of this product.

CAUTION: Do not use cartridges on equipment that has an electric conductivity water level indicator.

Test Conditions

RO FEED WATER..... 15 - 20 TDS
 pH..... 6.5 - 7.5
 CITY FEED WATER..... 170 TDS
 TEMPERATURE..... 77 +/- 2°F

Cartridges

Flow Rate

(1) PCF1-10MB 0.25 GPM
 (2) PCF1-20MB 0.50 GPM
 (3) BBF1-20MB 1.25 GPM
 (4) Two PCF1-20MB tested in a series @ 0.50 gpm
 (5) PCF1-20MB with RO feed water @ 0.50 gpm

1 Microsiemen = 1 Microhms/cm

FDA Grade Resin

FUNCTION STRUCTURE

Cation R-SO₃-H+
 Anion AR-N(CH₃)₂(C₂H₄OH)+OH-

PHYSICAL FORM

IONIC FORM

PERCENT CONVERSION

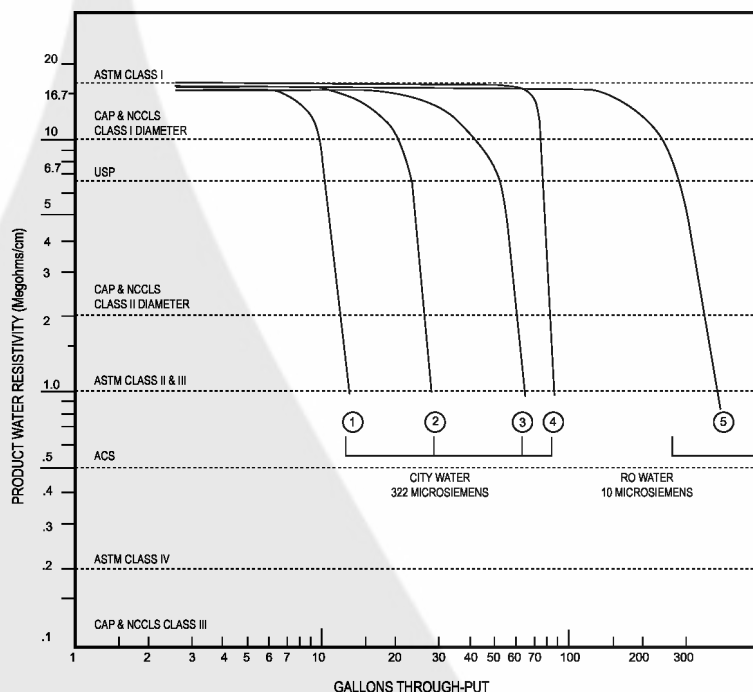
Hydrogen..... 99.9% Minimum
 Hydroxide 95% Minimum

Applications:

- Circuit Board Printing
- Power Generating Equipment
- Pharmaceutical Use
- Medical/Laboratory Use
- Steam and Humidification
- Breeding Tanks
- Cosmetics
- Lasers
- Steam Processors
- Jet Water Sprayers
- Humidification Systems
- Boiler Make-up Water
- Recirculating/Cooling Towers

CAUTION: Filter must be protected against freezing which can causing cracking of the filter and water damage. For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Do not use cartridges on equipment that has an electric conductivity water level indicator.

NOTE: The above resin data is based on information obtained by Pentek Filtration. These data are believed to be reliable but do not imply any warranty or performance guarantee. We recommend that the user determine performance by testing on his own processing equipment. We assume no liability or responsibility for patent infringement resulting from the use of this product. The DI Resin cartridges are being designed for the following performance parameters.



WS Series Water Softener Cartridges



- Convenient cartridge change-out.
- Manufactured with FDA grade softener resin.
- 750 to 4500 grain capacity available (grains as CaCO_3).
- For use in Slim Line®, Standard and Big Blue® filter housings.

WS Series cartridges provide softened water in a convenient cartridge-style design.

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.

WS Series cartridges are available in three different sizes and flow rates, and have a rated capacity of 750, 1500 or 4500 grains (as CaCO_3) capacity.



Item #	Model	Dimensions	Recommended Flow Rate	Capacity (Grains as CaCO_3)
15531903	WS-10	2- 5/8" x 9-3/4" (6.7cm x 24.8cm)	.50 gpm (1.9 lpm)	750
15532003	WS-20	2-5/8" x 20" (6.7cm x 50.8cm)	.75 gpm (2.8 lpm)	1,500
15532103	WS-20BB	4-1/2" x 20" (11.4cm x 50.8cm)	2.0 gpm (8.5 lpm)	4,500

Materials of Construction

- Filter Media..... Standard Softener Resin*
- End Caps Polypropylene
- Pre-Filter Polypropylene
- Post-Filter Polypropylene
- Gasket Buna-N
- Temperature Rating..... 100°F (37.7°C)

* Cation, sodium-form resin, 20 x 40 mesh, $\text{R-SO}_3\text{-Na}^+$

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

- Designed for cyst reduction, turbidity, and fine sediment filtration applications.
- > 98% reduction of 0.025 micron (25 nanometer) particles.*
- > 99.99% (> 4 Log) reduction of 0.065 micron (65 nanometer) particles.*
- Proprietary hollow-fiber ultrafiltration membrane.
- Professional-grade housing, controller and flush valve.
- Metered self-cleaning cycle flushes only when needed.
- Day override feature flushes module daily with fresh water when system is not in use.
- Peak flow rates up to 10 gpm (2271 L/h).
- Forward-flush and back-flush cleaning cycles provide extended filter life in a wide range of applications.

*Performance based on MS-2 (25 nm) and PRD-1 (65 nm) virus particle tests. Data available upon request.

The PENTEK® Freshpoint™ Ultrafiltration System provides complete point-of-entry (POE) filtration proven to reduce turbidity, particulates and cysts for safer, cleaner water at every tap. The system employs hollow-fiber Ultrafiltration membrane technology to filter impurities as small as 0.025 microns.

To maximize membrane capacity and service life, a metered flushing cycle is controlled using an advanced controller and high-performance turbine meter. The self-cleaning forward and back-flush cycles are initiated when the programmed capacity of the membrane is reached. During the backwash, flow is reversed and particles are ejected from the pores of the membrane and flushed to drain. In the forward-flush cycle, service water passes through the capillaries at a high speed, scouring particles from the membrane surface and rinsing them from the system. Since power is only required to flush the system, outages and interruptions will not jeopardize the integrity of membrane or its ability to provide safer, cleaner water.

The advanced electronic controller provides a programmable day override which allows the unit to flush every day with fresh water when the system is not in use. Critical system diagnostics, including totalized flow, instantaneous flow rate, and previous days water usage, are available to optimize flushing cycles and monitor performance.

The high-performance industrial fiberglass housing is pressure rated to 300 psi. Inside the housing, the membrane is sealed with double radial o-rings, minimizing the potential for leak paths. Quick-connect end caps allow the membrane to easily be removed for cleaning or replacement.

The system can be applied to solve “known” water problems including high turbidity, suspended solids, and certain microbiological contaminants. It can also serve as a flushable prefilter to extend the life of media filters downstream.



Item #	Model
33145	Freshpoint™ Ultrafiltration System (less controller)
33146	Freshpoint™ Ultrafiltration System (c/w controller)
61595-01	Freshpoint Filter Module Replacement
61667-11	Freshpoint, Backwash Kit c/w ROMate40 Tank 120V
61-667-12	Freshpoint, Backwash Kit w/o Tank, 120V (Tank Req'd)

Materials of Construction

MEMBRANE

- Material..... Polyethersulfone, modified (PESM)
- Pore Size..... 0.025 micron (nominal)
0.065 micron (absolute)
- Molecular Weight Cut Off 100-150 kD (MWCO)
- Active Membrane Surface..... 51 sq. ft.
- Service Flow Rate 6.23 gpm to 10 gpm @ 15 psi drop (1,416 L/h to 2,271 L/h)

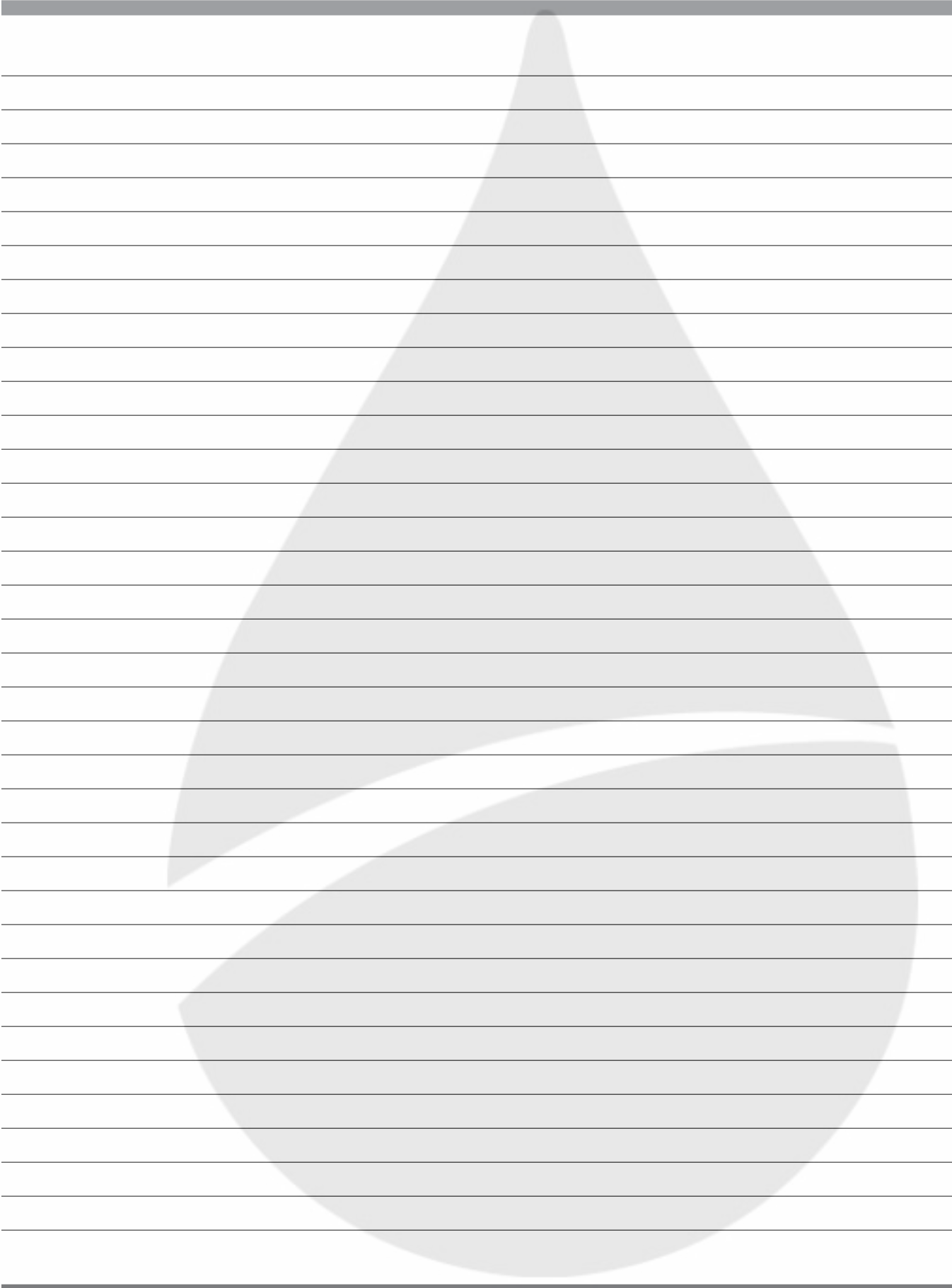
CONTROLLER

- Electrical Rating 50/60 Hz
- Forward Flush Cycle 1-99 minutes
- Metered Volume..... 1-9999 gallons
- Meter Accuracy 1-50 gpm +/- 5%

SYSTEM

- Inlet/Outlet..... 3/4-inch NPT

This product is not certified as microbiological purifier and should not be applied as stand-alone disinfection solution for microbiologically unsafe water.



Miscellaneous Filter Systems & Cartridges

Water Conditioning Products



Hot Water Side Stream Filter Systems



The hot water filtration system is especially suited for side stream filtration of boiler systems. Where solenoid valves are used and frequent water hammer occurs, the Side Stream Filter System is the answer.

Standard Features - Side Stream Filter

- Superior strength and durability with very high operating pressure to 250 psi and temperature rating to 200°F
- Accepts a complete range of 9-3/4" cartridges for application flexibility
- Assures positive cartridge sealing and easy cartridge change
- Sumps available in larger sizes to accept higher flow rates up to 20 gpm
- Available as single housing or as filter assembly

Features of Assembled SSF-ST1

- 3/4" nickel plated brass ball valves for fast cartridge changes
- Flow indicator easily displays flow path and flow rate (4 - 8 gpm) and is constructed of 304 stainless steel
- Brushed 304 stainless steel sump with a brass/nickel plated head
- All units offer a choice of either pipe plug or pet cock in the bottom for draining the sump



Item	Model	Inlet/Outlet Size	Height	Dimensions Length	Depth	Approx. Weight	Maximum Flow Rate	Maximum Water Temp.	Maximum Water Pressure	# of Cartridges Required	Flow Indication Range
15601705	SSF-ST1	3/4" FNPT	14"	13-3/8"	9"	11 lbs.	10 gpm	200°F	250 psi	1	4 - 8 gpm

NOTE: 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.

Tin Core String Wound Cartridges

Specifications

- 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 - 300°F (149°C)
- 2.5" O.D. Core x 10" Length (suitable for #10 and ST-1 Housings)
- Available in 5, 10, 25, 50 micron ratings

26141..... 5 micron, 10", Tin Core Natural Cotton
 26134.....10 micron, 10", Tin Core Natural Cotton
 26135.....25 micron, 10", Tin Core Natural Cotton
 26136.....50 micron, 10", Tin Core Natural Cotton

304SS Core String Wound Cartridges

Specifications

- 304 stainless steel core and string wound natural cotton media is suitable for slightly aggressive high temperature filter applications with water, oils, solvents, paints, moderately corrosive fluids and other non-FDA (non-potable) applications.
- Maximum Cartridge Temperature - 300°F (149°C)
- 2.5 O.D. Core x 10" Length (suitable for #10 and ST-1 Housings)
- Available in 5, 10, 25, 50 micron ratings

26137.....5 micron, 10" 304SS, Natural Cotton
 26138.....10 micron, 10" 304SS, Natural Cotton
 26139.....25 micron, 10" 304SS, Natural Cotton
 26140.....50 micron, 10" 304SS, Natural Cotton

Features

- The string wound winding pattern produces a greater solids-holding capacity and true depth filtration. Each 10" length cartridge provides 3.5 square feet of surface area and approximately 1/2 to 1 lb of solids retention before replacement. (NOTE: Actual amount of retention depends on type of solids and heat pressure.)
- Ideal for heating loop filtration applications using Side Stream Filter System Model SSF-ST1 (Item #15601705).

Absolute Rated POLY-PLEAT™ Cartridges

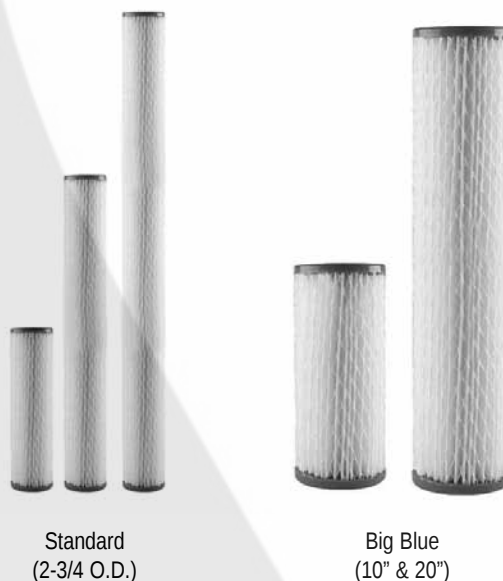


- One micron absolute rated cartridges for Cryptosporidium & Giardia Cyst removal.

Absolute rated POLY-PLEAT™ cartridges meet or exceed the three-log (99.9%) removal requirements described in National Sanitation Foundation Standard 53 for cyst sized particles. POLY-PLEAT™ cartridges are recommended to control Cryptosporidium, Giardia Cysts and other harmful micro-organisms to help ensure cyst-free drinking water.

Features

- Absolute rated one micron filter media removes cyst sized particles for safe, cyst-free drinking water.
- Pleated polypropylene filter media provides more surface area for longer filter life and increased particle removal.
- FDA listed materials for use in potable water and liquid food applications.
- End caps, center tubes and media are thermally bonded as one integral component for added strength and to provide superior end sealing.
- Full product line for standard and Big Blue filter housings.
- Economical cartridges from the value leader in the industry.
- Substantially removes Cryptosporidium, Giardia Cysts, harmful organisms, sediment, silt, turbidity and more.



Item No.	Product Code	Micron Rating	Type	Length	x O.D.	No./ Case
26099	PP-S-1	1 absolute	Standard	9-3/4"	2-3/4"	24
26106	PP-BB-10-1	1 absolute	Big Blue	9-3/4"	4-1/2"	8
26107	PP-BB-20-1	1 absolute	Big Blue	20"	4-1/2"	4



COMPONENT

Certified to
ANSI-NSF 61

- 10,000 Gallon Capacity Filter
- 5-function massage head
- Convenient handheld design
- Reduces over 98% Chlorine
- Reduces Hydrogen Sulfide
- Eliminates Odor
- No calcium or soap scum build-up on shower glass doors or tile
- Restores natural softness to skin, scalp and hair by removing harsh, drying chemicals from the water
- Easy to clean

- Easy installation - No tools required!
- Easy to install replacement cartridges
- Available in Chrome Color
- Come with filter cartridge installed
- Tested and Certified by NSF International to NSF/ANSI Standard 177 for the reduction of free available Chlorine. (Note: Use only with microbiologically safe water)

92701

Hand Held Shower Filter

- 5-function massage head
- Convenient hand-held design
- Available in Chrome



92702

Wall Mount Shower Filter

- 5-function massage head
- Convenient compact design
- Patented media and system



Item numbers 92701 and 92702 have been Tested and Certified by NSF International to NSF/ANSI Standard 177 for the reduction of free available Chlorine.

92703

Shower Filter Replacement Cartridge

- For use on hand held or wall mount shower filters





Chemical Feed Pumps, Applications & Accessories

Water Conditioning Products



Patented Mechanical Control

Stenner's unique control mechanism allows the pump's output to be scaled from 5% to 100% with the simple turn of a dial. This eliminates the need for troublesome electronic timers.

High Pressure Handling

Stenner manufactures the only high pressure peristaltic metering pump that can operate reliably and consistently against pressure of up to 100 PSI.

Safe and Versatile

Chemicals are metered without exposure to air or to moving mechanical parts. Undiluted muriatic acid and chlorine can be pumped without harm to the system. Since no hydraulic fluids are used, there is no possible leakage to the chemicals being metered.

Peristaltic Advantage

Peristalsis occurs when the rotation of the rollers around the inside diameter of the tube housing compresses and dilates the pumping tube. This eliminates diaphragms or foot valves while allowing the system to be completely self-priming. Hydrogen Peroxide can be pumped without concern about vapor lock.

Practical Modular Design

All major feeder components are secured by stainless steel locking rivets for quick disassembly without tools. This also makes adding capacity a snap.

Easy Tube Maintenance

Pumping tubes are easily replaced. Just set the tube in place and let it thread itself into position. Down time and maintenance costs are kept to a minimum through periodic tube replacement.



SVP Series (left) & Classic Series (above)



Features

- Precision pumping of fluids up to 170 gallons per day
- Completely self-priming, can operate dry
- Will not clog from dirt and minor debris
- Will not lose prime from air bubbles or hydrogen peroxide gassing
- Can pump against pressure of up to 100 PSI (maximum GPD 34)
- Check valves not required under 25 PSI
- Accurate within 2% of listed outputs
- Safer to use: chemicals are not exposed to air or to moving parts
- Five interchangeable tube sizes for control of feeder output
- Tube lubrication is not required
- Vertical or horizontal mount

Applications

- Biocide
- Sewage Treatment
- Boiler Treatment
- Food Service
- Private & Municipal Water Systems
- Poultry Farming & Processing
- Pools & Spas
- Cooling Towers
- Irrigation
- Metal Plating



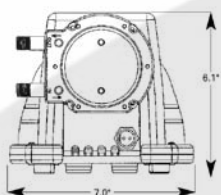
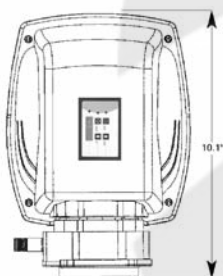
(SVP4 Model Shown)

Stenner SVP Series Variable Speed Metering Pump

- Polycarbonate corrosion resistant housing
- 40 GPD at 100 psi; 85 GPD at 25 psi
- 120v 50/60Hz; 220v 50/60Hz; 230v 50Hz
- Heavy Duty DC motor
- Optional 4-20mA input
- 24/7 Duty Cycle
- Self-priming up to 25 feet
- Easy to install/service
- Low maintenance cost
- Interchangeable with Classic Series Stenner pump head and pump tubes

Digital Keypad

- Manual control adjustable from 5 - 100% (20:1 turndown ratio)
- 4 character LED display
- 4 button keypad - Up, Down, On/Off, Prime



Stenner SVP Series Specifications:

Discharge pressure	0-100 psi; 0-6.9 bar
Output ranges	0.3-85 gallons/day; 0.95-321.7 litres/day
Turndown ratio	(variable speed) 20:1, approx. 5% to 100% in 1% increments
Voltages available	120v 50/60 Hz; 220v 50/60 Hz; 230v 50 Hz
Motor RPM.....	45
Amp draw	1.5 maximum
Horsepower.....	1/30 fractional
Connections.....	1/4", 3/8" or 6mm Suction/Discharge tubing
Shipping Weight	7 lbs. (3.17 kg)
Viscosity	Maximum 1500 cps; over 1500 cps consult factory
Operating Temperature	Max. 125 degrees Fahrenheit/ 51.6 degrees Celsius
4-20 mA Input Option.....	4mA=0%; 20mA=100% (non-scalable)

Stenner SVP Series Materials of Construction:

All Housings*	Lexan® Polycarbonate Plastic
Peristaltic Tube**	Santoprene® FDA Approved
Check Valve Duckbill	
Suction Discharge Tubing.....	LDPE Polyethylene
Ferrules (1/4" & 6mm)	NSF/FDA Approved
Tube Fittings.....	Type 1 Rigid PVC-NSF Listed
Connecting Nuts • Check Valve Fittings • Ceramic Weight Clip	
Suction Weight	Ceramic
All Fasteners.....	Stainless Steel

*Lexan® is a registered trademark of General Electric. Consult General Electric for chemical resistance of Lexan®.

**Santoprene® is a registered trademark of Advanced Elastomer System. Refer to chemical resistance chart in Stenner catalog for material compatibility.

Materials for all wetted parts have been tested and approved for potable water applications

1 year guarantee from date of manufacture

SVP1 Variable Speed 120VAC/60Hz 100 psi/6.9 bar

Item #	Model #	Pump Tube	Max Output GPD LPD
Special Order	SVP1H1A1SZAA	#1	5.0 / 18.9
Non-stock	SVP1H2A1SZAA	#2	17.0 / 64.3
Item	SVP1H7A1SZAA	#7	40.0 / 151.4

with 1/4" white suction/discharge.

SVP4 Variable Speed 4-20Ma 120VAC/60Hz 100 psi/6.9 bar

Item #	Model #	Pump Tube	Max Output GPD LPD
Special Order	SVP4H1A1SZAA	#1	5.0 / 18.9
Non-stock	SVP4H2A1SZAA	#2	17.0 / 64.3
Item	SVP4H7A1SZAA	#7	40.0 / 151.4

with 1/4" white suction/discharge.



Single head adjustable rate
Series 45 & 85

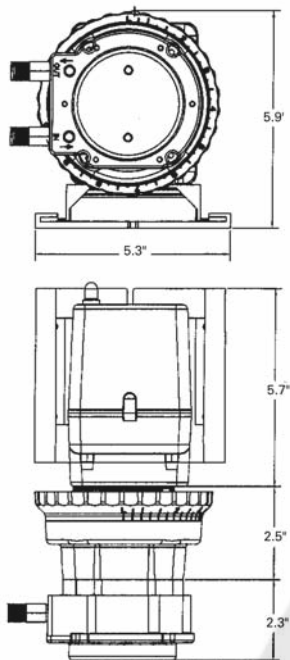
Discharge pressure 0-100 psi; 0-6.9 bar
Output ranges 0.2-85 gallons/day; 0.6-257.4 litres/day
Turndown ratio (adjustable models)
20:1, 5% to 100% in 2.5% increments
Voltages available 120v 60 Hz; 220v 60 Hz;
230v 50 Hz; 250v 50 Hz (special order)
Motor RPM..... 26 (45 series)
44 (85 series)
Amp draw 1.70 120v; .09 220v, 230v, 250v
Horsepower..... 1/30 fractional
Connections..... 1/4", 3/8" or 6mm
Suction/Discharge tubing
Shipping Weight 8 lbs. (3.63 kg)-single head adjustable
Viscosity Maximum 1500 cps;
over 1500 cps consult factory
Operating Temp. Max. 125 degrees Fahrenheit/
51.6 degrees Celsius

Stenner Classic Series Series 45 & 85 Single Head Adjustable Rate

Stenner feeders are self-priming and the 3-point roller assembly provides a positive 2-point seal on the tube at all times. This eliminates the need for anti-siphoning valves and diaphragms. The patented mechanical feed rate control (adjustable models) allows the pump's output to be scaled from 5% to 100% with the simple turn of the dial. Consult output chart for specific settings.

Features:

- Self-priming, won't lose prime
- Interchangeable pump tubes and sub-assemblies
- Pump tube lubrication not required
- Patented mechanical control adjustable from 5% to 100%
- Easy pump tube maintenance
- Quick serviceability
- Will not clog from dirt or minor debris
- Can pump against pressure of up to 100 PSI (maximum GPD 40) up to 6.9 bar (maximum LPD 121.1)
- Check valves not required under 25 PSI (1.72 bar)
- Reproducible within 2% of settings
- Precision pumping can run dry without damage
- Vertical or horizontal mount
- Simple to install and operate
- 0.2 - 40 GPD at 100 psi
- 1 year guarantee from date of manufacture



Stenner Classic Series Materials of Construction:

All Housings* Lexan® Polycarbonate Plastic

Peristaltic Tube** Santoprene® TPR-NSF Listed
Check Valve Duckbill

Suction Discharge Tubing..... LDPE Polyethylene
Ferrules (1/4" & 6mm) NSF Listed

Tube Fittings..... Type 1 Rigid PVC-NSF Listed
Connecting Nuts • Check Valve Fittings • Ceramic Weight Clip

Suction Weight.....Ceramic

All Fasteners..... Stainless Steel

*Lexan® is a registered trademark of General Electric. Consult General Electric for chemical resistance of Lexan®.

**Santoprene® is a registered trademark of Advanced Elastomer System. Refer to chemical resistance chart in Stenner catalog for material compatibility.

Materials for all wetted parts have been tested and approved for potable water applications

Series 45 MHP - Adjustable High Pressure: 0 to 100 PSI (6.9 bar) Maximum Discharge Pressure

CDN Item # 110v 220v	US Item # 110v 220v	Model	Tube	Feed Rate Setting: Outputs per day in US Gallons @ 60Hz										
				L	1	2	3	4	5	6	7	8	9	10
11873 11874	11873 11810	45MHP2	#1	0.2	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0
11876 11879	11809 11808	45MHP10	#2	0.5	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
Special Order Non-stock Item	Special Order Non-stock Item	45MHP22	#7	1.1	2.2	4.4	6.6	8.8	11.0	13.2	15.4	17.6	19.8	22.0

Series 85 MHP - Adjustable High Pressure: 0 to 100 PSI (6.9 bar) Maximum Discharge Pressure

CDN Item # 110v 220v	US Item # 110v 220v	Model	Tube	Feed Rate Setting: Outputs per day in US Gallons @ 60Hz										
				L	1	2	3	4	5	6	7	8	9	10
11880 11872	11852 11853	85MHP5	#1	0.3	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Special Order	11850 11851	85MHP17	#2	0.8	1.7	3.4	5.1	6.8	8.5	10.2	11.9	13.6	15.3	17.0
Non-stock Item	Non-stock Item	85MHP40	#7	2.0	4.0	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0





Stenner PCM Series Pump Control Module

The Stenner PCM Pump control module interfaces with Stenner metering pumps and contact water meters for proportional feed. It is ideal for injecting solutions based on actual flow rate for various water treatment applications.

Features:

- Microcontroller timer
- 10 Amp relay output
- ABS plastic housing
- On-time duration
- 10' power cord & heavy duty jacketed signal input cable
- Reliable technology
- Durable
- Chemical resistant enclosure
- Simple knob adjustment
- Convenient installation
- 1 year guarantee from date of manufacture

Item # CDN	Item # USA	Model	Time Range*
Special Order	11815	PCM1	0.1 - 1.0 seconds
27339	Special Order	PCM5	0.5 - 5.0 seconds
Special Order	Special Order	PCM10	1.0 - 10.0 seconds

Reset Time: Immediate

Minimum Signal Duration: 10 milliseconds

*On-Time Range: The duration of each pump on-time, per input signal, is set by adjustment of the knob located on the front of the unit.

Input Electrical Specifications

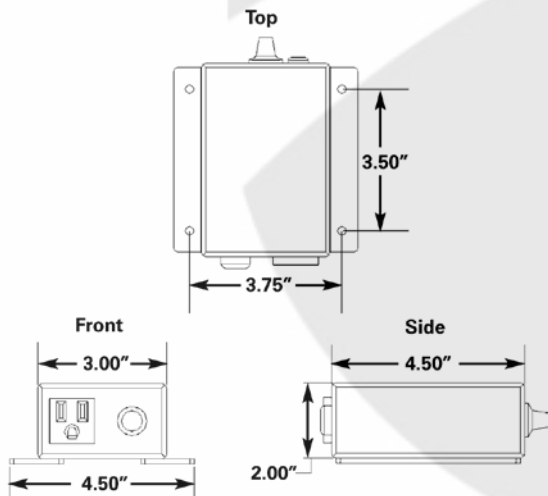
Voltage: 115 VAC 60 hertz

No Load Current: .45 mA ac maximum

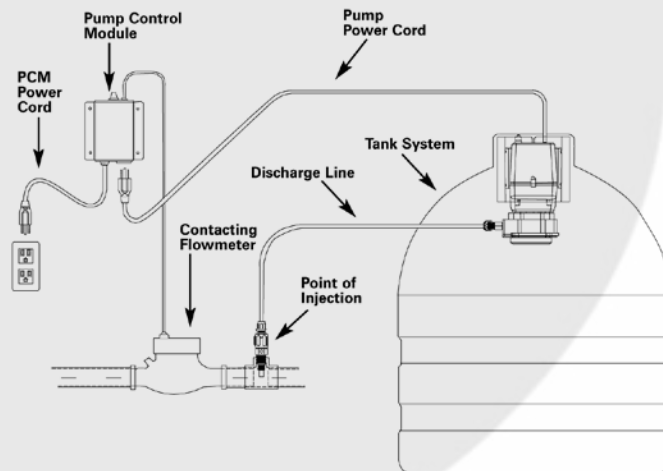
Output Electrical Specifications

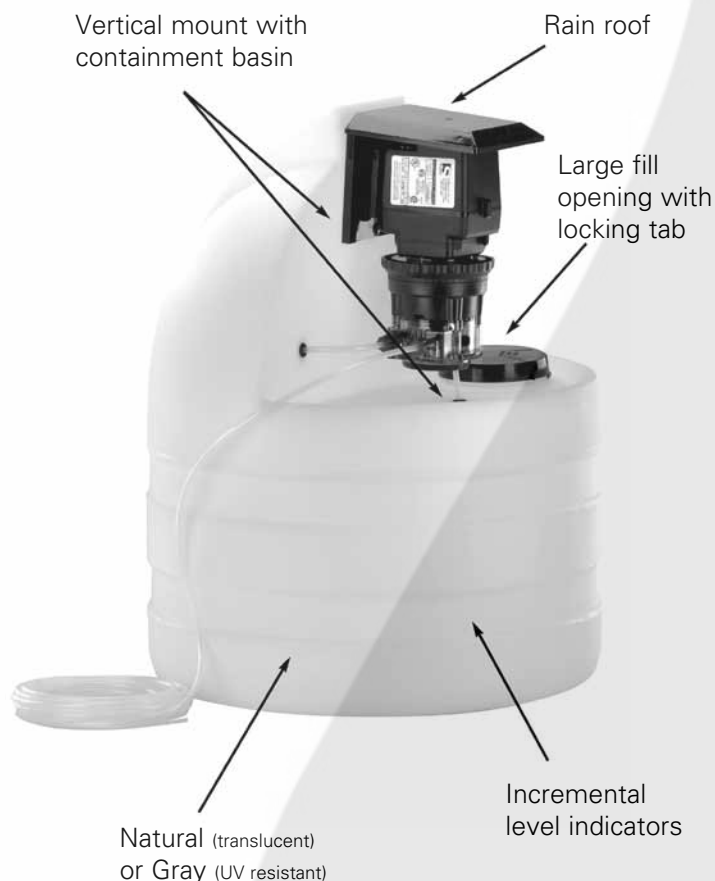
Maximum Device Load: 10 ampere resistive at 120 VAC

Dimensions:



Installation:





Stenner STS Series Pump and Tank Systems

Pre-assembled pump and tank systems in one convenient package for easy installation and startup.

Features:

- 15 & 30 gallon capacity
- Dimensions: 15 Gallon: 25-1/4" H x 20-1/2" OD
30 Gallon: 37-1/2" H x 20-1/2" OD
- Rugged polyethylene construction for indoor or outdoor applications
- Compact and light-weight design to minimize space requirements
- Attractive styling for convenient access and placement
- Includes rain roof

Special Order

- Pump and tank assembled packages or tank only

Series C Electronic Metering Pumps



Key Features

- Automatic Control by external pacing with prime switch (optional).
- Manual Control by on-line adjustable stroke length (fixed stroke rate).
- Liquid Low Level Option available to prevent loss of indoor applications.
- Agency Approved for demanding OUTDOOR and indoor applications.
- Highly Reliable timing circuit.
- Water Resistant excellent for OUTDOOR and indoor applications.
- Internally Dampened To Reduce Noise, very acceptable for household installations.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics.
- Premium Standard Wetted Component Materials.
- Few Moving Parts and Wall Mountable.
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard).

Complete Economical Selection

Four distinct models are available, having pressure capabilities to 80 PSIG, and flow capacities to 30 GPD, with a turndown ratio of 10:1. Metering performance is reproducible to within +/- 3% of maximum capacity.

Operating Benefits

Reliable metering performance - guided check valves, with state-of-the-art seat and ball designs, provide precise seating and excellent priming and suction lift characteristics. Timing circuit is highly reliable and, virtually unaffected by temperature, EMI and other electrical disturbances.

Rated 'hot' for continuous duty - Series C pumps continue to meet their specifications for pressure and capacity even during extended use because the high quality solenoid and special enclosure that effectively dissipates heat.

High viscosity capability - a straight flow path and ample clearance between the diaphragm and the head enable standard PULSAtron pumps to handle viscous chemicals up to a viscosity of 1000 CPS.

Leak-free, seatless, liquid end - diaphragms are of superior construction - PTFE-faced, bonded to a composite of Hypalon and fabric layers and reinforced with a metal insert for optimum flexibility and durability.

System Compatibility

A wide variety of chemicals can be pumped - liquid end materials include glass-filled polypropylene (GFPPL), PVC, styrene-acrylonitrile (SAN), Polyvinylidene Fluoride (PVDF), Teflon, Hypalon, Viton, ceramic, alloys and 316SS.

Immediate installation and start-up - included as standard accessories with most models are an injection/back pressure valve assembly and a foot valve/strainer assembly, including discharge and suction tubing.

Safe and easy priming and valve maintenance - included as a standard accessory is a bleed valve assembly, including return tubing (available only on those models with tubing connections).

Quick and economical liquid end maintenance - available for every model is a unique KOPkit®, a convenient, economically priced package containing new cartridge check valves and other important spare parts.



1 year guarantee from date of manufacture.



KOPkit®

Item #32881 - Type K3VTC1 (fits stocked 12 GPD C-Series Pumps)
Pulsafeeder has built a reputation for superior reliability by supplying carefully designed, high quality equipment, however, it requires a minimal amount of maintenance. KOPkits are designed to guard against unnecessary downtime and assure you the highest level of efficient and uninterrupted service from our PULSAtron pumps. KOPkits contain recommended spare parts for those parts that usually require preventive maintenance. KOPkits immediately available in all wetted materials at very affordable prices.

Note: Other size and material KOPkits available by special order.

Pressure and Flow Rate Capacity

Capacity Nominal	GPD	6	12*	24	30
	GPH	0.25	0.50	1.0	1.25
	LPH	0.9	1.9	3.8	4.7
Pressure, Max PSIG/Bar	80/5.6	LC02	LC03	LC04	LC54

*Stocked Item. See materials for pump construction.

Series C - Four model selections. Digit 1 and 2 (LC) signify product class, digit 3 and 4 signify pressure/flow.
For full model selection information, please contact our Order Desk.

Liquid End Materials

Series	Pump Head	Diaphragm	Check Valves		Fittings	Bleed Valve	Injection Valve Assembly Foot Valve Assembly	Tubing
			Seats/O-rings	Balls				
C	GFPPL PVC SAN PVDF 316SS	PTFE-faced Hypalon-backed	PTFE Hypalon Viton	Ceramic, PTFE, 316SS Alloy C	GFPPL PVC PVDF	Same as fitting and check valve selected, except 316SS	Same as fitting and check valve selected	Clear PVC White PE

Important: Material Code - GFPPL = Glass-filled Polypropylene, PVC = Polyvinyl Chloride, SAN = Styrene Acrylonitrile, PE = Polyethylene, PVDF = Polyvinylidene Fluoride. Hypalon and Viton are registered trademarks of E.I. DuPont Company. PVC wetted and recommended for sodium hypochlorite.

*Item # 01886 - Pump Model LCO3SAVTC-1

Electrical 115 VAC / 60 Hz

Output 12 GPD at 80 PSI

Materials PVC pump head, fittings and valves, ceramic ball checks, teflon seals, PE tubing

*Item # 01887 - Pump Model LCO3SBVTC-1

Electrical 230 VAC / 60 Hz

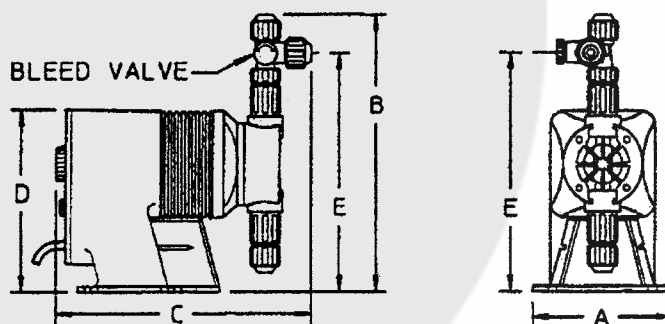
Output 12 GPD at 80 PSI

Materials PVC pump head, fittings and valves, ceramic ball checks, teflon seals, PE tubing

Other Series C Pumps sizes and materials selections available through special order

Dimensions

Series C Dimensions - Inches						
Note: inches x 2.54=cm						
Model No.	A	B	C	D	E	Shipping Weight (Lbs.)
LC02	5.0	9.6	9.5	6.5	8.2	10
LC03	5.0	9.9	9.5	6.5	8.5	10
LC04	5.0	9.9	9.5	6.5	8.5	10
LC54	5.0	9.9	9.5	6.5	8.5	10



Series E Electronic Metering Pumps



Key Features

- Manual Control by on-line adjustable stroke rate and stroke length.
- Agency Approved for demanding OUTDOOR and indoor applications.
- Highly Reliable timing circuit.
- Water Resistant excellent for OUTDOOR and indoor applications.
- Internally Dampened To Reduce Noise, very acceptable for household installations.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics.
- Premium Standard Wetted Component Materials.
- Few Moving Parts and Wall Mountable.
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard).

Complete Economical Selection

Nineteen distinct models are available, having pressure capabilities to 300 PSIG @ 3 GPD, and flow capacities to 500 GPD @ 20 PSIG, with a turndown ratio of 100:1. Metering performance is reproducible to within +/- 3% of maximum capacity.

Operating Benefits

Reliable metering performance - guided check valves with state-of-the-art seat and ball designs, provide precise seating and excellent priming and suction lift characteristics. Timing circuit is highly reliable and, virtually unaffected by temperature, EMI and other electrical disturbances.

Rated 'hot' for continuous duty - Series E pumps continue to meet their specifications for pressure and capacity even during extended use because our high quality solenoid is separately encapsulated in a fin-cooled, thermo-conductive enclosure that effectively dissipates heat.

High viscosity capability - a straight flow path and ample clearance between the diaphragm and the head enable standard PULSAtron pumps to handle viscous chemicals up to a viscosity of 1000 CPS. For higher viscosity applications, larger, spring-loaded connections are available.

Leak-free, seatless, liquid end - diaphragms are of superior construction - PTFE-faced, bonded to a composite of Hypalon and fabric layers and reinforced with a metal insert for optimum flexibility and durability.

System Compatibility

A wide variety of chemicals can be pumped - liquid end materials include glass-filled polypropylene, (GFPPL), PVC, styrene, acrylonitrile (SAN), Polyvinylidene Fluoride (PVDF), Teflon, Hypalon, Viton, ceramic, alloys and 316SS.

Immediate installation and start-up - included as standard accessories with all models are an injection/back pressure valve assembly and a foot valve/strainer assembly*, including discharge and suction tubing (*not available with high viscosity connections for >3000 CPS).

Safe and easy priming and valve maintenance - included as a standard accessory is a bleed valve assembly, including return tubing (available only on those models with tubing connections and ≤240 GPD).

Quick and economical liquid end maintenance - available for every model is a unique KOPkit®, a convenient, economically priced, package containing new cartridge check valves and other important spare parts.

1 year guarantee from date of manufacture.



KOPkit®

Item #32880 - Type K4VTC1 (fits stocked 24 GPD E-Series Pumps)
Pulsafeeder has built a reputation for superior reliability by supplying carefully designed, high quality equipment, however, it requires a minimal amount of maintenance. KOPkits are designed to guard against unnecessary downtime and assure you the highest level of efficient and uninterrupted service from our PULSAtron pumps. KOPkits contain recommended spare parts for those parts that usually require preventive maintenance. KOPkits immediately available in all wetted materials at very affordable prices.

Note: Other size and material KOPkits available by special order.

Pressure and Flow Rate Capacity

Capacity Nominal	GPD	3	5	6	11	12	14	20	21	24*	40	42	44	60	75	94	120	190	240	500
	GPH	0.13	0.20	0.25	0.45	0.50	0.58	0.83	0.87	1.0	1.66	1.75	1.83	2.5	3.17	3.91	5.0	8.0	10.0	20.0
	LPH	0.49	0.79	0.95	1.73	1.89	2.20	3.15	3.31	3.78	6.31	6.62	6.94	9.5	11.83	14.82	18.93	29.96	37.85	78.85
Pressure, Max PSIG/Bar	300/21	LEK2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	250/17	-	LE12	-	LE33	-	-	LEF4	-	-	LEH4	-	-	-	-	-	-	-	-	-
	150/10	-	-	LE02	-	LE13	-	-	LE34	-	-	LEG4	-	LEK5	LEH5	-	-	-	-	-
	100/7	-	-	-	-	LE03	LEK5	-	-	LE14	-	-	LE44	-	-	LEG5	LEH6	-	-	-
	50/3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LEK7	-	-
	35/2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LEH7	-
	20/1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LEH8

*Stocked Item. See materials for pump construction.

Series E - 19 model selections. Digit 1 and 2 (LE) signify product class, digit 3 and 4 signify pressure/flow.
For full model selection information, please contact our Order Desk.

Liquid End Materials

Series	Pump Head	Diaphragm	Check Valves		Fittings	Bleed Valve	Injection Valve Assembly Foot Valve Assembly	Tubing
			Seats/O-rings	Balls				
E	GFPPL PVC SAN PVDF 316SS	PTFE-faced Hypalon-backed	PTFE Hypalon Viton	Ceramic, PTFE, 316SS Alloy C	GFPPL PVC PVDF	Same as fitting and check valve selected, except 316SS	Same as fitting and check valve selected	Clear PVC White PE

Important: Material Code - GFPPL = Glass-filled Polypropylene, PVC = Polyvinyl Chloride, SAN = Styrene Acrylonitrile, PE = Polyethylene, PVDF = Polyvinylidene Fluoride. Hypalon and Viton are registered trademarks of E.I. DuPont Company. PVC wetted and recommended for sodium hypochlorite.

*Item # 01884 - Pump Model LE14SAVTC-1

Electrical 115 VAC / 60 Hz

Output 24 GPD at 100 PSI

Materials..... PVC pump head, fittings and valves, ceramic ball checks, teflon seals, PE tubing

*Item # 01885 - Pump Model LE14SBVTC-1

Electrical 230 VAC / 60 Hz

Output 24 GPD at 100 PSI

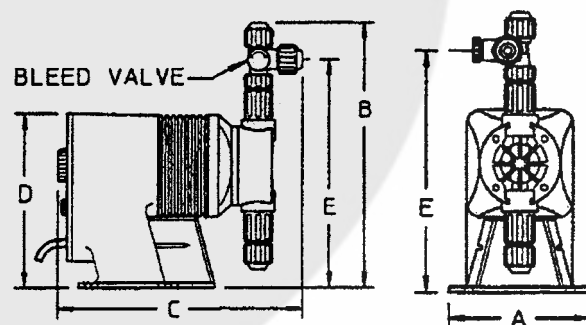
Materials..... PVC pump head, fittings and valves, ceramic ball checks, teflon seals, PE tubing

Dimensions

Series E Dimensions - Inches								
Note: inches x 2.54=cm								
Model No. (LE)	A	B	B1	C	C1	D	E	Shipping Weight (Lbs.)
02	5.0	9.6	-	9.5	-	6.4	8.2	7
03	5.0	9.8	-	9.5	-	6.4	8.4	7
12	5.0	9.6	-	9.5	-	6.4	8.2	7
13	5.0	9.8	-	9.5	-	6.4	8.4	7
14	5.0	9.8	-	9.5	-	6.4	8.4	7
33/34/44	5.4	10.6	-	11.2	-	7.5	9.2	12
F4/G4	5.4	10.6	-	11.7	-	7.5	9.2	15
G5	5.4	10.9	-	11.7	-	7.5	9.2	15
H4	6.2	10.9	-	11.2	-	8.2	9.5	18
H5/H6	6.2	11.3	-	11.2	-	8.2	9.9	18
H7	6.2	11.7	-	11.2	-	8.2	10.3	18
H8*	6.2	-	10.9	-	10.6	8.2	-	23
K2	5.4	10.3	8.8	10.9	9.9	7.4	8.9	10
K3	5.4	10.6	-	10.7	-	7.5	9.2	10
K5	5.4	10.9	-	11.7	-	7.5	9.5	15
K7	6.1	11.7	-	11.2	-	8.2	10.3	18

*H8 is designed without a bleed valve available

Other Series E Pumps sizes and materials selections available through special order



Series E Plus Electronic Metering Pumps



Key Features

- Automatic Control, available with 4-20 mADC direct or external pacing, with stop function.
- Manual Control by on-line adjustable stroke rate and stroke length.
- Agency Approved for demanding OUTDOOR and indoor applications
- Auto-Off-Manual switch.
- Highly Reliable timing circuit.
- Circuit Protection against voltage and current upsets.
- Panel Mounted Fuse.
- Solenoid Protection by thermal overload with auto-reset.
- Water Resistant, for outdoor and indoor applications.
- Indicator lights, panel mounted.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics..
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard).

Complete Economical Selection

Nineteen distinct models are available, having pressure capabilities to 300 PSIG @ 3 GPD, and flow capacities to 504 GPD @ 20 PSIG, with a turndown ratio of 100:1. Metering performance is reproducible to within +/- 2% of maximum capacity.

Operating Benefits

Reliable metering performance - Our guided check valves, with their state-of-the-art seat and ball designs, provide precise seating, and excellent priming and suction lift characteristics. Our timing circuit is highly reliable and, by design, virtually unaffected by temperature, EMI and other electrical disturbances.

Rated 'hot' for continuous duty - Series E PLUS pumps continue to meet their specifications for pressure and capacity even during extended use. That's because our high quality solenoid is separately encapsulated in a fin-cooled, thermally conductive, enclosure that effectively dissipates heat.

High viscosity capability - a straight flow path and ample clearance between the diaphragm and the head enable standard PULSAtron pumps to handle viscous chemicals up to a viscosity of 3000 CPS. For higher viscosity applications, larger, spring-loaded connections are available.

Leak-free, seatless, liquid end. - Our diaphragms are of superior construction - PTFE-faced, bonded to a composite of Hypalon and fabric layers, and reinforced with a metal insert for optimum flexibility and durability.

System Compatibility

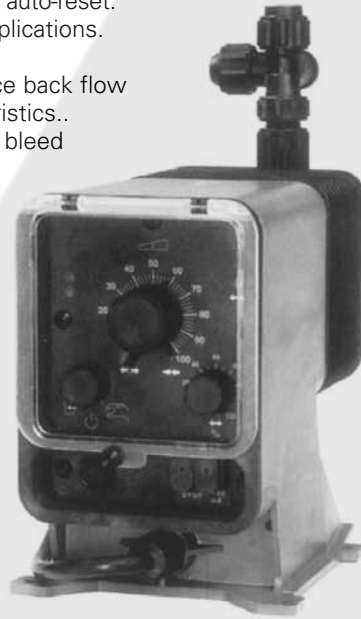
A wide variety of chemicals can be pumped - liquid end materials include glass-filled polypropylene (GFPPL), PVC, styrene- acrylonitrile (SAN), Polyvinylidene Fluoride (PVDF), Teflon, Hypalon, Viton, ceramic, alloys and 316SS.

Immediate installation and start-up - included as standard accessories with all models are an injection/back pressure valve assembly and a foot valve/strainer assembly*, including discharge and suction tubing and tube straightener (*not available with high viscosity connections for >3000 CPS).

Safe and easy priming and valve maintenance - included as a standard accessory is a bleed valve assembly, including return tubing (available only on those models with tubing connections and 240 GPD).

Quick and economical liquid end maintenance - available for every model is a unique KOPkit®, a convenient, economically priced package containing new cartridge check valves and other important spare parts.

1 year guarantee from date of manufacture.



KOPkit®

Item #32880 - Type K4VTC1 (fits stocked 6, 12 and 24 GPD E-Series Pumps)

Item #32883 - Type K2VTC1 (fits stocked 44 and 94 GPD E-Series Pumps)

Pulsafeeder has built a reputation for superior reliability by supplying carefully designed, high quality equipment, however, it requires a minimal amount of maintenance. KOPkits are designed to guard against unnecessary downtime and assure you the highest level of efficient and uninterrupted service from our PULSAtron pumps. KOPkits contain recommended spare parts for those parts that usually require preventive maintenance. KOPkits immediately available in all wetted materials at very affordable prices.

Note: Other size and material KOPkits available by special order.

Pressure and Flow Rate Capacity

Capacity Nominal	GPD	3	5	6*	11	12*	14	20	21	24*	40	42	44*	60	75	94*	120	190	240	500
	GPH	0.13	0.20	0.25	0.45	0.50	0.58	0.83	0.87	1.0	1.66	1.75	1.83	2.5	3.17	3.91	5.0	8.0	10.0	20.0
	LPH	0.49	0.79	0.95	1.73	1.89	2.20	3.15	3.31	3.78	6.31	6.62	6.94	9.5	11.83	14.82	18.93	29.96	37.85	78.85
Pressure, Max PSIG/Bar	300/21	LEK2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	250/17	-	LE12	-	LE33	-	-	LEF4	-	-	LEH4	-	-	-	-	-	-	-	-	-
	150/10	-	-	LE02	-	LE13	-	-	LE34	-	-	LEG4	-	LEK5	LEH5	-	-	-	-	-
	100/7	-	-	-	-	LE03	LEK5	-	-	LE14	-	-	LE44	-	-	LEG5	LEH6	-	-	-
	50/3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LEK7	-	-
	35/2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LEH7	-
	20/1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LEH8

*Stocked Item. See materials for pump construction.

Series E PLUS - 19 model selections. Digit 1 and 2 (LE) signify product class, digit 3 and 4 signify pressure/flow.
For full model selection information, please contact our Order Desk.

Liquid End Materials

Series	Pump Head	Diaphragm	Check Valves		Fittings	Bleed Valve	Injection Valve Assembly Foot Valve Assembly	Tubing
			Seats/O-rings	Balls				
E	GFPPL PVC SAN PVDF 316SS	PTFE-faced Hypalon-backed	PTFE Hypalon Viton	Ceramic, PTFE, 316SS Alloy C	GFPPL PVC PVDF	Same as fitting and check valve selected, except 316SS	Same as fitting and check valve selected	Clear PVC White PE

Important: Material Code - GFPPL = Glass-filled Polypropylene, PVC = Polyvinyl Chloride, SAN = Styrene Acrylonitrile, PE = Polyethylene, PVDF = Polyvinylidene Fluoride. Hypalon and Viton are registered trademarks of E.I. DuPont Company. PVC wetted and recommended for sodium hypochlorite.

*Item #7000071 - Pump Model LPA2EAVTC-1

Output 6 GPD at 150 PSI

*Item #7000070 - Pump Model LPA3EAVTC-1

Output 12 GPD at 100 PSI

*Item #7000072 - Pump Model LPB4EAVTC-1

Output 24 GPD at 100 PSI

*Item #7000074 - Pump Model LPE4EAVTC-1

Output 44 GPD at 100 PSI

*Item #7000075 - Pump Model LPG5EAVTC-1

Output 94 GPD at 100 PSI

All pumps listed above have the following common specifications:

Electrical 115 VAC / 60 Hz

Input Contacting meter or manual control

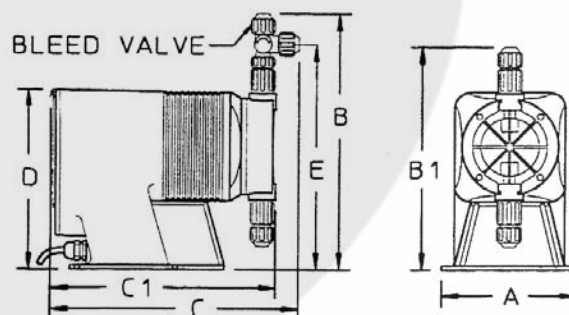
Materials PVC pump head, fittings and valves,
ceramic ball checks, teflon seals, PE tubing

Dimensions

Series E PLUS Dimensions - Inches								
Note: inches x 2.54=cm								
Model No.	A	B	B1	C	C1	D	E	Shipping Weight (Lbs.)
LPA2	5.0	9.6	-	9.5	-	6.4	8.2	13
LPA3	5.0	9.8	-	9.5	-	6.4	8.4	13
LPB2	5.0	9.6	-	9.5	-	6.4	8.2	13
LPB3	5.0	9.8	-	9.5	-	6.4	8.4	13
LPB4	5.0	9.8	-	9.5	-	6.4	8.4	13
LPD3	5.4	10.6	-	11.2	-	7.5	9.2	15
LPD4	5.4	10.6	-	11.7	-	7.5	9.2	15
LPE4	5.4	10.9	-	11.7	-	7.5	9.2	15
LPF4	6.2	10.9	-	11.2	-	8.2	9.5	18
LPG4	6.2	11.3	-	11.2	-	8.2	9.9	18
LPG5	6.2	11.7	-	11.2	-	8.2	10.3	18
LPH4	6.2	-	10.9	-	10.6	8.2	-	21
LPH5	5.4	10.3	8.8	10.9	9.9	7.4	8.9	21
LPH6	5.4	10.6	-	10.7	-	7.5	9.2	21
LPH7	5.4	10.9	-	11.7	-	7.5	9.5	21
LPH8*	6.1	11.7	-	11.2	-	8.2	10.3	25
LPK2	5.4	10.3	8.8	10.9	9.9	7.4	8.9	21
LPK3	5.4	10.6	-	10.7	-	7.5	9.2	21
LPK5	5.4	10.9	-	11.7	-	7.5	9.5	21
LPK7	6.1	11.7	-	11.2	-	8.2	10.3	25

*LPH8 is designed without a bleed valve available

Other Series E plus Pumps sizes and materials selections available through special order



Series MP Electronic Metering Pumps



Key Features

- Automatic Control, Fully scalable 4-20mA current signal that can also be calibrated to precisely match the current signal reading of the sending device.
- Flow Verification on select sizes can disable the pump and activate alarm if flow is interrupted for any reason.
- Flow Totalization accurately reports the volume of chemical pumped at the touch of a button in either Gallons or Liters. Factory preset to pump rating, manual calibration volume can be input to fine tune reporting.
- Relay Output for computer interface or AC power allows for external control.
- Simple Prompts in plain language allow for easy-to-understand instructions for programming. Available in four languages, English, French, German and Spanish.
- Alarm Signals for signal loss, full count, circuit failure, pulse overflow and pulse rate high. Liquid low level indicator capability is standard.
- Timed Sequences can be set for selected intervals and rate for repetitive metering.
- Pulse Signals can be multiplied or divided by 1 to 999 allowing for pumps to handle peak requirements.
- Flow Rate is displayed as GPH, GPD or LPH.
- Large easy to read backlit LCD display keeps you informed with the data that you need.

Complete Economical Selection

Nineteen distinct models are available, having pressure capabilities to 300 PSIG @ 3 GPD, and flow capacities to 504 GPD @ 20 PSIG, with a turndown ratio of 1000:1. Metering performance is reproducible to within $\pm 2\%$ of maximum capacity.

Operating Benefits

Reliable metering performance - Our guided check valves, with their state-of-the-art seat and ball designs, provide precise seating, and excellent priming and suction lift characteristics. Our timing circuit is highly reliable and, by design, virtually unaffected by temperature, EMI and other electrical disturbances.

Rated 'hot' for continuous duty - Series MP pumps continue to meet their specifications for pressure and capacity even during extended use. That's because of our high quality solenoid and special enclosure that effectively dissipates heat.

High viscosity capability - A straight flow path and ample clearance between the diaphragm and head enable standard PULSAtron pumps to handle viscous chemicals up to a viscosity of 3000 CPS. For higher viscosity applications, larger, spring-loaded connections are available.

Leak-free, seatless, liquid end - Our diaphragms are of superior construction - PTFE-faced, bonded to a composite of Hypalon and fabric layers, and reinforced with a metal insert for optimum flexibility and durability.



System Compatibility

A wide variety of chemicals can be pumped - Liquid end materials include glass-filled polypropylene (GFPPL), PVC, Polyvinylidene Fluoride (PVDF), PTFE, Hypalon, Viton, ceramic, alloys and 316SS.

Immediate installation and start-up - Included as standard accessories with all models are an injection/back pressure valve assembly and a foot valve/strainer assembly*, including discharge and suction tubing (*not avail. with high viscosity connections for >3000 CPS).

Safe and easy priming and valve maintenance - Included as a standard accessory is a bleed valve assembly, including return tubing (available only on those models with tubing connections and <240 GPD).

Quick and economical liquid end maintenance - Available for every model is a unique KOPkit®, a convenient, economically priced, package containing new cartridge check valves and other important spare parts.

1 year guarantee from date of manufacture.



KOPkit®

Item #32880 - Type K4VTC1 (fits stocked 6, 12 and 24 GPD E-Series Pumps)

Item #32883 - Type K2VTC1 (fits stocked 44 and 94 GPD E-Series Pumps)

Pulsafeeder has built a reputation for superior reliability by supplying carefully designed, high quality equipment, however, it requires a minimal amount of maintenance. KOPkits are designed to guard against unnecessary downtime and assure you the highest level of efficient and uninterrupted service from our PULSAtron pumps. KOPkits contain recommended spare parts for those parts that usually require preventive maintenance. KOPkits immediately available in all wetted materials at very affordable prices.

Note: Other size and material KOPkits available by special order.

Pressure and Flow Rate Capacity

Capacity Nominal	GPD	3	5	6	12*	14	20	22	24*	41	42	44	60	76	120	192	240	504
	GPH	0.13	0.21	0.25	0.5	0.6	0.85	0.9	1.0	1.7	1.75	1.85	2.5	3.15	5.0	8.0	10.0	21.0
	LPH	0.5	0.8	0.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7.0	9.5	11.9	18.9	30.3	37.9	79.5
Pressure, Max PSIG/Bar	300/21	LMK2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	250/17	-	LMB2	-	LMD3	-	LMF4	-	-	LMH4	-	-	-	-	-	-	-	-
	150/10	-	-	LMA2	LMB3	-	-	LMD4	-	-	LMG4	-	LMK5	LMH5	-	-	-	-
	100/7	-	-	-	LMA3	LMK5	-	-	LMB4	-	-	LME4	-	-	LMH6	-	-	-
	50/3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LMK7	-	-
	35/2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LMH7	-
	20/1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LMH8

*Stocked Item. See materials for pump construction.

Series MP - 19 model selections. Digit 1 and 2 (LM) signify product class, digit 3 and 4 signify pressure/flow.
For full model selection information, please contact our Order Desk.

Liquid End Materials

Series	Pump Head	Diaphragm	Check Valves		Fittings	Bleed Valve	Injection Valve Assembly Foot Valve Assembly	Tubing
			Seats/O-rings	Balls				
MP	GFPPL PVC PVDF 316SS	PTFE-faced Hypalon-backed	PTFE Hypalon Viton	Ceramic, PTFE, 316SS Alloy C	GFPPL PVC PVDF	Same as fitting and check except 316SS	Same as fitting and check valve selected	Clear PVC White PE valve selected,

Important: Material Code - GFPPL = Glass-filled Polypropylene, PVC = Polyvinyl Chloride, SAN = Styrene Acrylonitrile, PE = Polyethylene, PVDF = Polyvinylidene Fluoride. Hypalon and Viton are registered trademarks of E.I. DuPont Company. PVC wetted and recommended for sodium hypochlorite.

*Item #7000090 - Pump Model LMA3TA-VTC1

Output 12 GPD at 150 PSI

*Item #7000091 - Pump Model LMA2TA-VTC1

Output 6 GPD at 100 PSI

*Item #7000092 - Pump Model LMB4TA-VTC1

Output 24 GPD at 100 PSI

*Item #7000094 - Pump Model LME4TA-VTC1

Output 44 GPD at 100 PSI

*Item #7000095 - Pump Model LMH6TA-VTC3

Output 120 GPD at 100 PSI

All pumps listed above have the following common specifications:

Electrical 115 VAC / 60 Hz

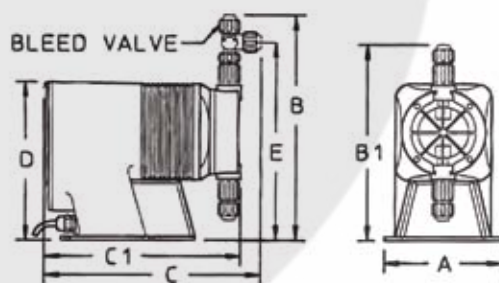
Input Contacting meter or manual control

Materials PVC pump head, fittings and valves,
ceramic ball checks, teflon seals, PE tubing

Dimensions

Series MP Dimensions - Inches								
Note: inches x 2.54=cm								
Model No.	A	B	B1	C	C1	D	E	Shipping Weight (Lbs.)
LMA2	5.4	10.3	-	10.8	-	7.5	8.9	13
LMA3	5.4	10.6	-	10.7	-	7.5	9.2	13
LMB2	5.4	10.3	-	10.8	-	7.5	8.9	13
LMB3	5.4	10.6	-	10.7	-	7.5	9.2	13
LMB4	5.4	10.6	-	10.7	-	7.5	9.2	13
LMD3	5.4	10.6	-	11.2	-	7.5	9.2	15
LMD4	5.4	10.6	-	11.2	-	7.5	9.2	15
LME4	5.4	10.6	-	11.2	-	7.5	9.2	15
LMF4	5.4	10.6	-	11.7	-	7.5	9.2	18
LMG4	5.4	10.6	-	11.7	-	7.5	9.2	18
LMH4	6.2	10.9	-	11.2	-	8.2	9.5	21
LMH5	6.2	11.3	-	11.2	-	8.2	9.9	21
LMH6	6.2	11.3	-	11.2	-	8.2	9.9	21
LMH7	6.2	11.7	-	11.2	-	8.2	10.3	21
LMH8*	6.1	-	10.9	1	10.6	8.2	-	25
LMK2	5.4	10.3	-	10.8	-	7.5	8.9	13
LMK3	5.4	10.6	-	10.7	-	7.5	9.2	13
LMK5	5.4	10.9	-	11.7	-	7.5	9.5	18
LMK7	6.1	11.7	-	11.2	-	8.2	10.3	21

*LMH8 is designed without a bleed valve available



15 Gallon Solution Tank

(not available in Canada)

#40376 15 Gallon Solution Tank, Almond

35 Gallon Solution Tank

#95172 35 Gallon Solution Tank, Natural

Features

- Polyethylene construction
- Removable lid
- Suction tube guide mounted internally
- Integral shelf for mounting chemical pump or mixer.
- Comes with a set of 4 nylon bolts and nuts for mounting pump
- Dimensions: 16"W x 16"D x 36"H



FRONT VIEW

(Shown with Pulsatron Pump
Mounted to tank shelf)



REAR VIEW

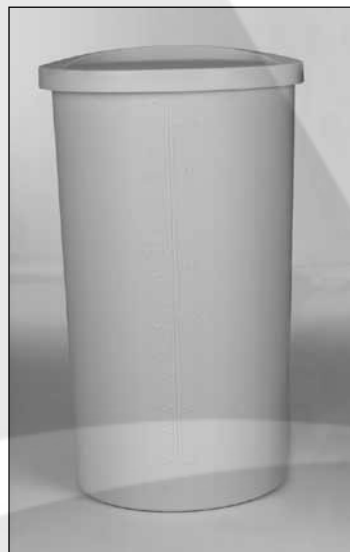
45 Gallon Solution Tank

#100088 45 Gallon Solution Tank, Natural

#100192 45 Gallon Solution Tank, Smoke White

Features

- Polyethylene construction
- Removable lid
- Graduated sidewall with gallons / liters



Solution Tank Mixer

#21301 Solution Tank Mixer, Bracket Mount

Features

- 1/20 HP motor, TEFC, 1550 RPM
- 115 Volt/60 Hz
- Bracket mounted with built in incidence angle for optimum mixing
- 304 Stainless Steel shaft and impeller with baked polymer coating for superior corrosion resistance.
- 115 Plug and cord included
- Motor can be wired directly or run through a ON/OFF switch (not supplied)



The FLEX-LITE tanks are available in two varieties – FLU and FLS. These tanks are NSF/ANSI 61 certified. Both types of tanks are 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. They have heavy duty base molded out of ABS for maximum strength and durability. They also have a removable schedule 80 PVC bottom connection that can be accessorized for increased installation flexibility. These tanks are 50% lighter than conventional steel tanks.

These tanks can easily be retrofitted with the Watergroup diffuser assembly to increase the tank-water contact time.

The FLS tanks have two additional stainless steel reinforced side ports for increased installation options.

The FLU tanks are available in five models for 30, 40, 80,120 Gallons capacities. The FLS tanks are available in three models for 40, 80 and 120 Gallons capacities.

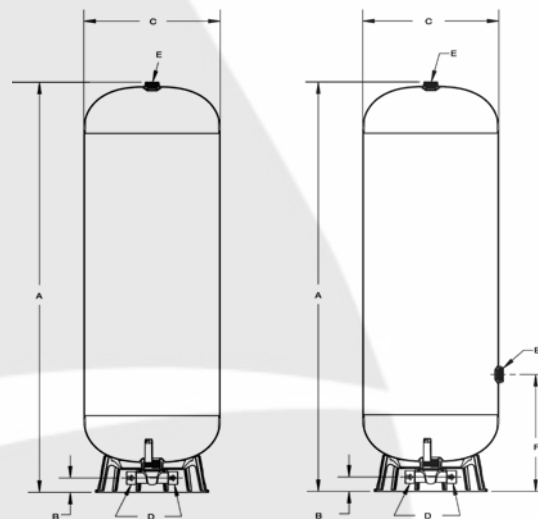


Flex-Lite FLU Utility Tank



Flex-Lite FLS Storage Tank

Item #	Model Description
33150	Tank, Universal, FLU-30, Flex-Lite
33151	Tank, Universal, FLU-40, Flex-Lite
33152	Tank, Universal, FLU-40S, Flex-Lite
33153	Tank, Universal, FLU-80, Flex-Lite
33154	Tank, Universal, FLU-120, Flex-Lite
33155	Tank, Universal, FLS40-D, Flex-Lite
33156	Tank, Universal, FLS80-D, Flex-Lite
33157	Tank, Universal, FLS120-D, Flex-Lite



Specifications

Model Description	Total Tank Volume gal / liters	A Height in / cm	B Floor to CL in / cm	C Diameter in / cm	D Socket Glue Connection	E FPT	F CL to Fitting End in / cm	Total Weight lb / kg
FLU30	30 / 114	42.5 / 108.0	1.75 / 4.4	16.5 / 41.8	1-1/4" schd-80	1-1/4"	N/A	23.0 / 10.4
FLU40	40 / 151	53.4 / 135.6	1.75 / 4.4	16.5 / 41.8	1-1/4" schd-80	1-1/4"	N/A	31.0 / 14.1
FLU40S	40 / 151	36.9 / 93.8	2.25 / 5.7	21.4 / 54.2	1-1/4" schd-80	1-1/4"	N/A	33.1 / 15.0
FLU80	80 / 303	64.1 / 162.8	2.25 / 5.7	21.4 / 54.2	1-1/4" schd-80	1-1/4"	N/A	60.0 / 27.0
FLU120	120 / 454	71.5 / 181.6	2.25 / 5.7	24.2 / 61.4	1-1/4" schd-80	1-1/4"	N/A	83.5 / 38.0
FLS40	40 / 151.4	53.4 / 135.6	1.75 / 4.4	16.5 / 41.9	1-1/4" schd-80	1-1/4"	15.5 / 39.4	25 / 11.3
FLS80	80 / 310.4	64.1 / 162.8	2.25 / 5.7	21.4 / 54.4	1-1/4" schd-80	1-1/4"	18.3 / 46.5	41 / 18.6
FLS120	120 / 450.5	71.5 / 181.6	2.25 / 5.7	24.2 / 61.5	1-1/4" schd-80	1-1/4"	20.2 / 51.3	61 / 27.7

Minimum Operating Temperature, internal & external: 120°F (4°C)

Maximum Working Pressure: 100 PSIG

Optional Accessories

Item #	Item Description	Item #	Item Description
33160	Air Volume Control Kit, w/o Pipe, Flexlite	33165	Air Volume Control Assy, FLU-120/FLS-120D
33161	Air Volume Control Assy, FLU-30	33167	Adapter, Stand Pipe Only, Twin Port Drain
33162	Air Volume Control Assy, FLU-40/FLS-40S	33168	Diffuser, Assy, Lower, Flexlite Tank
33163	Air Volume Control Assy, FLU-40S	33132	Diffuser, Assy, Upper
33164	Air Volume Control Assy, FLU-80/FLS-80D		



Flow Switches

Johnson Controls F61 Series Flow Switches

#85251 3/4" Flow Switch, F61KD-4
#85252 1" - 8" Flow Switch, F61KD-11

Application

The F61 SPDT flow switches are for use in liquid flow lines carrying water, ethylene glycol, or any fluid not harmful to brass or phosphor bronze and not classified as a hazardous fluid. They can be wired to close one circuit and open a second circuit when liquid flow either exceeds or drops below the adjusted flow rate.



F61KD-4



F61KD-11

MASCONTROL

#79980	1" NPT, 50 Feet	#79985	1-1/4" NPT, 50 Feet
#79983	1" NPT, 70 Feet	#79986	1-1/4" NPT, 70 Feet
#79984	1" NPT, 90 Feet	#79992	1-1/4" NPT, controlpres with built-in pressure adjustment

Mascontrol has been a great success as an innovative product for residential, commercial and irrigation system electric pump control. It also has uses in some chemical feed pump control applications. Flow rates as low as 0.21 USGPM will activate the Mascontrol.

The composite housing and stainless steel internal component construction is ideal for more aggressive environments. To find out if Mascontrol is right for your application, contact your Sales Representative. *2 Year Warranty*



Technical Specifications

Dual/Voltage 115V / 230V
Acceptable Power Fluctuations. +/-10%
Frequency 50 / 60 Hz
Amp Rating..... 115V-16FLA / 230V-20FLA
Electronic Enclosure NEMA 12
Maximum Operating Pressure .. 145 PSI
Operating Temperature 32-149°F (0-65°C)
Male Threaded Connections 1" or 1-1/4" models
Electrical Conduit Connections.. 1/2"

Contacting Flow Meters

#27340	3/4" Contacting Flowmeter.....	Range 1 - 20 USGPM.....	Output 0.25 Gallons per Contact
#273410.....	1" Contacting Flowmeter.....	Range 2 - 50 USGPM.....	Output 0.40 Gallons per Contact
#27342.....	1-1/2" Contacting Flowmeter....	Range 4 - 100 USGPM.....	Output 1.00 Gallons per Contact
#27352.....	2" Contacting Flowmeter	Range 6 - 130 USGPM.....	Output 2.00 Gallons per Contact

Multi-Jet – Reed Switch

Uses Reed Switch to provide a dry contact closure to metering pumps and controls. Does not require external power source.

Low Maintenance

High quality components insures performance for many years. The impeller and register are contained in a cartridge which can be serviced without taking the meter from the line. Maintenance is easier with less down time.

Gears lubricated for longevity

Water lubricated gears and internals provide long life and dependable service.

Sand and debris pass easily

Measuring chamber designed for superior ability to pass sand and debris.
Max Temperature = 40°C (105°C)



Float Switches

#8189 Mercury Float Switch, Wide Angle, 20 AMP, Normally closed, 115VAC Plug.
#302536 Mechanical Float Switch, 90 Degree Angle, 1/2 HP, Normally Closed, 115 VAC Plug.
#302535 Mechanical Float Switch, 90 Degree Angle, 1/2 HP, Double Throw, No Terminations

All floats: - High Impact Polystyrene construction
- 16 Gauge - chlorinated polyethylene cords, 20 ft



Chlorine is highly effective in destroying microorganisms in water. It is also a powerful oxidizer used to precipitate various contaminants in water.

With the introduction of the chemical free iron filter and ultraviolet, the number of chlorination applications has been reduced. However, there are still cases where a full-line chlorination system is the best solution for some water problems.

Information is available concerning the alternate use of hydrogen peroxide for specialty applications.

Application

Following are the conditions where we recommend the installation of a full-line chlorination system:

1. Where hydrogen sulfide exceeds 3.0 ppm
2. Where combined levels of iron, manganese and sulfur exceed the limits for the chem-free or the iron & sulfur filter
3. Where disinfection is required to make the water bacteriologically safe
4. For livestock application requiring chlorine residuals
5. For community wells
6. To comply with user's personal reference (type of recommendation by governments).

Installation

Chemical Feeder/Solution Tank

The injection point should be installed after the pressure tank and before the holding tank.

This pump is wired to the pressure switch of the water pump (s). Thus, it is important that the chemical pump be the same voltage as the water pump. Specify 115V or 230V when ordering.

The injector and anti-syphon valves should be cleaned regularly according to the maintenance instructions provided with the pump.

Chemical Feed Solution

Is most often a mixture of household bleach (chlorine). Do not use a powdered pool type of bleach. If you must dilute the chlorine, be sure to use clean, treated water for mixing; otherwise, the mixture will be too weak to work and a sludge will build up on the bottom of your solution tank.

Shut-Off Valves

Are required on both sides of the injection point in order to be able to isolate the injector for cleaning and testing purposes.

Flow Switch

Optional when all water is not being treated - the flow switch is installed after the untreated water lines.

Retention Tank

Water should always be fed in at the bottom and the outlet should be at the top. A bleed off valve should be installed at the lowest point of the tank.

Retention of at least 20 minutes is required as calculated by the tank size and the recommended 4-5 gpm flow rate. Chlorine must have this time for an effective bacteria kill and to oxidize contaminants. At 5 USGPM, a 100 gallon retention tank would be required.

Multi-Media Filter

Installed after the retention tank to collect suspended matter such as clay, silt or ferric iron or oxidized manganese or sulfur. Pressure loss usually indicates more frequent backwash is required.

Activated Carbon Filter

Will remove any residual chlorine and trace organics in the water, improving taste and odor. Pressure loss or chlorine slippage usually indicates more frequent backwashes are required.

Water Softener

Installed after filtration equipment. The water softener should be applied when the water tests more than 1 gpg total hardness. Sizing of the correct model of softener should be done according to the normal three day sizing formula.

Test Cocks

Should be installed after each piece of equipment in order to analyze operating performance.

Plumbing

Should be in good order and all taps indicated should be installed. All plumbing, including pressure tank fittings should be a minimum of 3/4" for good flow rates and healthy backwash flows. A minimum of 20 psi should be maintained throughout the system.

Bypass valves are recommended on every filter and softener. PVC plumbing is recommended over galvanized steel.

Do not use polybutylene pipe with total chlorine levels over 2 ppm.

pH

If the pH is below 6.5, it must be increased to allow for efficient oxidation by the chlorine. This can be accomplished with the addition of soda ash by a separate feed system.

Regeneration Time

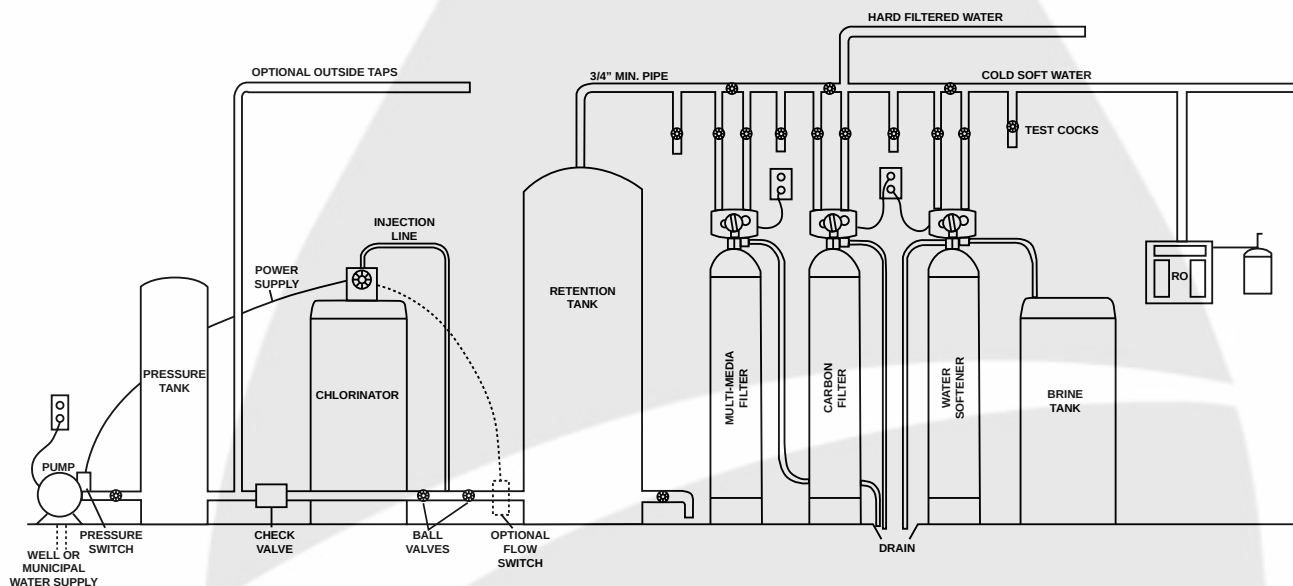
All filters and the softener should regenerate/backwash every three days. The time of regeneration/backwash must be staggered to avoid having more than one unit backwashing at one time.

User Involvement

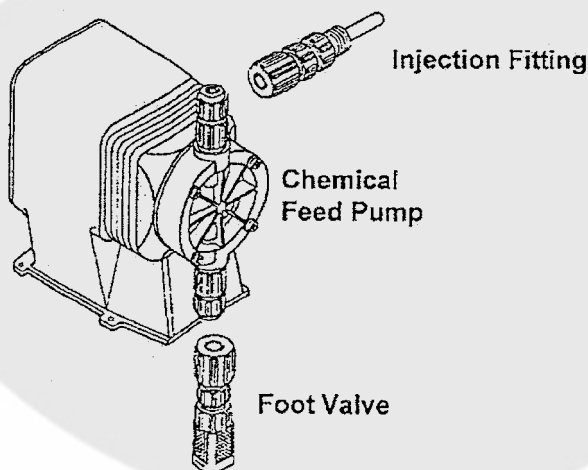
A problem water system requires testing and monitoring. The user must be aware of the chemical mixing procedure and how to test for residual chlorine at the

test tap between the multi-media and carbon filters, etc. The chlorine tank must not run dry and lose the prime of the feed pump.

- The chlorinator is wired to the pump or flow switch
- The retention tank is sized for a minimum of 20 minutes retention
- Optional flow switch is to be used when outside unchlorinated water service is required
- Backwash and regeneration times must be staggered to ensure adequate water supply for proper regeneration



Chemical Feed Pump



Sizing the System

Sizing the Filters

When sizing the filtration components in a full line chlorination system, the basic rule for filtration applies - match the pump flow rates to the backwash rates and service flow rates. Remember 'Bigger is not always better and smaller is not right either.'

Sizing the Chemical Feeder Pump

Need to know:

Chlorine demand for water treatment

To do a chlorine demand test (should be performed on-site), you will need:

- 1 gallon of fresh raw water.
- Sample of chlorine which will be used in the system. Typically either 12.5% or 5.25% Sodium Hypochlorite or household bleach.

Chlorine test kit goal:

- To achieve a residual chlorine level of 1.0 - 1.5 ppm (free chlorine test).
- If used to precipitate hydrogen sulfide, a residual of 3 ppm should be obtained.

Procedure:

- Add 3 drops chlorine to the gallon of raw water.
- Allow to stand for 5 minutes.
- Test water with the chlorine test kit.
- If no chlorine residual is indicated, add more drops in sets of 3 until a chlorine residual of 1.0 - 1.5 ppm is obtained.
- Measure the pumping rate of the pump system.
- Multiply the pumping rate by the number of drops of chlorine required. This will equal the number of drops of chlorine required per minute.

Example:

$$\begin{array}{rcl}
 & 26 & \text{drops required} \\
 \times & 6 & \text{gpm pumping rate} \\
 \hline
 = & 156 & \text{drops per minute} \\
 \times & 60 & \text{minutes per hour} \\
 \hline
 = & 9,360 & \text{drops per hour} \\
 \div & 75,000 & \text{drops per gallon} \\
 \hline
 = & 0.125 & \text{gallons of chlorine per hour}
 \end{array}$$

Sizing the Chlorinator

Select a chlorinator which will run at approximately 30-80% injection.

Most chlorinators will inject more than required. Therefore, dilute the chlorine with 'clean' treated soft water to obtain the quantity required versus the pump's efficient setting.

*Example: 0.125 gallons of chlorine required per hour.
The selected pump will inject 1.0 gallons per hour.*

$$\begin{array}{rcl}
 1.0 & \text{maximum output of chemical feed pump} \\
 \div & 50.0\% & \text{optimum pump setting} \\
 \hline
 = & 0.5 & \text{gallons per hour} \\
 \div & 0.125 & \text{gallons per hour required} \\
 \hline
 = & 4.0 &
 \end{array}$$

Your dilution ratio is 4:1.



Water Treatment Chemicals

Water Conditioning Products





NOTE: Please consult price list on case quantities and shipping information.
MSDS Sheets for all PRO Chemicals products are available upon request.

Rust Out® Water Softener Rust Remover *Maintains performance of softeners on iron bearing water.*

Applications

Water Softeners: First Application: Preventative
Maintenance: General Purpose Cleaning:

Item No.	Unit Size	Case Qty
45126	24 oz.	Single Bottle
45127	5 lb.	6/case
45128	50 lb.	1 Pail



ResCare® Liquid Resin Cleaner

Resin cleaner maintains performance of softener resin.

Pro Res Care is a specially formulated liquid resin cleaner designed to clean resin pores of iron, manganese, silt, metal particles and organic compounds that cause softener inefficiencies. Regular use of Res Care resin cleaner will restore the softener beads and control valve parts 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. Pro Res Care is NSF Certified to meet NSF/ANSI Standard 60 for drinking water additives.

Applications

First Application: Pour 4 oz. (1/2 cup) of Pro Res Care resin cleaner per cu. ft. directly into brine well (for softeners with no brine well, pour directly into salt tank when salt is low). Manually regenerate softener. Repeat regeneration if taste, odor, or discoloration is detected in discharge, then run cold soft water tap nearest the softener until the odor or taste is gone.

Preventative Maintenance: Add 1/2 oz. (1 Tbsp.) per cu. ft. to brine well before each regeneration.

Automatic Feeder Systems: Follow recommended dosage and feed rates specified by manufacturer or supplier.

Item No.	Unit Size	Case Qty
45147	1 Gallon	4/case
45148	1 Quart	12/case



NOTE: Pro products in (US. only) will drop ship directly from vendor and are not eligible for freight.

Ban-T® - Water Softener Iron Removal

Formerly Pro-Citric Acid

Maintains the pH of alkaline water.

Pro Ban T is a water softener iron removal cleaner that is specially formulated to effectively lower pH and remove iron and other contaminants from fouled water softeners. The water softener iron removal cleaning powers of Ban T should be used as preventative maintenance on all water softeners in areas with moderate iron content to maintain the life of the softener. Ban T is an environmentally friendly water softener iron removal cleaning agent that removes hard water deposits, lime scale and moderate iron staining from household fixtures.

Applications

First Application: Dissolve 2 cups of the powder in 1 qt. of warm water and pour into the brine well. For softeners with no brine well, pour into the salt storage tank when salt level is low. Manually regenerate the softener.

Preventative Maintenance: Add 1/2 cup to every 40 lbs. of salt added to brine tank, and layer it to ensure a continuous dose of Ban T during each regeneration.

General Purpose Cleaning: Ban T can be used on fiberglass, porcelain, glass, stainless steel or chrome to remove hard water deposits from tubs, sinks, showers, faucets, ceramic tile, dishes, glassware, plasticware, ice machines, ultra violet filters, humidifiers and distillers.

Item No.	Unit Size	Case Qty
45138	1.5 lb.	12/case
45153*	50 lb.	1 Drum

***45153 not available in Canada.**



Pot Perm® - Iron Filter Regenerant

Maintains performance of greensand iron filters.

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.

Applications

For each cubic foot of filter media, 2-4 ounces of dry Pot Perm iron filter regenerant is suggested. It may be added directly to the filter or mixed with water and added as a solution. Eight ounces of Pot Perm will dissolve in one gallon of water at room temperature (68°F).

Item No.	Unit Size	Case Qty
95020	10 lb.	Single bottle
50010	55 lb.	1 Drum
45143	5 lb.	6/case
45145	10 lb.	4/case



Poly Guard® Liquid - Prevent Hard Water Stains

Rust & Scale Preventer.

Pro Poly Guard Scale & Rust Preventer (Liquid) is specifically formulated to prevent hard water stains, including scale and iron staining in commercial, industrial and residential potable water applications. Poly Guard forms a protective coating on metal and plastic surfaces preventing hard water stains, scale, corrosion and copper leaching. To eliminate hard water stains, inject Poly Guard by chemical feed pump into the raw water system as close to the source as possible. This product is NSF Certified to meet NSF/ANSI Standard 60 for drinking water additives.

Applications

Corrosion Control: To get rid of hard water stains, Poly Guard is applied through a chemical feed pump downline from the well pump. Poly Guard is normally fed at a rate of 1 gallon per 200,000 gallons of water. The feed rate should increase to 1 gallon per 100,000 gallons in above normal iron and corrosion water supplies. Follow the procedure for injecting Poly Guard solution into the water system as specified by the chemical feed pump manufacturer or supplier.



Item No.	Unit Size	Case Qty
45156	1 Gallon	4/case
<i>Poly Guard not available in Canada.</i>		

Poly Guard® Powder - Rust & Scale Preventer

Maintains performance of greensand iron filters.

Pro Poly Guard Scale & Rust Preventer (Powder) is specifically formulated to prevent hard water scale and iron staining in commercial, industrial and residential potable water applications. The scale preventer powder of Poly Guard forms a protective coating on metal and plastic surfaces preventing scale, corrosion and copper leaching. Inject Poly Guard scale preventer powder by chemical feed pump into the raw water system as close to the source as possible. This Poly Guard product is a scale preventer powder that requires mixing before use. Pro Poly Guard is NSF Certified to meet NSF/ANSI Standard 60 for drinking water additives.

Applications

Mixing: Poly Guard scale preventer powder should be dissolved at a rate of 1.5 pounds per 5 gallons of water. The solution should be held in a solution tank and injected into the water system.

Corrosion Control: Poly Guard scale preventer powder is applied through a chemical feed pump downline from the well pump. Poly Guard is normally fed at a rate of 1 pound (1.5 cups) per 40,000 gallons of water. The feed rate should increase to 1 pound per 20,000 gallons in above normal iron and corrosion water supplies. Follow the procedure for injecting Poly Guard solution into the water system as specified by the chemical feed pump manufacturer or supplier.



Item No.	Unit Size	Case Qty
45141	50 lb.	1 Drum
<i>Poly Guard not available in Canada.</i>		

Neutra 7® - Acid Water Neutralizer (Replaces Neutra 5)

Prevents corrosion in water systems.

Pro Neutra 7 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 7 acid water neutralizer solution injected into a water system will neutralize acid water and prevent corrosion. Pro Neutra 7 is NSF Certified to meet NSF/ANSI Standard 60 for drinking water additives.

Applications

Acid Water Neutralization: The feed rate depends on the acidity of water. Proper dosage is reached when the pH of the treated water is between 7.0 and 8.0. Follow procedure for injecting soda ash into your water system by the chemical feed pump manufacturer or supplier.

Tannin Water Softener Cleaning: Mix 1 cup of Neutra 5 with 1 quart of water and pour into salt storage tank on a weekly basis.

Item No.	Unit Size	Case Qty
45157	7 lb.	4/case
45137	45 lb.	1 Drum
45155	45 lb.	1 Drum

Neutra 7 is available in Canada.



Neutra Sul® - Eliminate Rotten Egg Smell

Protects against irregular coloring and rotten egg smells in treated water.

Pro Neutra Sul is formulated to remove the rotten egg smell and pollutants from any water supply through oxidation. Neutra Sul is a blend of Hydrogen Peroxide 7% solution and will 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.

Applications

Oxidation: Normal procedure for oxidizing a water supply and removing the rotten egg smell is usually specified by the chemical feed pump manufacturer or supplier and depends on water conditions. There are many types, designs and methods of introducing Neutra Sul to the water supply. A normal method is to inject Neutra Sul directly into the water line with the use of a chemical feed pump. Dosage rates will vary. If unsure consult owner's manual.

Dosage: Proper dosage rates will vary depending on application. For oxidation of impurities, feed Neutra Sul until there are very few oxygen bubbles in treated water.



Item No.	Unit Size	Case Qty
50023	1 Gallon	4/case

Chlor Pel® - The Leading Product for Well Maintenance

Well Maintenance Product.

Pro Chlor Pel is an EPA approved, blended pellet well maintenance product designed to disinfect and destroy certain disease-causing organisms found in water. It is formulated for well maintenance to use in new wells, wells that have had service work, cisterns, storage tanks and water lines. Chlor Pel is compatible with most brands of dry pellet chlorinators and will prevent or treat iron algae, harmful bacteria, disease-causing pathogens, hydrogen sulfide and other odor-causing agents.

Applications

Dry Pellet Chlorinators: Shock treat the well to a chlorine residual level of 5 ppm by dropping pellets directly into the well. Adjust chlorinator pellet feed rate to retain a chlorine residual of .6 to 3 ppm. Test with kit provided with your chlorinator or purchased from dealer to determine chlorine residual.

Temporary Well and Water Main Sanitation: A 200 ppm chlorine residual is recommended to destroy disease causing organisms that may be present in water.



Item No.	Unit Size	Case Qty
50012	5 lb.	4/case
50018	35 lb.	1 Pail



Pro Chemicals - Water Treatment Chemicals

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.

Applications

First Application: Dissolve 1 cup of Softener Mate softener cleaner in 1 qt. of warm water. Pour directly into brine well. (Softeners with no brine well, pour directly into salt storage tank when salt level is low.) Manually regenerate softener. Repeat for heavily fouled unit. **Preventative Maintenance:** Add 1/4 cup (4 oz.) for every 40 lbs. of salt added to the salt storage tank. Layer to ensure a continuous dose of Softener Mate softener cleaner with each regeneration.

Item No.	Unit Size	Case Qty
45132	1.5 lb. Gallon	12/case
45133	5 lb.	6/case
Softener Mate not available in Canada.		



NOTE: Pro products in (US. only) will drop ship directly from vendor and are not eligible for freight.

FORMULA 2000 - Hard Well Water Formulation

Item No.	Unit Size	Case Qty
50027	1 Gallon	4/case

Treats iron in high calcium situations.

Formula 2000 is designed to treat iron and some calcium in well water with 15 grains or more of hardness and a pH of 6.5 or more. One gallon of Rid O' Rust® Formula 2000 will treat 125,000 gallons of well water with 1ppm of iron. It is made for use with hard water and for irrigation applications only.

It is one thing to remove existing rust stains; it is another to keep them from coming back. Preventing stains requires installing a system that feeds a special chemical into the irrigation line. We call these chemicals our Rid O' Rust rust stain prevention Formulas. Sold as concentrates, the Formulas are mixed with water in a feeder tank and then fed into the irrigation line.

How do Rid O' Rust Formula Products work?

Rid O' Rust Formula products "chelate" or "sequester" the ferrous iron (as well as other minerals in well water), preventing the ferrous iron from combining with oxygen to form ferric oxide— RUST.

Rid O' Rust Formula products do not actually remove the iron, they neutralize the iron so that it won't react with air. The Formulas are introduced into a well water line via a feeder system—either a siphoning system or an injection system. The amount of Formula to be mixed in the feed tank with water is determined by analysis of the well water and a determination of the irrigation system's maximum flow rate.



NOTE: Rid O' Rust will not be effective under certain circumstances.

Warranty Information: The warranty will be applied in case of inappropriate amount of ingredients and that under stated conditions, they should perform as represented. Many factors can affect the performance of the product. Therefore there is no blanket guarantee of this product.



American Hydro Systems is a division of Pro Products, LLC
Ft. Wayne, IN (800) 285-9176

EXTERIOR RUST STAIN REMOVER - Liquid Formula

Item No.	Unit Size	Case Qty
50024	1 Gallon	4/case

Makes stained surfaces look like new!

Premixed and easy to use! Spray on and watch the stains disappear! One gallon will cover approximately 400 square feet. More concentrated stains may require additional applications.

This chemical enables you to remove rust stains by simply spraying them on the stained surface with a trigger sprayer—no scrubbing or high pressure spraying is required. You may want to use a pump-up type sprayer for easy application.

- They are safe for application on most man-made surfaces, except for those materials containing iron oxide such as manufactured colored pavers, certain stones, colored stuccos and the like.
- They are biodegradable and non-carcinogenic.
- With normal application, they will not harm grass or shrubs with over-spray.

Cautions:

Our Rust Stain Remover removes rust stains caused by irrigation from most inorganic surfaces including metal siding, concrete, stucco, grout and the like.

Rust Stain Remover may leave a white residue on dark surfaces such as asphalt and red brick unless it is rinsed off promptly after application.

Do not apply to materials that contain iron oxide either in the surface pigment or as a constituent element of the material as Rust Stain Remover may take the color out of the material.

Important: Always test a small area first, apply and then wait for the surface to dry thoroughly before continuing.

Remember, these products will remove stains, but will not prevent them from coming back!



This programmed feeder meters the appropriate volume of Pro Res Care Cleaner each time the resin bed is regenerated. The Res-Up Feeder can be programmed for the size of resin bed and the quantity of iron or other impurities in the untreated water.

Res-Up Feeders are easy to install and operate.

- Item No. 45147

Pro Res Care - Gallon
- Item No. 45148

Pro Res Care - Quart
- Item No. 33010

Res-Up Feeder with Yellow Wick
- Item No. 33018

Res-Up Feeder with Clear Wick



Application Guide

Approx. Resin Bed Size	Delivery Feed	Regeneration Cycle (12 Day Clock)				
		1 Cycle	2 Cycles	3 Cycles	4 Cycles	6 Cycles
1/2 cu ft	Light	Yellow	Yellow	Yellow	Yellow	Yellow
	Medium	Yellow	Yellow	Yellow	Yellow	Yellow
	Heavy	Yellow	Yellow	Yellow	Yellow	Yellow
3/4 cu ft	Light	Yellow	Yellow	Yellow	Yellow	Yellow
	Medium	Clear	Yellow	Yellow	Yellow	Yellow
	Heavy	Clear	Clear	Yellow	Yellow	Yellow
1.0 cu ft	Light	Clear	Yellow	Yellow	Yellow	Yellow
	Medium	Clear	Yellow	Yellow	Yellow	Yellow
	Heavy	Clear	Clear	Yellow	Yellow	Yellow

Note: Pro-ResCare is not to be used with Gel Zeolite. In the event the resin bed is initially contaminated you may add quantities of Pro-ResCare cleaner directly into the brine well to start the cleaning action immediately.

Water Conditioning Products



Canada Item #	US Item #	Description	Type	Ionic Form	Canada Weight	US Weight
Cation Resin						
21502	21502	WaterGroup Aquafine, AQ100-NA, 1 CF bag	Softening	NA	50	50
21501	21501-4*	Purolite - C100E, 1CF		NA	50	54
21503	NA	Dowex - 1 Cu ft cation resin			53	
21499	21499-4*	Purolite - C100EFM Fine Mesh Resin, 1 CF bag		NA	52	56
21512	21483	Purolite - SST60 Cation Resin, 1 CF bag		NA	45	45
21488	NA	Purolite - C100EF			53	
21510	NA	Purolite - C150E (high chlorine applications)			50	
21495	NA	Purolite - C100X 10-NA			54	
21496	NA	Purolite - C100X 10-H			54	
Anion Resin						
21491	21491	Purolite - A860, Tannin Select, 1 CF bag	Tannins	CL	43	43
21494	21494	Purolite - A850, Tannin Select, 1 CF bag		CL	43	43
21497	21497	Purolite - A520E, Nitrate Select, 1 CF bag	Nitrates	CL	43	43
21481	NA	Purolite - A400			43	
Specialty Resin						
21492	NA	Purolite -NRW37	Nuclear		46	
21480	NA	Tanex Resin	Tannins		47	
21498	NA	Arsenix	Arsenic		58	
Activated Carbon						
#N/A	22022-4*	Calgon - F-200, 1 CF bag - low fines	Bituminous	12 x 40		31
#N/A	33028	Calgon - F-400, 2.2 CF bag - low fines		12 x 40		62
30404	30404-4*	Calgon - GW, 2 CF bag - low fines		12 x 40	58	58
30404-2	NA	Calgon carbon 12 x 40 (1 cu ft = 29 lbs)		12 x 40	29	
NA	22023	Calgon - CPGLF, 2 CF bag - acid washed, low fines		12 x 40		58
30401	30401	Calgon - TOG - 1 CF bag		20 x 50	28	28
NA	30405	Calgon - Coconut - 2 CF bag	Coconut	12 x 40		56
NA	22019	Carbon Activated - Coconut - 2 CF bag		20 x 50		55
NA	22026	Calgon - Filtrasorb 600 2 CF	Bituminous	12 x 40		60
25001	NA	Hydrosorb carbon 1.67 cu ft bag			40	
25003	NA	Hydrosorb carbon 1.0 cu ft bag			24	
30401C	30401C-4*	Jacobi Aquasorb CS LF, 20 X 50, 1 cu ft	Coconut	20 x 50	27.5	30
22022C	22022C-4*	Jacobi Aquasorb CS LF, 12 X 40, 1 cu ft		12 x 40	27.5	30
22023C	22023C-4*	Jacobi Aquasorb HS LF, 12 X 40, 1 cu ft		12 x 40	27.5	30
Catalytic Carbon						
22018	22018-4*	Calgon - Centaur - 1 CF	Catalytic	12 x 40	33	36
22018C	22018C-4*	Jacobi coconut carbon GW 1 CF	Coconut	12 x 40		

w

Canada Item #	US Item #	Description	Type	Canada Weight	US Weight
Pre-washed Gravel					
NA	22027	1/8" x 1/16" Fine Gravel, 25 lb.	Bed support		25
NA	22028	1/4" x 1/8" Medium Gravel, 25 lb.			25
NA	22029	1/2" x 1/4" Coarse Gravel, 25 lb.			25
22001	22001-50-4*	1/8" x 1/16" Fine Gravel		100	53
22002	22002-50-4*	1/4" x 1/8" Medium Gravel		100	53
22003	22003-50-4*	1/2" x 1/4" Coarse Gravel		100	53
Sand					
22004	22004-50-4*	.45 - .55 mm Filter Sand	Sediment, turbidity	100	53
Garnet					
22502	22502-50-4*	30 x 40 Fine Garnet	Sediment, turbidity	125	53
22503	22503-50-4*	8 x 12 Coarse Garnet	Sediment, turbidity	140	50
Filter Ag					
33013	33013-4*	Filter Ag 1 CF bag	Sediment, turbidity		25
Green Sand					
52000	52000	Manganese Green Sand Plus / 1/2 CF bag.	Iron, HS reduction		43
52001	NA	Cu ft manganese greensand (Special Order Only)			
Birm					
33016	33016-4*	Birm, I CF	Iron, HS reduction	42	42
Pyrolox					
22014	22014-4*	Pyrolox, .417 CF	HS, iron, manganese	60	60
KDF					
NA	33007	KDF 55, drum	Chlorine reduction		57
NA	33008	KDF 85, drum	Iron, Chlorine reduction		57
25004	NA	KDF55, 1/3 CF, price per bag	Chlorine reduction	57	
25005	NA	KDF85, 1/3 CF, price per pail	Iron, Chlorine reduction	57	
Neutralizer					
32377	32377-4*	Magnesium Oxide, 1 CF, plastic pail	Neutralizer	65	65
NA	95443	Magnesium Oxide, 3 LB adder jar			3
32376	32376-4*	Calcite, 1 CF, plastic pail		90	90
Anthracite					
31501	31501-4*	Anthrafilt 1 CF Bag, 50 lb.	Anthracite	50	53
Nextsand					
22510	22510	NextSand - media	Zeolite	53	53

* "-4" indicates that media is shipped in a pail. Most available is alternative packaging by omitting "-4" Call for pricing
Actual weight and container may vary. Subject to change

Pre-Measured Replacement Media Beds



Pre-Measured Replacement Media Beds (Replacement media beds are packaged in pales and cloth bags within the pales - For loading instructions please refer to our web site or product owners manuals.)

CDN Item #	US Item #	Description	Quantity	Weight
Multi-Media Filter (Turbidity) Replacement Beds				
95418	95418-4	Multi-Media Filter Bed	0.75 CF	74 LB/CF
95419	95415-4		1.00 CF	94 LB/CF
95420	95416-4		1.50 CF	138 LB/CF
95433	95417-4		2.00 CF	186 LB/CF
next-Sand (Turbidity) Replacement Beds				
22510	22510	Nextsand (Turbidity) Media	1.00 CF	53 LB/CF
Sand Filter (Turbidity) Replacement Beds				
—	95421-4	Sand Filter Bed	0.75 CF	87 LB/CF
—	95422-4		1.00 CF	120 LB/CF
—	95423-4		1.50 CF	180 LB/CF
—	95424-4		2.00 CF	230 LB/CF
Activated Carbon Filter (Taste & Odor) Replacement Beds				
95401	95401-4	Activated Carbon Filter Bed	0.75 CF	31 LB/CF
95402	95402-4		1.00 CF	44 LB/CF
95403	95403-4		1.50 CF	65 LB/CF
95404	95404-4		2.00 CF	76 LB/CF
Manganese Greensand Filter (Iron, Manganese & Sulfur) Replacement Beds				
95411	95411-4	Mang. Greensand Filter Bed	0.75 CF	78 LB/CF
95412	95412-4		1.00 CF	107 LB/CF
95413	95413-4		1.50 CF	160 LB/CF
95414	95414-4		2.00 CF	202 LB/CF
Chem Free Iron Filter Replacement Beds				
95431	95431-4	Chemical Free Filter Bed	0.75 CF	76 LB/CF
95550	95425-4		1.00 CF	100 LB/CF
95551	95427-4		1.50 CF	144 LB/CF
95427	95429-4		2.00 CF	292 LB/CF
Chem Free Iron Filter (Low pH Applications) Replacement Beds				
95432	95432-4	Chemical Free Filter Bed - low pH applications	0.75 CF	78 LB/CF
95553	95426-4		1.00 CF	100 LB/CF
95554	95428-4		1.50 CF	144 LB/CF
95428	95430-4		2.00 CF	292 LB/CF
Neutralizing Filter Replacement Beds				
93500	93500-4	Neutralizing Filter Bed	0.75 CF	77 LB/CF
93504	93504-4		1.00 CF	90 LB/CF
93505	93505-4		1.50 CF	130 LB/CF
93506	93506-4		2.00 CF	178 LB/CF



Filter Media - General Properties & Conditions for Operation

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.

Birm®

Under the proper conditions, no chemicals to purchase for maintenance. Regeneration not required. Iron removal efficiency is extremely high. Only periodic backwashing required. Durable material with a long life and wide temperature range. Weighs only 46-50 lbs/cubic foot. Manganese removal pH is 8-9.

Calcium Carbonate

**(sometimes referred to 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.

Garnet

A naturally hard, durable, high specific gravity mineral. Resistant 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.

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.

Magnesium Oxide

(sometimes referred to as Corosex®)

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

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.

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.

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

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

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

WaterGroup 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.
Manufactured in China.

Regulatory Compliance

AQUAFINE AQ100-Na is tested and certified by WQA to NSF / ANSI Standard 44 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 44.

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 ⁺ ® H ⁺	5% maximum
Ca ⁺⁺ ® 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 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.

<u>Lbs. of Salt (NaCl)</u> <u>Per Cu. Ft. of Resin</u>	<u>30 to 70 Mesh</u> <u>Kilograin Capacity</u>	<u>Standard Purolite C-100</u> <u>Kilograin Capacity</u>
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

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.

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 to 5 gpm per cubic foot. Pressure drop in psi per foot of resin depth is $0.18 \times$ 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 to 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 the 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 where it exceeds 1 to 2 ppm. If iron is in excess of this, then use salt with a built-in resin cleaner.
- For further information on the use of tannin resins, call our Customer Service Department.

Red Flint Sand & Gravel - Industrial & 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	% Red	% 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



General

Manganese greensand, used for removing soluble iron and/or manganese as well as hydrogen sulfide from well water supplies, is a purple-black filter media processed from Glauconitic greensand. Manganese greensand can be used in a completely closed pressure system with no aeration or repumping or in an open gravity filter system.

The two methods of operation are continuous regeneration (CR), which is recommended for predominantly iron waters and intermittent regeneration (IR), which is recommended for predominantly manganese waters.

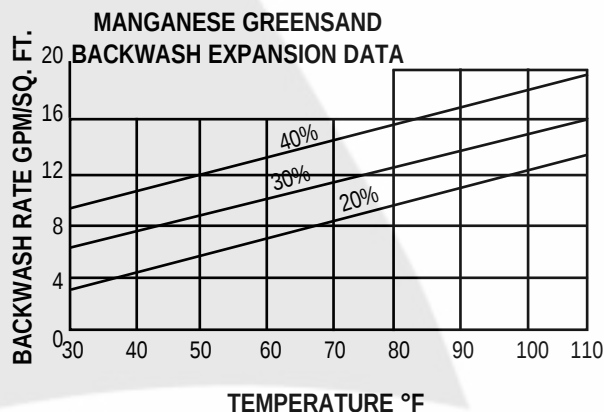
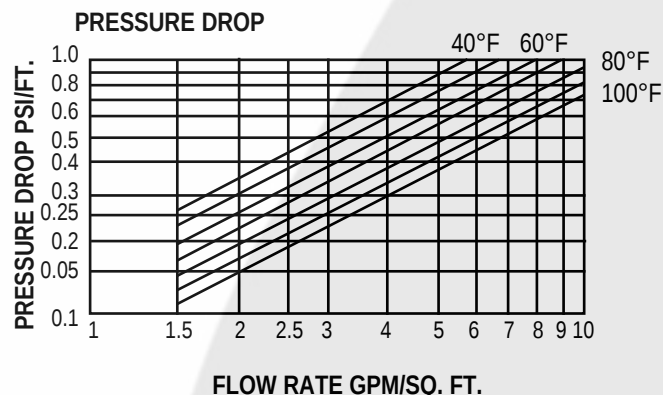
Hydraulic Characteristics

Pressure Drop

The approximate pressure drop for each foot of manganese greensand bed depth on a clean bed is shown in the graph. Pressure drop increases as run progresses. Do not exceed 12 psi.

Bed Expansion During Backwashing

After each service cycle, the manganese greensand should be backwashed for 8-10 minutes to remove the suspended material collected during the run. The manganese greensand should be expanded a minimum of 35% during backwash. The bed expansion characteristics are shown in the graph.



Physical Characteristics

Physical Form Black, nodular granules, shipped in a dry form
 Shipping Weight 86 pounds per cubic foot net
 Screen grading (dry) 18 to 60 mesh
 Effective size 0.30 to 0.35 mm
 Uniformity coefficient 1.40 to 1.55

Suggested Operating Conditions

pH range 6.1 to 8.5 (see detailed information)
 Maximum temperature Above 100°F (contact supplier)
 Maximum pressure drop 12 psi
 Backwash rate See detailed information
 Service flow rate See detailed information
 Minimum bed depth .. 24 inches (18 inches on dual beds)

Methods of Operation

Continuous Regeneration (CR)

Continuous regeneration (CR) operation is recommended on well waters where iron removal is the main objective with or without the presence of manganese. Briefly, it involves the feeding of a predetermined amount of potassium permanganate (KMnO_4) usually in combination with chlorine (Cl_2) directly to the raw water prior to the unit containing manganese greensand. The chlorine should be fed upstream of the KMnO_4 with a contact time of 10-20 seconds, if possible. Sufficient chlorine should be fed to produce desired residual in the filter effluent.

The quantity of Cl_2 and KMnO_4 required can be estimated as follows:

$\text{ppm Cl}_2 = \text{ppm Fe}$

$\text{ppm KMnO}_4 = 0.2 \times \text{ppm Fe} + 2 \times \text{ppm Mn}$

Without the Cl_2 , the KMnO_4 demand can be estimated as follows:

$\text{ppm KMnO}_4 = 1 \times \text{ppm Fe} + 2 \times \text{ppm Mn}$

Suggested Operating Conditions

Backwash - Sufficient rate to produce approximately 40% bed expansion

Capacity - 500 to 700 grains/sq. ft. bed area based on potassium permanganate demand. In addition to the manganese greensand, a 15 inch minimum specially sized anthracite bed is required. In any case, the pressure drop should not exceed 10 to 12 psi.

Flow Rate - Normal flow rates with CR operation are 2 to 5 gpm/sq. ft. Higher concentrations of iron and manganese usually require lower flow rates for equivalent run lengths. Rates in excess of 5 gpm/sq. ft. can usually be tolerated, but a pilot unit should be operated to determine the effluent quality and run length.

The run length between backwashes can be estimated as follows:

Example: What is a run length on water containing 1.7 ppm iron and 0.3 ppm manganese at a 4 gpm/sq. ft. operating rate?

$\text{KMnO}_4 \text{ demand} = (\text{Fe}) 1.7 \times 1 + (\text{Mn}) 0.3 \times 2 \text{ or } 2.3 \text{ ppm}$
 $2.3/17.1 = 0.13 \text{ grains/gal. (gpg)}$

$700 \text{ grains/sq. ft.} \div 0.13 \text{ gpg} = 5200 \text{ gal./sq. ft.}$

$5200 \text{ gal./sq. ft.} \div 4 \text{ gpm/sq. ft.} = 1300 \text{ min.}$

Therefore, the backwash frequency is approximately every 20 to 24 hours of operation.

Intermittent Regeneration (IR)

The IR method of operation is recommended on well waters where only manganese or manganese with small amounts of iron is to be removed. Briefly, it involves the regeneration of manganese greensand with a predetermined amount of KMnO_4 after a specified quantity of water has been processed. With this method, the pressure drop is lower because the manganese is removed by contact oxidation on the manganese greensand. This eventually results in a larger manganese greensand grain size and bed growth, which, if not tolerable, should be removed physically by backwashing at a higher rate or by sluicing from the bottom of the bed via suitable tank connection.

Suggested Operating Conditions

Backwash Rate - Sufficient to produce approximately 40% bed expansion

Regeneration

KMnO_4 dosage - 1.5 to 2.0 oz./ KMnO_4 cu. ft.

KMnO_4 solution strength - 2 to 4 oz./gallon

KMnO_4 regeneration rate - 0.25 gpm/cu. ft.

KMnO_4 regeneration time - 30 minutes optimum

KMnO_4 regeneration volume - 7.5 gal/cu. ft.

Rinse rate - 1 gpm/cu. ft.

Rinse volume - 40 gal./cu. ft. or until all traces of KMnO_4 are gone

Recycling rinse water will conserve KMnO_4 and rinse waste water.

Capacity - 300 grains Mn/cu. ft. Prechlorination is recommended, especially if iron is present.

Pressure Drop - Maximum pressure drop 12 psi. If this pressure differential is reached before the capacity for Mn is obtained, manganese greensand can be backwashed without regenerating.

Flow Rate - 2 to 5 gpm/sq. ft., or 1 to 2 gpm/cu. ft. For higher flow rates, contact our Customer Service Department.

General Notes

Raw waters having a pH of 6.2 or higher can be passed through manganese greensand without pH correction; waters having a pH lower than 6.2 should be pH corrected to 6.2 to 6.5 before passing through the manganese greensand. If a pH higher than 6.5 is desired in the water system, the additional alkali should be added after the filters, due to the adverse reaction (formation of a colloid) that sometimes occurs with the iron and alkali with pH over 6.5

KMnO₄ Solution Strength - With CR operation, the KMnO₄ can be any concentration up to 4 oz./gal. See chart for solubility of KMnO₄.

Solubility of KMnO ₄ in Water			
Temp °F	Temp °C	g/100 ml	lb/gal
32	0	2.78	0.23
68	20	6.51	0.54
104	40	12.53	1.05

Warranty

The information and recommendations in this publication are true and reliable to the best of our knowledge. They are offered in good faith, but without warranty or liability for consequential damage because the conditions and method of use of our products are varied and beyond our control. We suggest that the suitability and performance of our products be determined by the user before they are adopted on a commercial scale.

The use of manganese greensand in the CR (continuous regeneration) process is covered by Patent No. 3,167,506 but license to use the CR process is granted by a royalty charge of 25 cents per cubic foot at the time of purchase.

Special Notes

Removing Fines - although the manganese greensand is thoroughly washed before shipment, it is recommended that, before it is put into service, the material be thoroughly backwashed and the top layer of finer material be removed by undercutting. This is especially important if anthracite is placed on top of the manganese greensand. Each bag contains sufficient material to compensate for removing about 1" of finer material.

Regeneration - Although the manganese greensand is thoroughly regenerated before shipment, it is necessary prior to use to regenerate with potassium permanganate solution contacting the bed for approximately 1 hour. Usually 2 oz. of potassium permanganate per cubic foot is adequate. The filter must be rinsed of all traces of permanganate after regeneration.

Sometimes during the IR regeneration, more or less than the equivalent amount of potassium permanganate is required. Since this is an oxidation-reduction reaction, if there are other reducing substances in the water, more permanganate than the equivalent amount may be required. Conversely, where there are oxidizing substances in the water such as oxygen and/or chlorine, under certain situations less potassium permanganate may be required. This can best be determined by close surveillance of operating data. Theoretically 300 grains of manganese is equivalent to 1.3 oz. of potassium permanganate.

Permanganate Detector - A properly operated manganese greensand filter should never have potassium permanganate or "pink water" in the treated water supply. If, however, it is felt that insurance against pink water should be provided, there are detectors available to signal an alarm or shut down a plant should pink water be detected in the treated water supply. Further details are available from our Customer Service Department.

Manganese Greensand is tested and certified by NSF International under ANSI/NSF Standard 61 for materials only.

Manganese Greensand is manufactured by: Inversand Company - Sewell, NJ

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	CaCO ₃ - 95% minimum
MgCO ₃	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.



HYDRODARCO® 4000 - Granular Activated Carbon

HYDRODARCO® 4000 is a carbon designed for water treatment applications. It is produced by high temperature steam activation of lignite coal. HYDRODARCO® 4000 has a wide pore size distribution and large pore volume. These characteristics provide HYDRODARCO® 4000 with rapid adsorption rate and high capacity for dissolved organics.

Potable Water

HYDRODARCO® 4000 adsorbs taste, odor, color and toxic organic compounds from drinking water. It has the highest capacity of any commercial water carbon for tannic and humic compounds which are precursors for trihalomethane (THM) formation. HYDRODARCO® 4000 effectively removes pesticides, herbicides, synthetic organic chemicals and many other suspected carcinogenic compounds which may find their way into water supplies. HYDRODARCO® 4000 meets all AWWA B-604 standards for activated carbon for rapid gravity filters and pressure contactors used in potable water purification systems.

Product Specifications

Moisture, % as packed	8 max.
Dust, %	0.30 max.
Mesh size (U.S. Sieve Series)	
Greater than 10 mesh (2.00mm), %	5 max.
Less than 30 mesh (0.60mm), %	5 max.

Typical Properties*

Tannin value, ppm	220
Molasses number	450
Molasses decolorizing efficiency, %	105
pH, water extract	4.9
Apparent density, vibrating feed, g/ml	0.40
lbs./ft ³	25
Bed density, backwashed and drained, lbs./ft ³ ...	21.5
Mean particle diameter, mm	1.0
Abrasion number (NBS)	80

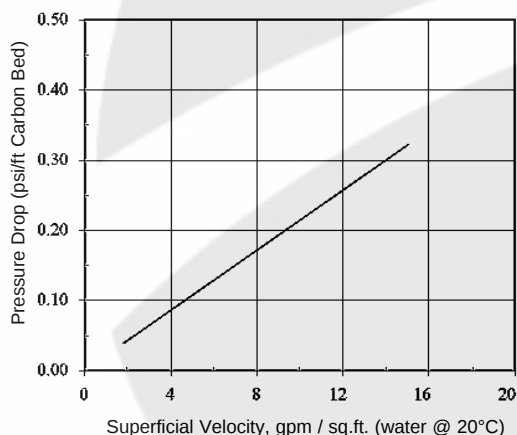
General Characteristics*

Surface area, m ² /g	625
Total pore volume, ml/g	0.93

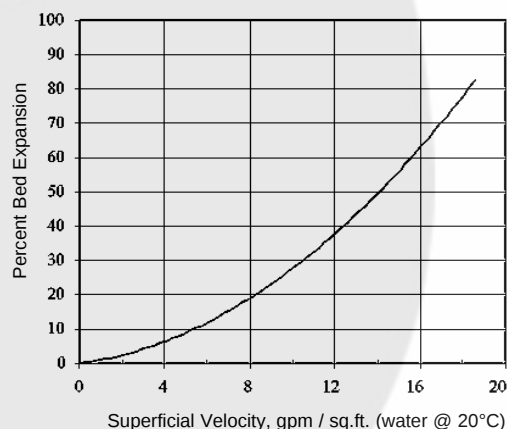
Safety

Wet activated carbon depletes oxygen from air and, therefore, dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed. Appropriate protective equipment should be worn. Avoid inhalation of excessive carbon dust. No problems are known to be associated in handling this material. However, dust may contain greater than 1.0% silica (quartz). Long term inhalation of high dust concentrations can lead to respiratory impairment. Use forced ventilation or a dust mask when necessary for protection against airborne dust exposure (see Code of Federal Regulations - Title 29, Subpart Z, par. 1910.1000, Table Z-3).

Pressure Drop Curve for
HYDRODARCO® 4000



Bed Expansion Curve
for HYDRODARCO® 4000



* Expansion is expressed as percent of
the backwashed and settled bed depth.

Hydrodarco 4000 is tested and
certified by NSF International
under ANSI/NSF Standard 61
for materials only.

HYDRODARCO® 4000 is manufactured by: NORIT AMERICAS INC. - Marshall, TX
HYDRODARCO is a registered trademark of NORIT AMERICAS INC.

next-Sand is based on a rare natural mineral that is highly processed and graded. It's unique properties allow it to radically alter the performance and cost of media filtration. The hardness, stability and microporous character of next-Sand makes it a perfect filtration media for virtually every application in the water and wastewater treatment industry.

Features

- High filtration performance – 3-5 micron removal.
- High capacity filtration throughout the entire nextsand bed depth provides more than twice the capacity of multimedia filtration.
- High flow – 3-4 times that of multimedia with superior filtration.
- Long lasting media (>5 years) not consumed in the process.
- Simple periodic backwash keeps the media clean and operating efficiently.

Physical Properties

Composition	High Purity Alumino-Silicate
Size	0.4-1.4 mm (approx. 14x40 mesh)
Color	Dark Gray
Surface Area	25m ² /gram
Surface Absorption	Hydrophillic
Thermal Stability	Stable to 500° C
Coefficient of Uniformity	1.7
Bed Void Volume	55%
Surface Charge	Net Negative
Bulk Density	55 lbs per ft ³ (0.88 kg/L)
Packaging	1 ft ³ bags, 2200lb (40ft ³) supersacks.

Performance Characteristics

Filtration (nominal)	3-5 micron
Surface Loading	16-20 gpm/ft ² (Typical) 12 gpm/ft ² (Optimized for silt, SDI and ultrafine particulates)

Conditions of Operation

1. Service flow - 12-20 gpm/ft²
2. Backwash flow - 13-22 gpm/ft²
3. Backwash duration - 5-15 min
4. Backwash expansion - 40-50%
5. Backwash frequency - Delta-P determined
6. Bed depth - 30"-48" depending on application

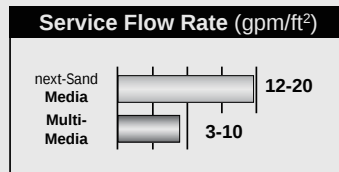
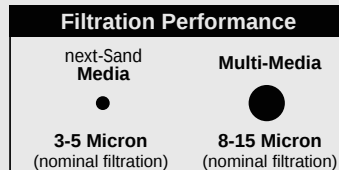
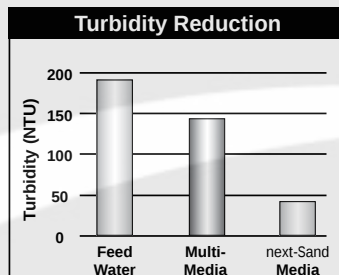
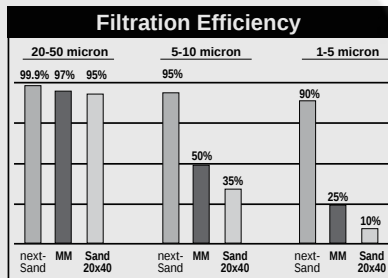
Applications

- RO Pretreatment – superior SDI reduction
- Cooling Towers – unequalled Turbidity removal
- Municipal Water Treatment, pressure and gravity filters – higher flow, lower pressure drop and superior filtration performance
- Wastewater Polishing – exceptional TSS removal
- Precipitated metals removal
- Carwash reclaim and recycling
- Irrigation

Typical Backwash Flow Requirement, vs Water Temp*

Flow	80°F (27°C)	70°F (21°C)	60°F (16°C)	50°F (10°C)	40°F (4.5°C)
U.S. gpm/ft ²	22.3	19.8	17.2	14.8	12.5
m/h	54.5	48.4	42	36.2	30.6

*40% bed expansion.



Testing Equipment & Reagents

Water Conditioning Products



CDN Part #	US Part #	Description
49145602	49-1456-02	HA95A: Total Hardness and Iron Test Kit
49183701	49-1837-01	HA62A: Total Hardness, Iron and pH Test Kit
49145300	145399	5-B: Total Hardness, 1 to 30 gpg
49018	49-25378-00	HS-C: Hydrogen Sulfide Test Kit, 0 to 5 mg/L
49146700	49146700	MN-5: Manganese Test Kit, 0 to 3 mg/L
49146803	49-1468-03	NI-11: Nitrate Test Kit, 0 to 50 mg/L
49193701	49-1937-01	TA-3: Tannin/Lignin Test Kit, 0 to 15 and 0 to 150 mg/L
49225401	49225401	CN-65: Chlorine, Total, 0.2 to 4 & 1 to 20 mg/L
49013	49013	CN-70: Chlorine, Free and Total, 0 to 0.7 & 0 to 3.5
492060300	49-20603-00	Chlorine, Free, Low Range Cube, 0 to 2.5 mg/L
492060400	492060400	Chlorine, Total, Low Range Cube, 0 to 2.5 mg/L
49147006	147006	17F: pH Test Kit, Mid Range, 5.5 to 8.5
49148405	49-1484-10	AD-16E: Water Conditioning Deluxe Demo Kit (Softener Demo, Hardness, Soap Consumption, Iron, Nitrate, TDS and pH)
49016	49016	Key Dealer Test Kit - Hardness, Iron, Manganese, pH, TDS and Hydrogen Sulfide

Meters

66751	35005013	Myron L Model 532T1 - Analog TDS Meter, Range 0 to 5000 ppm
494440000	49-44400-00	Pocket Pal Digital TDS Meter, Range 10 to 1990 ppm
494435000	49-44350-00	Pocket Pal Digital pH Meter, Range 0 to 14

Popular Test Kit Refill Chemicals

Key Dealer Combo Kit (49016) and HA62A Hardness & Iron Test Kit

301227	301227	#1 Buffer Hardness Solution
301228	301228	#2 Buffer Hardness Solution
301226	301226	#3 Buffer Hardness Solution
301233	301233	Ferover pillows 100/pkg
49022	49022	Alka-Selzer w/o aspirin 36/pkg
49023	49023	Test papers (sulphur test)
49008	49008	pH wide range 4 ind. soln

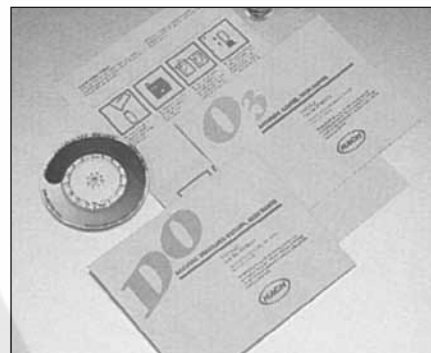
HA 95 Hardness Test Kit Refill

301518	49-962-99	Univer 3 Powder Pillow
--------	-----------	------------------------

Manganese Test Kit Refill

492107669	49-21076-69	Buffer, Citrate, 100 pack
492107769	49-21077-69	Sodium Periodate

Replacement Reagent for all listed kits are available.



Step-By-Step Instructions

You don't have to be a trained chemist to get professional results with Hach's proven methods. Kits are supplied with detailed instructions to guide you step by step through each procedure and provide analytical results.



Ideal for all pH testing, water purification applications, wastewater regulation, aquaculture, hydroponics, colloidal silver, labs & scientific testing, pools & spas, ecology testing, boilers & cooling towers, water treatment, wine, coffee, agriculture and more.

Features:

- Measures pH and Temperature
- Auto-ranging three point calibration with digital fine tuning
- Includes 4 pH buffer solution in a sponge embedded in a clear cap
- Waterproof housing (IP-67 rating)
- Simultaneous temperature display
- Measurement Range: 0-14 pH
- Digital automatic calibration (one point), with digital fine tuning
- Auto-off function, data-hold function and low-battery indicator
- Display: large and easy-to-read LCD screen includes simultaneous temperature reading
- Factory Calibrated: The PH-200 meter is three-point factory calibrated to 4, 7, and 10 pH. The meter can be recalibrated with digital calibration using the push buttons, rather than a screwdriver.
- Includes a cap, batteries, lanyard, and pH 7.0 buffer
- Warranty: 1 Year

Specifications

Item Number: 66761
 pH Range: 0 - 14
 Temperature Range: 0-80 °C; 32-176 °F
 Resolution: 0.01 pH; Temperature resolution is 0.1 °C/F
 Accuracy: +/- 0.02 pH
 Calibration: Digital automatic calibration (one point) with digital fine tuning
 Electrode: Replaceable glass sensor and reference tube electrodes
 Housing: IP-67 Waterproof (submersible; floats)
 Power source: 3 x 1.5V button cell batteries (included)
 Dimensions: 18.5 x 3.4 x 3.4 cm (7.3 x 1.3 x 1.3 inches)
 Weight: 96.4 g (3.4 oz)



Manufactured by:
 HM Digital, Inc., Culver City, CA

The TDS-3 Handheld Meter is very affordable and comes with a carrying case. It easily fits in your pocket. This meter is ideal for all water purification applications for both consumer and commercial use.

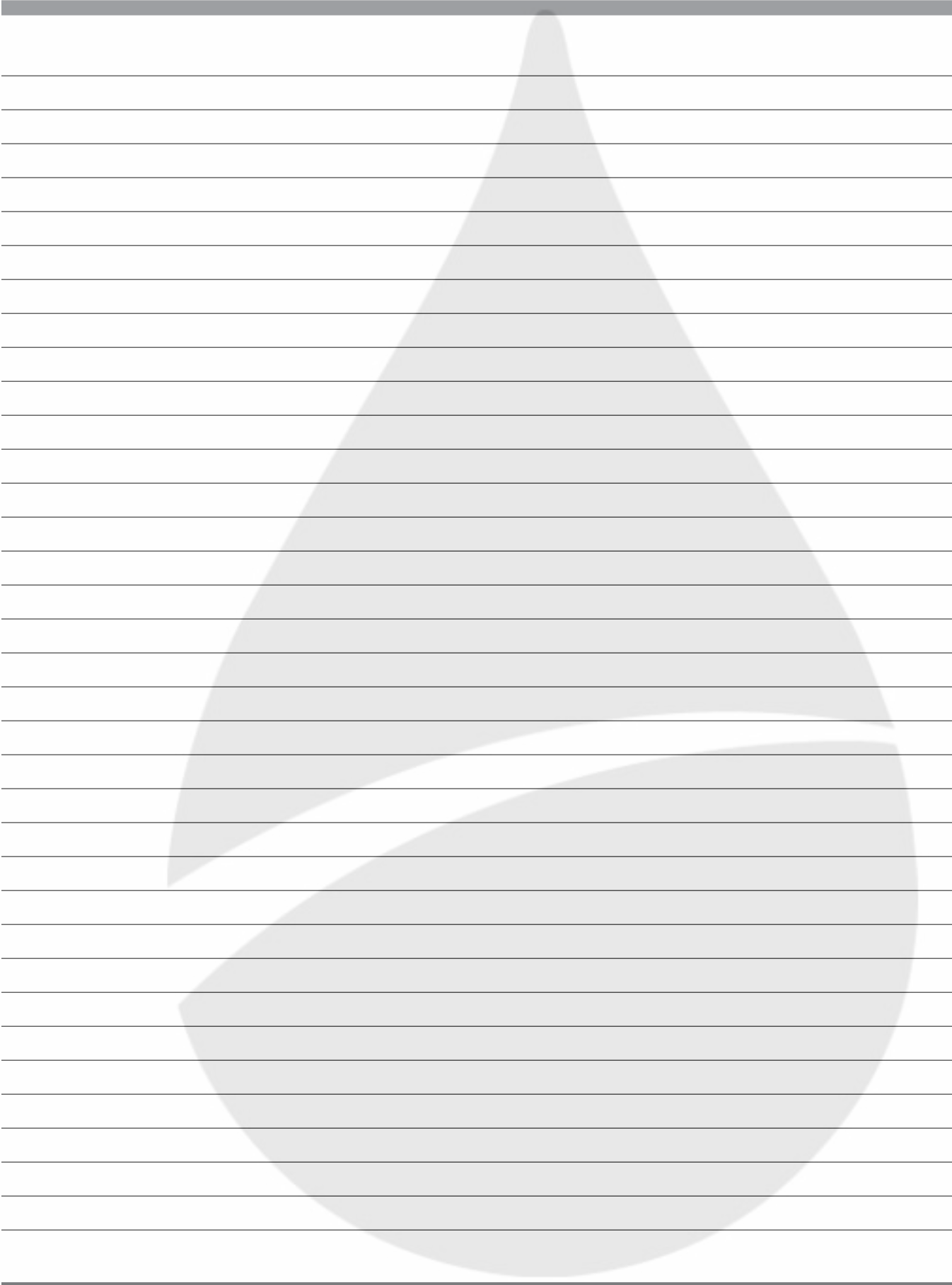
Features:

- Ideal for commercial use. Includes a carrying case with belt clip.
- Highly efficient and accurate due to its advanced microprocessor technology.
- Hold Function: saves measurements for convenient reading and recording.
- Auto-off function: the meter shuts off automatically after 10 minutes of non-use to conserve batteries.
- Measurement Range: 0-9990 ppm. From 0-999 ppm, the resolution is in increments of 1ppm. From 1000 to 9990 ppm, the resolution is in increments of 10ppm, indicated by a blinking 'x10' image.
- Built-in digital thermometer
- Display: large and easy-to-read LCD screen.
- Factory Calibrated: the meters are calibrated with a 342 ppm NaCl solution. Meters can be recalibrated with a mini-screwdriver.
- Very Affordable
- Warranty: 3 Years

Specifications

Item Number: 66760
 TDS Range: 0 - 9990 ppm (mg/L)
 Temp. Range: 0 - 80 degrees Celsius
 Resolution: 1 ppm, 1 degree Celsius
 Accuracy: +/- 2%
 Conversion Factor: NaCl (avg. 0.5)
 ATC: Built-in sensor for Automatic Temperature Compensation of 1 to 50 degrees Celsius (33 to 122 degrees Fahrenheit)
 Power source: 2 x 1.5V button cell batteries (included)
 Battery life: 1000 hours of usage
 Dimensions: 15.5 x 3.1 x 2.3cm (6.1 x 1.25 x 1 inches)
 Weight with case: 76.5g (2.7 oz)
 Weight without case: 56.7g (2 oz)





Water Conditioning Products



If you haven't jumped into supplying and installing commercial equipment yet, you're missing out on one of the major growth sectors of the water treatment industry. More and more commercial businesses are realizing the benefits of treating the existing water supply. Typically, commercial applications are medium to large volume water users compared to your average household. Treating the water supply in commercial applications is (or should be) a high priority to these customers since it is typically feeding expensive equipment. An untreated water supply can cost these customers frequent and high maintenance bills, lost profits due to down time and frustration.

The application for commercial equipment is all around you. Here are some opportunities, to name a few:

- Laundromats
- Car/Truck Washes
- Restaurants
- Schools
- Hospitals
- Health Clinics
- Dentist Offices
- Office Buildings
- Livestock Operations
- Manufacturing Plants
- Heating Plants
- Machine/Welding Shops

If you have been thinking about getting into commercial products, here are some reasons that should make the decision a little easier:

- The application of commercial softeners, filters, dealkalizers, ultraviolet sterilizers and reverse osmosis units is not that much different from household equipment.
- Our product line is full of equipment to suit most applications and the available options provide the flexibility many commercial customers require. From basic mechanical timers and easy-to-program electronic controllers to advanced remote monitoring software, we have all the products to service your needs.
- We have a very knowledgeable sales team backed by an expert engineering team with years of experience in the field. They are there to assist you with sizing equipment, choosing the system for the application, reviewing the water analysis and providing technical support and training when required.

Bigger equipment means bigger profits!



Apartments - Based on 3 people per unit @ 60 gallons per day with laundry facilities

Number of units	4	5	6	8	10	15	20	30	40	50	100
Total Daily Consumption (gals)	720	900	1,000	1,400	1,800	2,700	3,600	5,400	7,200	9,000	18,000
Peak Flow (gpm)	24	28	33	44	55	83	90	99	110	120	175
Daily Hot Water Consumption (gals)	430	540	600	860	1,080	1,620	2,160	3,240	4,320	5,400	10,800
Hot Water Peak Flow (gpm)	14	16	20	27	33	50	55	60	66	72	105

Schools - Based on 25 gallons per day per student and washrooms having flush valves and shower facilities

Number of students	100	200	300	400	500	800	1,000
Total Daily Consumption (gals)	2,500	5,000	7,500	10,000	12,500	20,000	25,000
Peak Flow (gpm)	57	86	114	142	170	238	285
Daily Hot Water Consumption (gals)	600	1,200	1,800	2,500	3,000	4,800	6,000
Hot Water Peak Flow (gpm)	14	22	28	38	47	57	66

Motels - Based on 40 gallons per person per day @ 2.5 people per unit and washrooms with flush tanks

Number of units	10	20	30	40	50	75	100	125	150
Total Daily Consumption (gals)	1,000	2,000	3,000	4,000	5,000	7,500	10,000	12,500	15,000
Peak Flow (gpm)	30	50	63	75	86	120	150	175	200
Daily Hot Water Consumption (gals)	400	800	1,200	1,600	2,000	3,000	4,000	5,000	6,000
Hot Water Peak Flow (gpm)	20	29	41	49	55	71	84	88	110

APARTMENTS

Based on 3 persons/apartment

Hot and cold180 gal/unit/day

Hot only60 gal/unit/day

ASSEMBLY HALLS2 gal/seat

BARBER SHOPS55 gal/day/chair

BEAUTY SALONS270 gal/day/station

BOILERS

To determine daily makeup in gallons:

1. Multiply boiler HP.hr rating by 4.25
2. Then multiply by hours per day of operation
3. Then multiply by the % operating rate
4. Then subtract the % condensate returns

NOTE - When ratings are given in pounds of steam per hour, divide by 500 to obtain gpm requirements. When ratings are given in BTUs, divide by 2,544. For every 2,544 BTUs, there is an equivalent of 1 HP.hr.

BOWLING ALLEYS175 gal/lane

CAMPS

Day (no meals)15 gal/day/person

Resorts50 gal/day/person

Tourist35 gal/day/person

COOLING TOWERS

To determine daily makeup in gallons:

1. Multiply the tonnage by 4 (this includes 2 gal per day/hr/ton bleed off)
2. Then multiply by the number of hours per day of operation

DENTISTS4,000 gal/month/chair

DEPARTMENT STORES

..... 0.215 gal/day per sq.ft. of sales area

DORMITORIES

Hot and cold40 gal/person/day

Hot only20 gal/person/day

GOLF CLUBS/GYMS

With Showers# of showers x 1300 gal/day

With Lavatories.....# of lavatories x 150 gal/day

Serving Meals# of meals x 4 gal/day

HOMES60 gal/person/day

HOTELS

Hot and cold 350 gal/day/guest room

Hot only 225 gal/day/guest room

HOSPITALS

Hot and cold250 gal/bed/day

Hot only170 gal/bed/day

LAUNDROMATS

Hot and cold =2.5 x lb capacity is equivalent to gallons per cycle

LAWNS25 gal/sq ft/season

LIVESTOCK & POULTRY

Cow, beef12 gal/animal/day

Cow, dairy20 gal/animal/day

Goat.....2 gal/animal/day

Hog12 gal/animal/day

Horse12 gal/animal/day

Mule12 gal/animal/day

Sheep2 gal/animal/day

Chickens10 gal/each 100/day

Turkeys.....18 gal/each 100/day

MEAT PACKING FACILITIES

Birds1 gal/bird day

Hogs6 gal/hog/day

Cows12 gal/cow/day

MOTELS

Hot and cold100 gal/unit/day

Hot only40 gal/unit/day

MOVIE THEATERS2 gal/day/seat

NURSING HOMES

Hot and cold100 gal/bed/day

Hot only50 gal/bed/day

OFFICE BUILDINGS

Hot and cold20 gal/person/day

Hot only3 gal/person/day

RESTAURANTS

Hot and cold15 gal/meal/day

Hot only7 gal/meal/day

Add on for bar or cocktail lounge ... 2 gal/patron/day

SCHOOLS

Hot and cold13 gal/student/day

Hot only5 gal/student/day

Showers hot and cold25 gal/student/day

Showers hot only6 gal/student/day

Showers & cafeteria hot and cold...35 gal/student/day

Showers & cafeteria hot only15 gal/student/day

SERVICE STATIONS 700 gal/day/service bay

SHOPPING CENTERS300 gal/day/1000 sq ft

STOCKYARDS200 gal/day/acre

TAVERNS20 gal/day/seat

TRAILER PARKS150 gal/day/trailer

These figures are approximate and might vary. All gallon figures are U.S. gallons.



The FAF Series is the primary group of commercial softeners that have been engineered to provide solutions to almost any application. Softeners are available in this series up to 58 cubic foot of resin per tank with pressure vessels 63 inches in diameter. The FAF Series offers the most options and configurations of the three commercial softener series available.

Technical Specifications and Features

- Recommended maximum operating pressure: 100 psig (690 kPa)
- Recommended maximum operating temperature: 100°F (38°C)

Main Control Valve

- Single valve per tank controls all softener functions
- Electro-mechanical timer controls all valve cycles including service, backwash, brine draw, slow rinse, fast rinse and brine tank refill
- Meter initiated regeneration
- All control valves constructed of lead free-brass*
- Main piston is also lead-free brass* with a Teflon coating
- *No hard water bypass* during regeneration is standard on multi-tank systems
- Simple threaded (NPT) inlet, outlet and drain connections
- CSA certified valves (in Canada)

* as defined under Section 1417(d) of the U.S.E.P.A. Safe Drinking Water Act.

Resin

- Premium quality ion exchange softening resin, selected for resistance to fouling and minimum salt usage
- FDA Grade

Softener Tanks and Internals

- Seamless polyethylene liner wrapped with a continuous filament wound/epoxy resin fiberglass shell
- PVC hub/lateral flow distributor and riser tube with washed quartz support bed
- Tanks up to and including 24" diameter are manufactured by WaterGroup Companies Inc. in Canada.
- Brine tanks are one piece rotationally molded polyethylene with lid, air check valve assembly, brine well and salt support grid.

Optional Features

- Calendar clock initiated regeneration
- Electronic Controller (3200NXT)
- Demand recall multi-tank systems (3214NXT)
- Side mounted control valve adapter and manifold available on 2850, 2900s, 3150 and 3900 only
- Brine tank safety float
- Environmental covers (2750, 2850, 2900s)
- Optional brine tank sizes
- Hot water systems (up to 150°F)

Standard System Control Types

System 4 - Single tank meter initiated. Regeneration is delayed until 2:00 a.m. (adjustable). Hard Water Bypass during regeneration is standard or No Raw Water Bypass during regeneration is optional.

System 5 - Multi-tank meter initiated regeneration. All tanks are in service to provide parallel flow. Each tank is equipped with its own meter and brine tank. Regeneration is immediate once capacity is exhausted. Each control is interlocked to prevent more than one system from regenerating at the same time. Valves are equipped with no hard water bypass to prevent hard water passing to service while a tank is regenerating.

System 6 - Sequential Demand system with all tanks in service and all water flow is monitored by one meter. The tanks regenerate sequentially, on demand with one tank off line at any time.

System 7 - Duplex alternating tank meter initiated regeneration. Service / standby operation with one tank online while the second tank is regenerating or is in standby. One meter supplied for entire system. Valves are equipped with no hard water bypass to prevent hard water passing to service while a tank is regenerating or is in standby.

Warranty

All equipment manufactured by WaterGroup Companies Inc./WaterGroup Inc. and is warranted against defects in material or workmanship for the following periods:

- Fiberglass tanks - 5 years
- Brine Tank - 1 year
- Control Valve and Electronics - 5 years
- Brine Tank Air Check - 2 years
- All other components are for a period of one year

FAF Series Specifications



Model	Capacity (grains) @15lb-salt/cu.ft. @10lb-salt/cu.ft.	Resin Volume cu.ft. (cu.m.)	Critical Application Max Flow Rate usgpm (lps)	2750 - 1" Valve Units		2850s - 1.5" Valve Units		2900s - 2" Valve Units	
				Flow Rate at 15 psi and 25 psi Pressure Drops (Single Tank Systems)					
				@ 15psi	@ 25psi	@ 15psi	@ 25psi	@ 15psi	@ 25psi
				usgpm (lps)		usgpm (lps)		usgpm (lps)	
FAF 45	45,000 40,500	1.5 (0.04)	7.5 (0.47)	17 (1.07)	23 (1.45)				
FAF 60	60,000 54,000	2 (0.06)	10 (0.63)	22 (1.39)	29 (1.83)	36 (2.27)	49 (3.09)	50 (3.15)	75 (4.73)
FAF 90	90,000 81,000	3 (0.08)	15 (0.95)	20 (1.26)	27 (1.70)	32 (2.02)	44 (2.78)	41 (2.59)	60 (3.79)
FAF 120	120,000 108,000	4 (0.11)	20 (1.26)	21 (1.32)	29 (1.83)	35 (2.21)	49 (3.09)	49 (3.09)	70 (4.42)
FAF 150	150,000 135,000	5 (0.14)	25 (1.58)	24 (1.51)	31 (1.96)	43 (2.71)	58 (3.66)	76 (4.79)	103 (6.50)
FAF 180	180,000 162,000	6 (0.17)	30 (1.89)	24 (1.51)	31 (1.96)	42 (2.65)	57 (3.60)	72 (4.54)	98 (6.18)
FAF 210	210,000 189,000	7 (0.20)	35 (2.21)	23 (1.45)	31 (1.96)	41 (2.59)	55 (3.47)	67 (4.23)	93 (5.87)
FAF 240	240,000 216,000	8 (0.23)	40 (2.52)	23 (1.45)	30 (1.89)	40 (2.42)	54 (3.41)	63 (3.97)	89 (5.62)
FAF 270	270,000 243,000	9 (0.25)	45 (2.84)	24 (1.51)	31 (1.96)	42 (2.65)	57 (3.60)	75 (4.73)	104 (6.56)
FAF 300	300,000 270,000	10 (0.28)	50 (3.15)	23 (1.45)	31 (1.96)	42 (2.65)	57 (3.60)	73 (4.61)	102 (6.44)
FAF 330	330,000 297,000	11 (0.31)	55 (3.47)	23 (1.45)	31 (1.96)	42 (2.65)	56 (3.53)	71 (4.48)	99 (6.25)
FAF 360	360,000 324,000	12 (0.34)	60 (3.79)			46 (2.90)	61 (3.85)	84 (5.30)	116 (7.32)
FAF 390	390,000 351,000	13 (0.37)	65 (4.10)			46 (2.90)	61 (3.85)	82 (5.17)	114 (7.19)
FAF 450	450,000 405,000	15 (0.42)	75 (4.73)			45 (2.84)	60 (3.79)	80 (5.05)	112 (7.07)
FAF 510	510,000 459,000	17 (0.48)	85 (5.36)			45 (2.84)	59 (3.72)	79 (4.98)	109 (6.88)
FAF 570	570,000 513,000	19 (0.54)	95 (5.99)					86 ⁽¹⁾ (5.43)	116 ⁽¹⁾ (7.32)
FAF 600	600,000 540,000	20 (0.57)	100 (6.31)					85 ⁽¹⁾ (5.36)	115 ⁽¹⁾ (7.26)
FAF 630	630,000 567,000	21 (0.59)	105 (6.62)					84 ⁽¹⁾ (5.30)	114 ⁽¹⁾ (7.19)
FAF 660	660,000 594,000	22 (0.62)	110 (6.94)						
FAF 720	720,000 648,000	24 (0.68)	120 (7.57)						
FAF 780	780,000 702,000	26 (0.74)	130 (8.20)						
FAF 900	900,000 810,000	30 (0.85)	150 (9.46)						
FAF 1020	1,020,000 918,000	34 (0.96)	170 (10.73)						
FAF 1080	1,080,000 972,000	36 (1.02)	180 (11.36)						
FAF 1740	1,740,000 1,566,000	58 (1.64)	220 (13.88)						

Shipping Weights:

- Single units shipping weights shown are maximums for each unit size.
- Valve type, multiple unit systems and additional options may alter this figure.
- Please consult customer service or a system specification drawing for actual shipping weights.

⁽¹⁾ Must have 60 psi minimum to regenerate units properly.

Additional Notes:

- Critical applications refer to softening prior to equipment such as: Boiler makeup water, heat exchangers and other equipment sensitive to hardness scaling.
- Depending on the valve used in each system, critical application flow rates are decreased if the pressure drop is 15psig or greater.
- Factory settings shown in italics.
- WaterGroup 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.



FAF Series Specifications

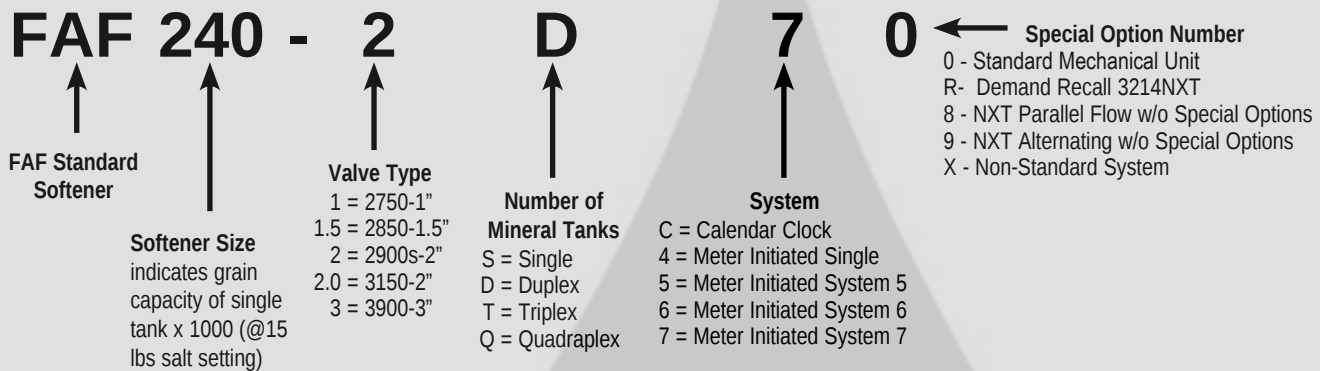
3150 - 2" Valve Units		3900 - 3" Valve Units		Salt per Regen. (lbs (kg)) @15lbs. salt/cu.ft. @10lbs. salt/cu.ft.	Backwash Flow Rate usgpm (lps)	Mineral Tank Dimensions inches (mm)	Brine Tank Dimensions (USA) inches (mm)	Brine Tank Dimensions (CANADA) inches (mm)	Shipping Weight Single lbs (kg)
Flow Rate at 15 psi and 25 psi Pressure Drops (Single Tank Systems)									
@ 15psi	@ 25psi	@ 15psi	@ 25psi						
usgpm (lps)		usgpm (lps)							
				23 (10) 15 (7)	2.4 (0.15)	10 x 54 (254 x 1372)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	180 (82)
				30 (14) 20 (9)	5.0 (0.32)	14 x 50 (356 x 1270)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	270 (122)
				45 (20) 30 (14)	5.0 (0.32)	14 x 65 (356 x 1651)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	330 (150)
				60 (27) 40 (18)	7.0 (0.44)	16 x 65 (406 x 1651)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	390 (177)
				75 (34) 50 (23)	12 (0.75)	21 x 54 (533 x 1372)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	500 (227)
				90 (41) 60 (27)	12 (0.75)	21 x 54 (533 x 1372)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	560 (255)
				105 (48) 70 (32)	12 (0.75)	21 x 69 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	640 (291)
				120 (54) 80 (36)	12 (0.75)	21 x 69 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	690 (314)
				135 (61) 90 (41)	15 (0.94)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	820 (373)
				150 (68) 100 (45)	15 (0.94)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	880 (399)
				165 (75) 110 (50)	15 (0.94)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	930 (423)
		156 (9.84)	215 (13.56)	180 (82) 120 (54)	25 (1.57)	30 x 72 (762 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	1130 (514)
		152 (9.59)	210 (13.25)	195 (88) 130 (59)	25 (1.57)	30 x 72 (762 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	1180 (536)
		142 (8.96)	200 (12.62)	225 (102) 150 (68)	25 (1.57)	30 x 72 (762 x 1829)	39 x 48 (991 x 1219)	36 x 48 (914 x 1219)	1340 (609)
		138 (8.71)	190 (11.99)	255 (116) 170 (77)	25 (1.57)	30 x 72 (762 x 1829)	39 x 48 (991 x 1219)	36 x 48 (914 x 1219)	1440 (655)
85 (5.36)	112 (7.05)	180 (11.36)	247 (15.58)	285 (116) 190 (86)	35 (2.20)	36 x 72 (914 x 1829)	39 x 48 (991 x 1219)	36 x 48 (914 x 1219)	1580 (718)
84 (5.30)	111 (6.98)	177 (11.17)	245 (15.46)	300 (136) 200 (91)	35 (2.20)	36 x 72 (914 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	1648 (748)
83 (5.22)	111 (6.98)	173 (10.91)	242 (15.27)	315 (143) 210 (95)	35 (2.20)	36 x 72 (914 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	1700 (773)
88 (5.55)	116 (7.32)	202 (12.74)	273 (17.22)	330 (150) 220 (100)	45 (2.83)	42 x 72 (1047 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	1850 (841)
88 (5.55)	116 (7.32)	201 (12.68)	269 (16.97)	360 (163) 240 (109)	45 (2.83)	42 x 72 (1047 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	2650 (1202)
87 (5.49)	115 (7.26)	197 (12.43)	266 (16.78)	390 (177) 260 (118)	45 (2.83)	42 x 72 (1047 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	2860 (1300)
89 (5.56)	117 (7.37)	213 (13.44)	284 (17.92)	450 (204) 300 (136)	60 (3.77)	48 x 72 (1291 x 1829)	50 x 60 (1270 x 1524)	42 x 60 (1067 x 1524)	3330 (1510)
88 (5.55)	116 (7.32)	208 (13.12)	280 (17.67)	510 (231) 340 (154)	60 (3.77)	48 x 72 (1291 x 1829)	50 x 60 (1270 x 1524)	42 x 60 (1067 x 1524)	3540 (1606)
88 (5.55)	116 (7.32)	205 (12.93)	276 (17.41)	540 (245) 360 (163)	60 (3.77)	48 x 72 (1291 x 1829)	50 x 60 (1270 x 1524)	42 x 60 (1067 x 1524)	3640 (1655)
87 (5.48)	116 (7.32)	220 (13.88)	295 (18.61)	870 (395) 580 (245)	95 (5.99)	63 x 86 (1600 x 2185)	70 x 58 (1778 x 1474)	70 x 58 (1778 x 1474)	6740 (3064)

Commercial Softener System Selection



System Selection

The following example explains how the model number works:



Regeneration Initiation Types Available

Calendar Clock: Softener systems with Calendar Clock initiation are typically the least expensive. The regeneration is delayed and can be set for any time of day. Typically, twelve (12) day clocks are used so that the system can be regenerated at evenly spaced intervals of every 1, 2, 3, 4, 6 or 12 days. A 7-day clock is an option.

Metered or Volumetric: Although a meter initiated system is slightly more expensive than a calendar clock system, a metered system will easily pay for itself shortly in better salt and water consumption efficiencies. The meter measures the volume of water passing through the softener. The regeneration interval is based on the volume calculated to exhaust the softeners bed capacity. Meter initiated softeners also have the greatest range of systems available. Single, duplex and triplex systems can be ordered with different operational characteristics and controllers.

External Input (OPTIONAL): Some systems can be initiated with external inputs. This type of regeneration initiation typically requires an electronic controller. Co-ordination with our commercial engineering department is suggested to facilitate this special type of system.

Controller Types Available

Mechanical Timers: These timers are the most cost-effective type of control available for softener and filter systems. The program wheel of the timer allows adjustment of a regeneration in two minute increments by adding and removing pins which control the regeneration cycle times. Mechanical timers, however, are wired for one type of system only. They are not as flexible as an electronic control to change regeneration types or parameters and they cannot be changed to add future multiple units.

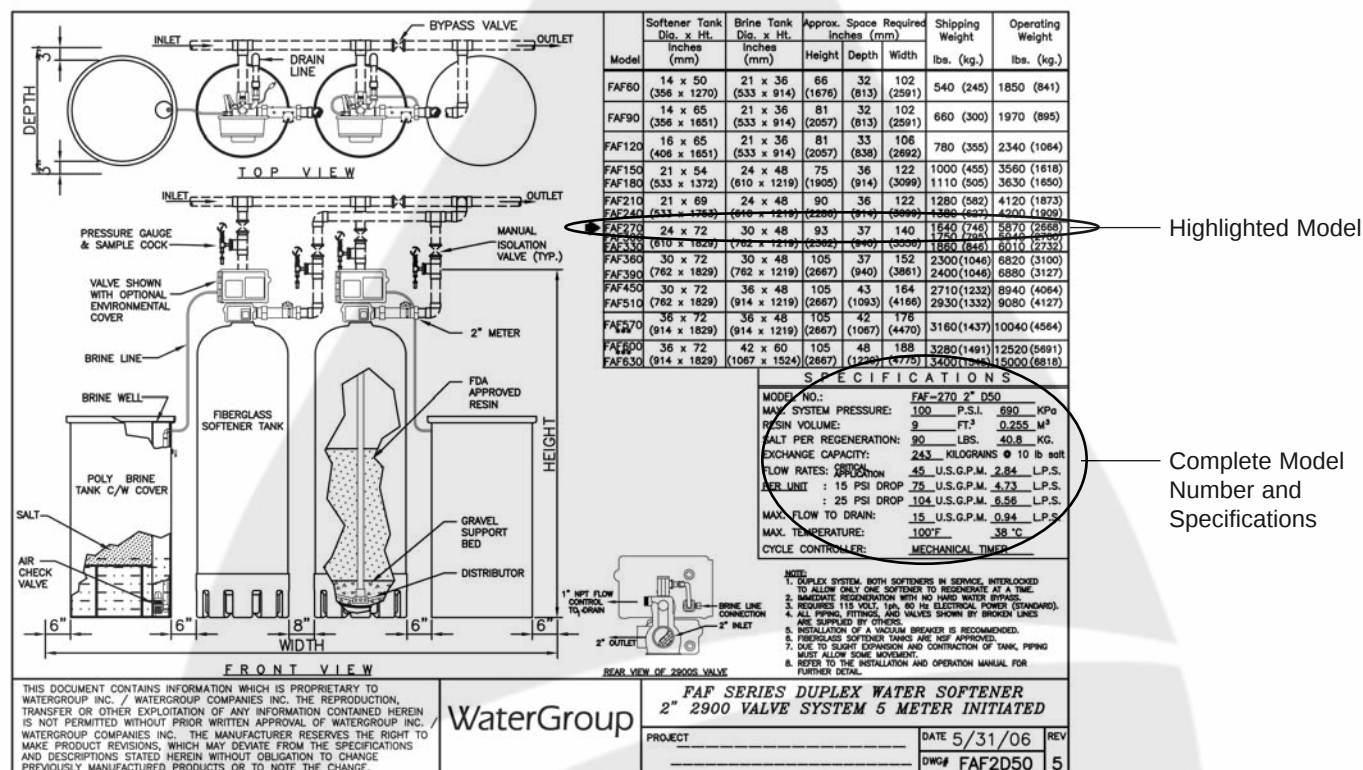
3200NXT Network Timer: The 3200NXT allows all valves to be identical in configuration. This allows for simple system expansion in the future without needing to replace existing controls. The control also makes initial setup simple and allows modifications to the system operation to be done in the field. The 3200NXT control also includes additional diagnostic functionality to assist with system troubleshooting. Available for FAF Series softeners, 2750, 2850, 2900, 3150 and 3900 valves; one to four valves within a system; all operational systems modes.

3214NXT Demand Recall: The 3214NXT Demand Flow Network Controller is available to configure with all commercial 2750, 2850, 2900, 3150, and 3900 control valves. This demand flow system can be programmed to bring multiple units to the service position and back to standby based on system demand flow. The 3214NXT Demand Flow Network Controller uses on-board communication capabilities to link multiple valves via standard CAT3, CAT5, or better communication cables.

Need a Drawing?

Drawings can be provided for all standard single and duplex FAF series commercial softeners with your quotation. Many drawings are also available for optional product setups such as 3200NXT Electronic Timers and Side Mounted Piping. Please ask your area representative or customer service if you require a drawing along with your commercial equipment quotation.

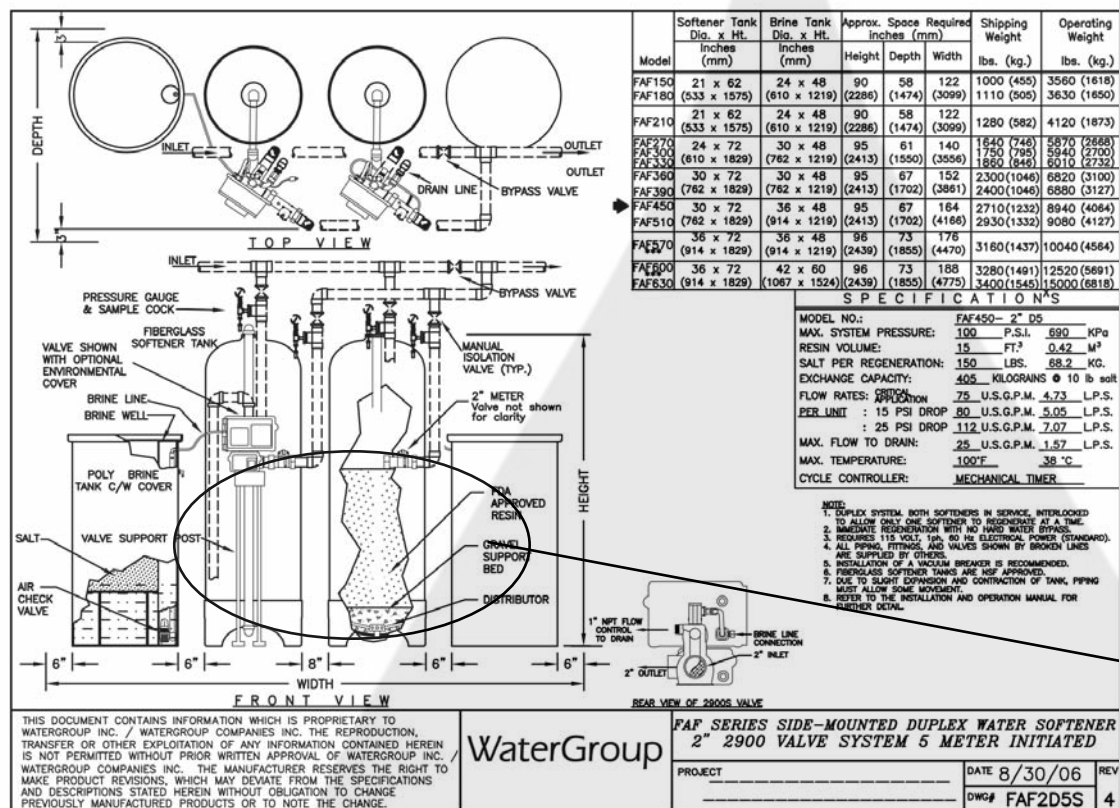
FAF Softener drawings are supplied with the appropriate model highlighted, and corresponding performance specifications automatically filled in as shown in the following example.



FAF Softener drawings include all pertinent information such as:

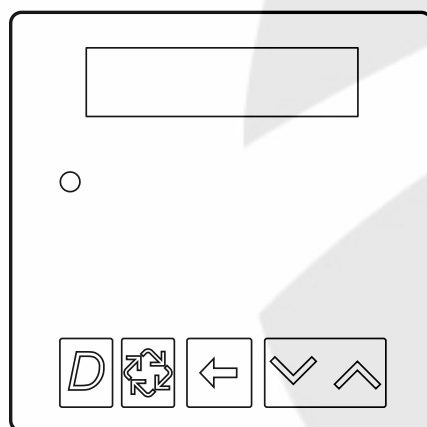
- System type and operating description
- Mineral and Brine Tank Dimensions
- Approximate Installation Space Required (in the configuration shown)
- Shipping and Operating Weight
- Service Flow rates for Critical Applications, 15 psi and 25 psi pressure drops
- Maximum Flow rate to drain during backwash
- Electrical Information and Controller Type
- Piping layout, installation notes and accessories

Example of Optional Side Mounted Control Valve and Piping

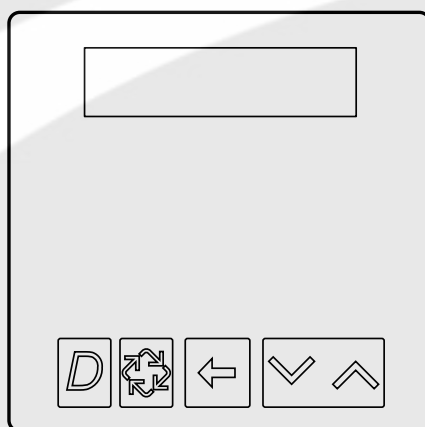


Side Mounted Piping

Drawings can also be supplied showing added options such as the 3200NXT electronic timer, 3214NXT electronic timer and Brine Tank Safety Floats.



NXT TIMER



3214NXT TIMER

In a class by itself, TMI is engineered for the most demanding light commercial and heavy residential needs.

All water softeners require periodic regeneration when their softening capacity is exhausted. Conventional softeners can allow hard water to bypass the softener during regeneration.

The TMI Series features a twin mineral tank system governed by a meter initiated control valve. One softener tank is in service, delivering soft water, while the second softener tank is held in reserve. When the softening capacity of the service tank is exhausted, the control valve automatically switches the water flow to the reserve tank. The exhausted tank regenerates immediately and then becomes the reserve. This ensures a continuous supply of soft water without the risk of hard water getting into the service flow, making the TMI Series ideal for feed water pretreatment of commercial and industrial reverse osmosis systems.

Technical Specifications & Features

- Recommended maximum operating pressure: 100 psig (690 kPa)
- Recommended maximum operating temperature: 100°F (38°C)

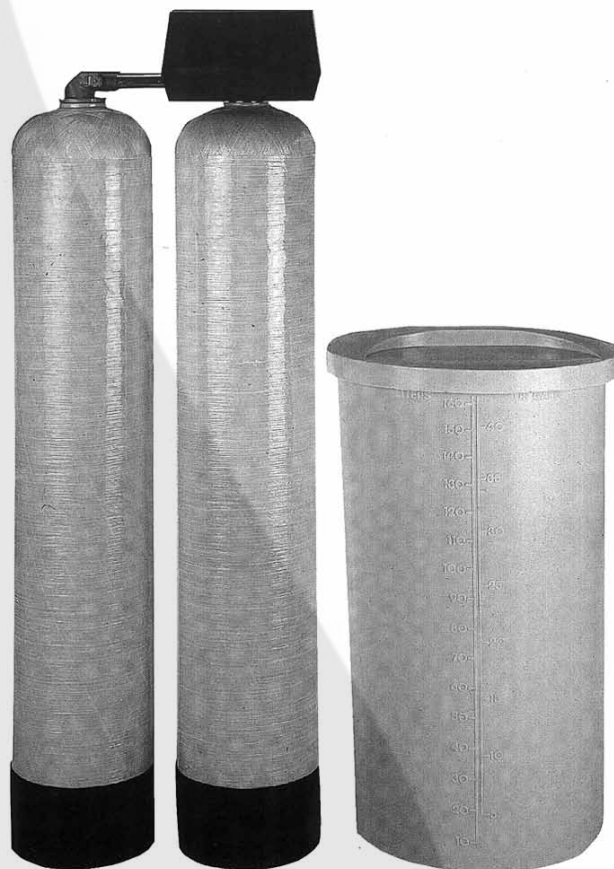
Main Control Valve

- Single valve per system (two tanks) controls all softener functions
- Electro-mechanical timer controls all valve cycles including service, backwash, brine draw, slow rinse, fast rinse and brine tank refill
- Meter initiated regeneration
- 9000 and 9500 control valves constructed of lead free-brass*; 9100SXT control valve constructed of fiber reinforced polymer
- Main piston is also lead-free* brass with a Teflon coating
- Simple threaded (NPT) inlet, outlet and drain connections
- CSA certified valves (in Canada, except 9100 which uses a 24VAC Class 2, certified transformer)

* as defined under Section 1417(d) of the U.S.E.P.A. Safe Drinking Water Act.

Softener Tanks and Internals

- Seamless polyethylene liner wrapped with a continuous filament wound/epoxy resin fiberglass shell
- PVC hub/lateral flow distributor and riser tube with washed quartz support bed
- Tanks up to and including 24" diameter are manufactured by WaterGroup Companies Inc. in Canada.
- Brine tanks are one-piece rotationally molded polyethylene with lid, air check valve assembly, brine well and salt support grid



Resin

- Premium quality ion exchange softening resin, selected for resistance to fouling and minimum salt usage
- FDA Grade

Optional Features

- 9100SXT control valve
- Electronic controller (XT or SXT)
- Brine tank safety float
- Optional brine tank sizes
- Sodium Chloride Dealkalizer anion resin systems (DTMI Systems)

Warranty

All equipment manufactured by WaterGroup Companies Inc./WaterGroup Inc. and is warranted against defects in material or workmanship for the following periods:

- Fiberglass tanks - 5 years
- Brine Tank - 1 year
- Control Valve and Electronics - 5 years
- Brine Tank Air Check - 2 years
- All other components are for a period of one year

TMI Series Specifications



Model	Capacity (grains) @15lb-salt/cu.ft. @10lb-salt/cu.ft.	Resin* Volume cu.ft. (cu.m.)	Critical Application Max Flow Rate usgpm (lps)	Flow Rates usgpm (lps)		Maximum Flow to Drain usgpm (lps)	Salt per Regen. (lbs (kg)) @15lbs. salt/cu.ft. @10lbs. salt/cu.ft.	Mineral Tank Dimensions inches (mm)	Brine Tank Dimensions (USA) inches (mm)	Brine Tank Dimensions (CANADA) inches (mm)	Approximate Space Required inches (mm)			Shipping Weight lbs (kg)
				@ 15psi drop	@ 25psi drop						Height	Depth	Width	
TMI 30-3/4"	30,000 27,000	1.0 (.028)	5 (0.32)	13 (0.82)	18 (1.14)	2.0 (0.13)	15 (6.8) 10 (4.5)	9 x 48 (229 x 1219)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	59 (1499)	25 (635)	62 (1575)	250 (114)
TMI 30-1"	30,000 27,000	1.0 (.028)	5 (0.32)	14 (0.88)	19 (1.20)	2.0 (0.13)	15 (6.8) 10 (4.5)	9 x 48 (229 x 1219)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	59 (1499)	25 (635)	62 (1575)	250 (114)
TMI 40-3/4"	40,000 36,000	1.33 (.038)	6.5 (0.41)	13 (0.82)	18 (1.14)	2.4 (0.15)	20 (9.1) 13.3 (6.0)	10 x 54 (254 x 1372)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	65 (1651)	25 (635)	64 (1626)	290 (132)
TMI 40-1"	40,000 36,000	1.33 (.038)	6.5 (0.41)	15 (0.95)	21 (1.32)	2.4 (0.15)	20 (9.1) 13.3 (6.0)	10 x 54 (254 x 1372)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	65 (1651)	25 (635)	64 (1626)	290 (132)
TMI 50-3/4"	40,500 45,000	1.66 (.047)	8 (0.50)	15 (0.95)	21 (1.32)	4 (0.25)	25 (11.3) 16.6 (7.5)	12 x 52 (305 x 1321)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	63 (1600)	25 (635)	68 (1727)	355 (161)
TMI 50-1"	40,500 45,000	1.66 (.047)	8 (0.50)	17 (1.07)	23 (1.45)	4 (0.25)	25 (11.3) 16.6 (7.5)	12 x 52 (305 x 1321)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	63 (1600)	25 (635)	68 (1727)	355 (161)
TMI 60-3/4"	60,000 54,000	2 (.057)	10 (0.63)	16 (1.01)	22 (1.39)	5 (0.32)	30 (13.6) 20 (9.1)	14 x 50 (356 x 1270)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	61 (1549)	25 (635)	72 (1829)	430 (195)
TMI 60-1"	60,000 54,000	2 (.057)	10 (0.63)	18 (1.14)	25 (1.58)	5 (0.32)	30 (13.6) 20 (9.1)	14 x 50 (356 x 1270)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	61 (1549)	25 (635)	72 (1829)	430 (195)
TMI 60-1-1/2"	60,000 54,000	2 (.057)	10 (0.63)	33 (2.08)	45 (2.84)	5 (0.32)	30 (13.6) 20 (9.1)	14 x 50 (356 x 1270)	19 x 34 (483 x 864)	21 x 36 (533 x 914)	62 (1575)	30 (762)	69 (1753)	510 (232)
TMI 90-3/4"	90,000 81,000	3 (.085)	15 (0.95)	15 (0.95)	21 (1.32)	5 (0.32)	45 (20.5) 30 (13.6)	14 x 65 (356 x 1651)	24 x 50 (610 x 1270)	21 x 36 (533 x 914)	76 (1930)	25 (635)	72 (1829)	540 (245)
TMI 90-1"	90,000 81,000	3 (.085)	15 (0.95)	17 (1.07)	23 (1.45)	5 (0.32)	45 (20.5) 30 (13.6)	14 x 65 (356 x 1651)	24 x 50 (610 x 1270)	21 x 36 (533 x 914)	76 (1930)	25 (635)	72 (1829)	540 (245)
TMI 90-1-1/2"	90,000 81,000	3 (.085)	15 (0.95)	29 (1.83)	41 (1.90)	5 (0.32)	45 (20.5) 30 (13.6)	14 x 65 (356 x 1651)	24 x 50 (610 x 1270)	21 x 36 (533 x 914)	77 (1956)	30 (762)	69 (1753)	610 (277)
TMI 120-1"	120,000 108,000	4 (.112)	18 (1.14)	18 (1.14)	24 (1.51)	7 (0.44)	60 (27.3) 40 (18.2)	16 x 65 (406 x 1651)	24 x 50 (610 x 1270)	21 x 36 (533 x 914)	77 (1956)	30 (762)	73 (1854)	680 (309)
TMI 120-1-1/2"	120,000 108,000	4 (.112)	20 (1.26)	32 (2.02)	44 (2.78)	7 (0.44)	60 (27.3) 40 (18.2)	16 x 65 (406 x 1651)	24 x 50 (610 x 1270)	21 x 36 (533 x 914)	77 (1956)	30 (762)	73 (1854)	750 (341)
TMI 150-1-1/2"	150,000 135,000	5 (.141)	25 (1.58)	39 (2.46)	52 (3.28)	12 (0.75)	75 (27.3) 50 (22.7)	21 x 54 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	71 (1803)	30 (762)	92 (2337)	960 (341)
TMI 180-1-1/2"	180,000 162,000	6 (.167)	30 (1.89)	38 (2.33)	50 (3.15)	12 (0.75)	90 (40.8) 60 (27.3)	21 x 54 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	71 (1803)	30 (762)	92 (2337)	1070 (559)
TMI 210-1-1/2"	210,000 189,000	7 (.198)	35 (2.21)	37 (2.33)	50 (3.15)	12 (0.75)	105 (47.7) 70 (31.8)	21 x 69 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	86 (2184)	30 (762)	92 (2337)	1230 (559)
TMI 240-1-1/2"	240,000 216,000	8 (0.23)	36 (2.27)	36 (2.27)	48 (3.03)	12 (0.75)	120 (54.5) 80 (36.4)	21 x 69 (533 x 1753)	30 x 50 (762 x 1270)	24 x 48 (610 x 1219)	86 (2184)	30 (762)	92 (2337)	1340 (609)
TMI 270-1-1/2"	270,000 243,000	9 (0.26)	38 (2.40)	38 (2.40)	51 (3.22)	15 (0.94)	135 (61.4) 90 (40.8)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	89 (2261)	36 (914)	104 (2652)	1590 (723)
TMI 300-1-1-2"	300,000 270,000	10 (0.28)	38 (2.40)	38 (2.40)	51 (3.22)	15 (0.94)	150 (68.2) 100 (45.4)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	89 (2261)	36 (914)	104 (2652)	1695 (771)
TMI 330-1-1/2"	330,000 297,000	11 (0.31)	37 (2.33)	37 (2.33)	50 (3.15)	15 (0.94)	164 (75.0) 110 (49.9)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	89 (2261)	36 (914)	104 (2652)	1800 (818)

* Resin Volume is per tank, system volume is twice the individual tank volume.

• Factory settings shown in italics.

• WaterGroup 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.

System Selection

The following example explains how the model number works:

TMI

TMI Standard
Softener

60

Softener Size
indicates grain capacity of a single
tank x 1000 (@15 lbs salt setting)

-

3/4

Valve Type
3/4 = 9000, 3/4"
1 = 9000, 1"
3/4P* = 9100, 3/4"
1P* = 9100, 1"
1.5 = 9500, 1.5"

*P denotes plastic version

DA

System
DA = Duplex
Alternating

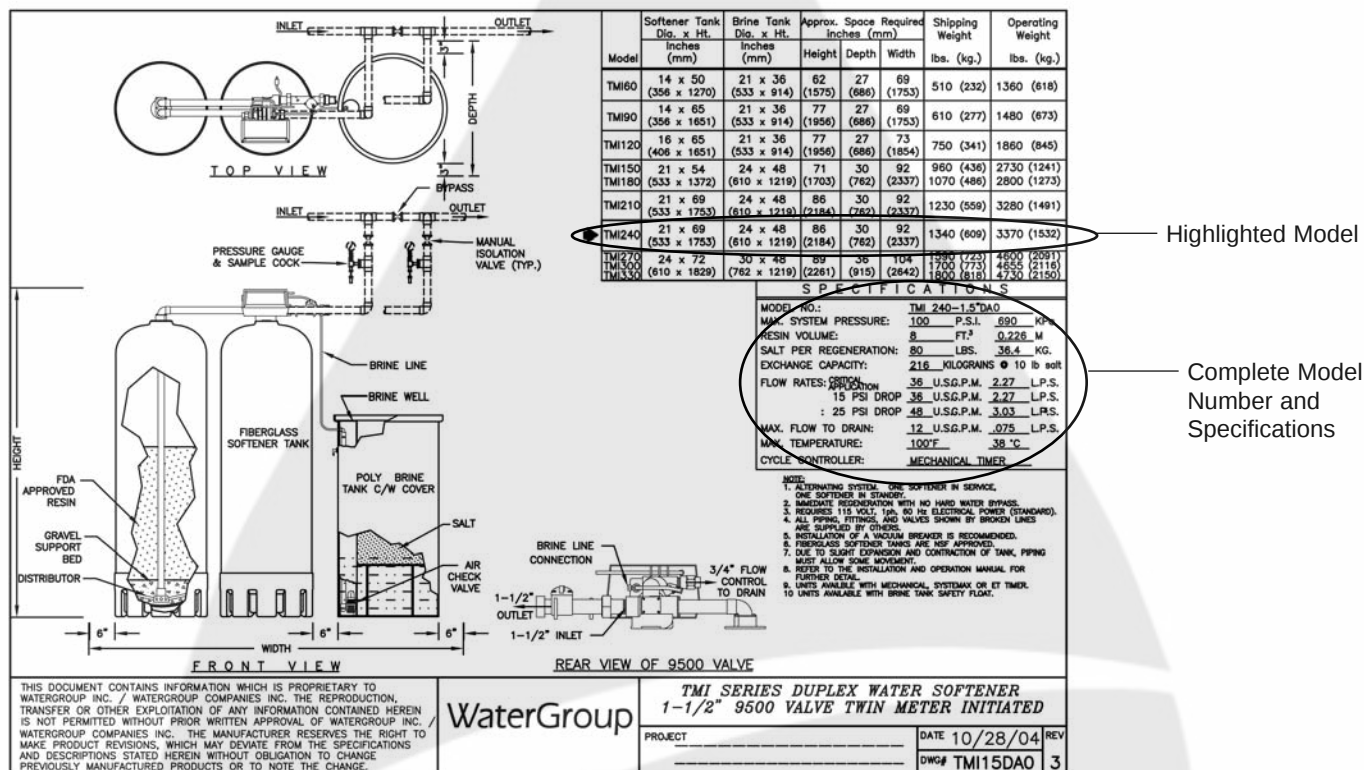
0

Special Option Number
0 - Standard Mechanical System
6 - SXT Timer
8 - XT System w/o Special Options
X - Non-Standard System

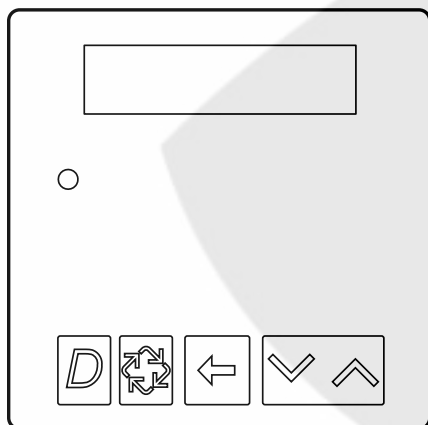
Need a Drawing?

Drawings can be provided for all standard TMI series commercial softeners with your quotation. Many drawings are also available for optional product setups such as XT Electronic Timers. Please ask your area representative or customer service if you require a drawing along with your commercial equipment quotation.

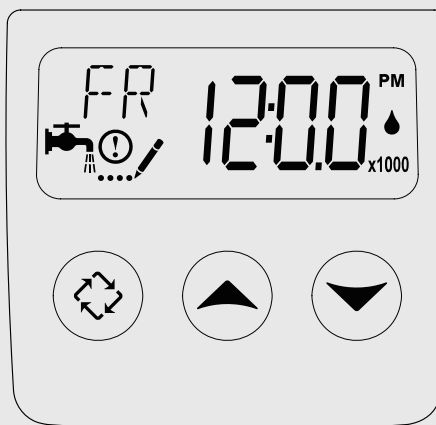
TMI Softener drawings are supplied with the appropriate model highlighted, and corresponding performance specifications automatically filled in as shown in the following example.



Drawings can also be supplied showing added options such as the XT electronic timer, SXT electronic timer and brine tank safety floats. The following picture with corresponding model number modifications and text would appear.



XT TIMER



SXT TIMER

LCS Series Commercial Water Softeners



The LCS Series is our newest product, perfect for Light Commercial applications requiring a simple cost effective solution for single tank softening applications. The series features the 7000 control valve. Additional flexibility is provided with the available options.

Technical Specifications & Features

- Recommended maximum operating pressure: 100 psig (690 kPa)
- Recommended maximum operating temperature: 100°F (38°C)

Main Control Valve

- Single valve per tank controls all softener functions
- Electronic timer controls all valve cycles including service, backwash, brine draw, second backwash, slow rinse, fast rinse and brine tank refill
- Meter initiated regeneration
- 7000SXT control valve constructed of fiber reinforced polymer
- Main piston is a lead-free* brass with a Teflon coating
- Simple threaded (NPT) inlet, outlet and drain connections
- 7000SXT valves uses 24VAC Class 2, certified transformer

*As defined under Section 1417(d) of the U.S.E.P.A. Safe Drinking Water Act

Resin

- Premium quality ion exchange softening resin, selected for resistance to fouling and minimum salt usage
- FDA Grade

Softener Tanks and Internals

- Seamless polyethylene liner wrapped with a continuous filament wound/ epoxy resin fiberglass shell
- PVC hub/lateral flow distributor and riser tube with washed quartz support bed
- Tanks up to and including 24" diameter are manufactured by WaterGroup Companies Inc. in Canada
- Brine tanks are one-piece rotationally molded polyethylene with lid, air check valve assembly, brine well and salt support grid

Optional Features

- Brine tank safety float
- Optional brine tank sizes
- Additional pipe connection types

Warranty

All equipment manufactured by WaterGroup Companies Inc./WaterGroup Inc. and is warranted against defects in material or workmanship for the following periods:

- Fiberglass tanks - 5 years
- Brine Tank - 1 year
- Control Valve and Electronics - 5 years
- Brine Tank Air Check - 2 years
- All other components are for a period of one year



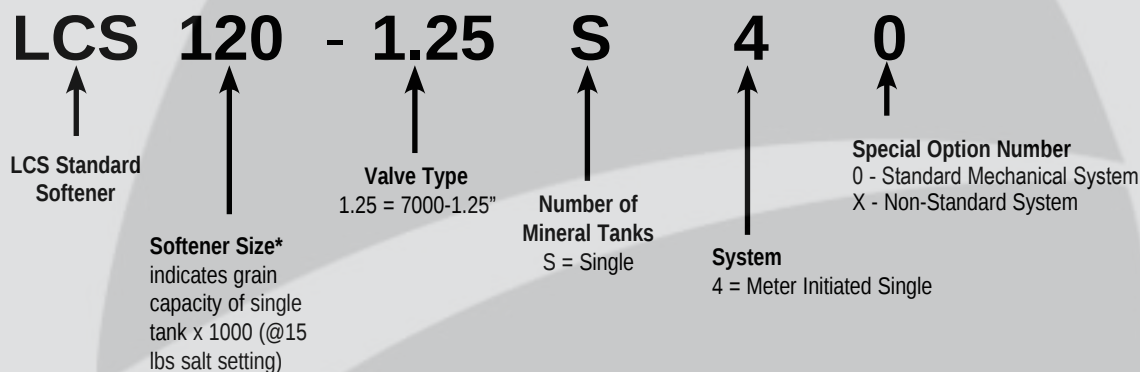
Model	Capacity at Factory Setting kilograins	Resin Volume cu.ft. (cu.m.)	Critical Application Max Flow Rate usgpm (lps)	Flow Rates usgpm (lps)		Maximum Flow to Drain usgpm (lps)	Salt per Regen. at Factory Setting lbs (kg)	Mineral Tank Dimensions inches (mm)	Brine Tank Dimensions (USA) inches (mm)	Brine Tank Dimensions (CANADA) inches (mm)	Approximate Space Required inches (mm)			Shipping Weight lbs (kg)
				@ 15psi drop	@ 25psi drop						Height	Depth	Width	
LCS 60 - 1.25" S40	54,000	2 (0.06)	10 (0.63)	22 (1.39)	30 (1.89)	5 (0.32)	20 (9)	14 x 50 (356 x 1270)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	58 (1473)	33 (838)	54 (1372)	225 (102)
LCS 90 - 1.25" S40	81,000	3 (0.08)	15 (0.95)	20 (1.26)	28 (1.77)	5 (0.32)	30 (14)	14 x 65 (356 x 1651)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	73 (1854)	33 (838)	54 (1372)	285 (129)
LCS 120 - 1.25" S40	108,000	4 (0.11)	20 (1.26)	22 (1.39)	29 (1.83)	7 (0.44)	40 (18)	16 x 65 (408 x 1651)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	73 (1854)	33 (838)	55 (1397)	345 (156)
LCS 150 - 1.25" S40	135,000	5 (0.14)	24 (1.51)	24 (1.51)	32 (2.02)	12 (0.75)	50 (23)	21 x 54 (533 x 1372)	24 x 50 (610 x 1219)	24 x 48 (610 x 1219)	63 (1600)	36 (914)	64 (1626)	460 (209)
LCS 180 - 1.25" S40	162,000	6 (0.17)	24 (1.51)	24 (1.51)	32 (2.02)	12 (0.75)	60 (27)	21 x 54 (533 x 1372)	24 x 50 (610 x 1219)	24 x 48 (610 x 1219)	63 (1600)	36 (914)	64 (1626)	515 (234)
LCS 210 - 1.25" S40	175,000	7 (0.20)	23 (1.45)	23 (1.45)	31 (1.96)	12 (0.75)	56 (25)	21 x 69 (533 x 1753)	24 x 50 (610 x 1219)	24 x 48 (610 x 1219)	78 (1981)	36 (914)	64 (1626)	295 (134)
LCS 240 - 1.25" S40	200,000	8 (0.23)	23 (1.45)	23 (1.45)	31 (1.96)	12 (0.75)	64 (29)	21 x 69 (533 x 1753)	24 x 50 (610 x 1219)	24 x 48 (610 x 1219)	78 (1981)	36 (914)	64 (1626)	655 (297)
LCS 270 - 1.25" S40	180,000	9 (0.25)	24 (1.51)	24 (1.51)	32 (2.02)	15 (0.94)	54 (24)	24 x 72 (610 x 1829)	30 x 50 (762 x 1219)	30 x 48 (762 x 1219)	81 (2057)	42 (1067)	73 (1854)	785 (356)
LCS 300 - 1.25" S40	200,000	10 (0.28)	24 (1.51)	24 (1.51)	32 (2.02)	15 (0.94)	60 (27)	24 x 72 (610 x 1829)	30 x 50 (762 x 1219)	30 x 48 (762 x 1219)	81 (2057)	42 (1067)	73 (1854)	835 (379)
LCS 330 - 1.25" S40	220,000	11 (0.31)	24 (1.51)	24 (1.51)	32 (2.02)	15 (0.94)	66 (30)	24 x 72 (610 x 1829)	30 x 50 (762 x 1219)	30 x 48 (762 x 1219)	81 (2057)	42 (1067)	73 (1854)	885 (401)

* The factory regeneration recommended setting of the LCS Series is shown in *italics* in the table above. Higher capacities with an increased salt dosage is achievable on most systems with the exception of some larger systems. Consultation with WaterGroup's Commercial Engineering and Applications department is recommended regarding modifying regeneration settings.

• WaterGroup 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.

System Selection

The following example explains how the model number works:



*Note: On LCS Series Systems, the softener size number in kilograins does not necessarily indicate the maximum attainable capacity due to control valve limitations. The softener size has been denoted similarly to FAF and TMI systems for consistency.



The removal of bicarbonate and carbonate alkalinity is valuable in the prevention of CO₂ corrosion for boiler condensate systems.

DAF Series Automatic Chloride Anion Dealkalizers are effective in treating boiler feedwater with simple, reliable equipment.

Technical Specifications and Features

- Recommended maximum operating pressure: 100 psig (690 kPa)
- Recommended maximum operating temperature: 100°F (38°C)

Main Control Valve

- Meter initiated regeneration is standard
- Valve body constructed of lead-free brass*
- Main piston constructed of Teflon coated lead-free brass* with no hard water bypass feature standard on all duplex models
- Standard cycle timer controls service, backwash, brine draw, slow rinse, fast rinse and brine tank refill
- Standard 115 volt electrical requirement
- Simple threaded (NPT) service inlet and outlet connections

* as defined under Section 1417(d) of the U.S.E.P.A. Safe Drinking Water Act.

Resin

- Premium quality ion exchange anion resin.

Mineral Tanks and Internals

- Seamless polyethylene liner wrapped with a continuous filament wound/epoxy resin fiberglass shell
- PVC hub/lateral flow distributor and riser tube with washed quartz support bed
- Tanks up to and including 24" diameter are manufactured by WaterGroup Companies Inc. in Canada.
- Brine tanks are one piece rotationally molded polyethylene with lid, air check valve assembly, brine well and grid assembly
- Pulsatron chemical feed pump with solution tank for addition of Sodium Hydroxide (NaOH).

Warranty

All equipment manufactured by WaterGroup Companies Inc./ WaterGroup Inc. and is warranted against defects in material or workmanship for the following periods:

- Fiberglass tanks - 5 years
- Brine Tank - 1 year
- Control Valve and Electronics - 2 years
- Brine Tank Air Check - 2 years
- All other components are for a period of one year

Optional Features

- Calendar clock initiation
- 3200NXT network timer
- 3214NXT demand recall
- Brine tank safety float valve
- Side mounted valves (2850 and larger).

System Controls & Configurations

1. System 4 - Single meter initiated unit with standard hard water bypass piston.
2. System 5 - Duplex meter initiated system with all units in parallel service. Each unit has its own meter and brine tank. Regeneration is immediately at end of service run and an electrical interlock prevents regeneration of a unit while another is in regeneration. No hard water bypass pistons are standard.
3. System 7 - Duplex alternating (service/stand-by) system with one unit on line and the other in regeneration or stand-by. Hard water bypass is prevented with no hard water bypass pistons (2900 or 3900 valve) and automatic diaphragm isolation valves on all other types.
4. 3200NXT Network Timer - the network controller is the newest electronic controller available and is highly recommended for any DAF Series system. The control makes initial setup simple and allows modifications to the system operation to be done in the field. Network connections are made with CAT3 or CAT5 communication cables.
5. 3214NXT Demand Recall - The 3214NXT Demand Flow Network Controller is available to configure with all commercial 2750, 2850, 2900, 3150, and 3900 control valves. This demand flow system can be programmed to bring multiple units to the service position and back to standby based on system demand flow. The 3214NXT Demand Flow Network Controller uses on-board communication capabilities to link multiple valves via standard CAT3, CAT5, or better communication cables.



DAF Series Commercial Chloride Anion Dealkalizers

Standard Models	Capacity*, grains of Total Alkalinity as CaCO ₃	Resin Volume cu.ft.	Recommended Continuous Flow rate USGPM	Maximum Flow to Drain USGPM	Salt per Regeneration lb	Sodium Hydroxide per Regeneration lb	Mineral Tank Size in.	Brine Tank Size in.	Approximate Space Required-in.				Shipping Weight** lb	Valve Types Available
									Height	Depth	Width			
											Single	Duplex		
DAF 30	30,000	3.0	2.0	2.0	18	0.75	14 x 65	21 x 36	81	27	53	75	327	9000,9500,2750,2850,2900
DAF 36	36,000	3.6	7.3	2.5	22	0.90	16 x 65	21 x 36	81	27	55	79	381	9000,9500,2750,2850,2900
DAF 50	50,000	5.0	10.0	4.0	30	1.25	21 x 54	21 x 36	75	27	60	89	470	9000,9500,2750,2850,2900
DAF 60	60,000	6.0	12.0	4.0	36	1.50	21 x 69	21 x 36	90	27	60	89	514	9000,9500,2750,2850,2900
DAF 70	70,000	7.0	14.0	4.0	42	1.75	21 x 69	24 x 48	90	30	63	92	568	9000,9500,2750,2850,2900
DAF 80	80,000	8.0	16.0	5.0	48	2.00	24 x 72	24 x 48	93	30	66	98	691	9500,2750,2850,2900
DAF 90	90,000	9.0	18.0	5.0	54	2.25	24 x 72	24 x 48	93	30	66	98	735	9500,2750,2850,2900
DAF 100	100,000	10.0	20.0	5.0	60	2.50	24 x 72	24 x 48	93	30	66	98	779	9500,2750,2850,2900
DAF 110	110,000	11.0	22.0	7.0	66	2.75	20 x 72	30 x 48	101	36	78	116	979	9500,2850,2900
DAF 130	130,000	13.0	26.0	7.0	78	3.25	30 x 72	30 x 48	101	36	78	116	1073	9500,2850,2900
DAF 150	150,000	15.0	30.0	7.0	90	3.75	30 x 72	30 x 48	101	36	78	116	1161	9500,2850,2900
DAF 180	180,000	18.0	36.0	12.0	108	4.50	36 x 72	36 x 48	101	42	90	134	1422	2850,2900
DAF 200	200,000	20.0	40.0	12.0	120	5.00	13 x 72	36 x 48	101	42	90	134	1510	2850,2900
DAF 240	240,000	24.0	48.0	15.0	144	6.00	42 x 72	36 x 48	113	48	96	146	2428	2900

NOTES:

1. All DAF Dealkalizers are regenerated according to the resin manufacturers recommendation of a minimum 5 lb-salt/cu.ft.-resin and 0.25 lb-NaOH/cu.ft.-resin.
2. All DAF Dealkalizer flow rates recommended are based on resin manufacturers recommendations of 2.0 USGPM/cu.ft.-resin.
3. Standard resin supplied is Strong Base High Capacity Anion Resin.
4. Feed Water must be softened prior to treatment by a Chloride Anion Dealkalizer.
5. Single Unit dimensions include one (1) mineral tank, one (1) brine tank.

Duplex Unit dimensions assume an alternating type system, which includes two (2) mineral tanks, one (1) brine tank.

(All standard DAF Units are also equipped with a Chemical Solution Pump & Tank for NaOH addition)

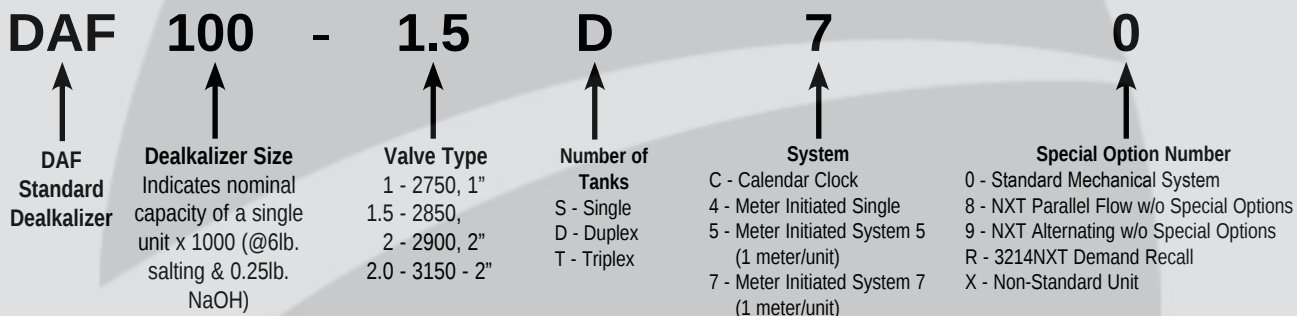
* Nominal capacity is shown, but please note that capacity will vary depending on the raw water analysis.

** Shipping Weights are single tank unit maximums, but will vary slightly with different valves.

Large units also available. Contact our Customer Service Department.

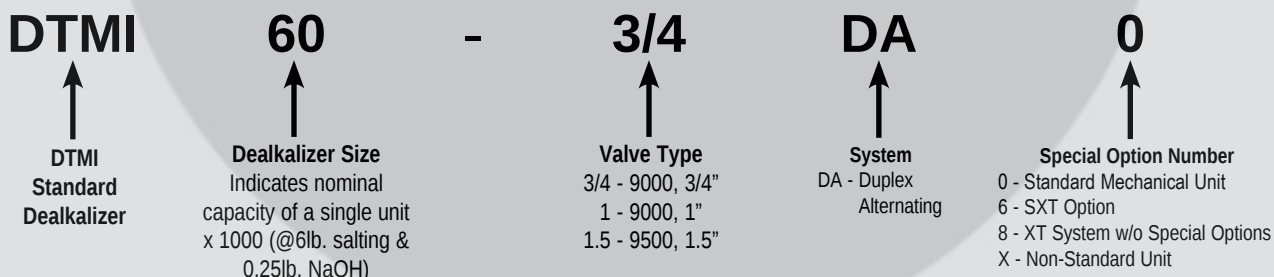
System Selection (2750, 2850, 2900, 3150, 3900 Valves)

The following example explains how the model number works:



System Selection (9000 - 3/4", 9000 - 1", 9500 Valves)

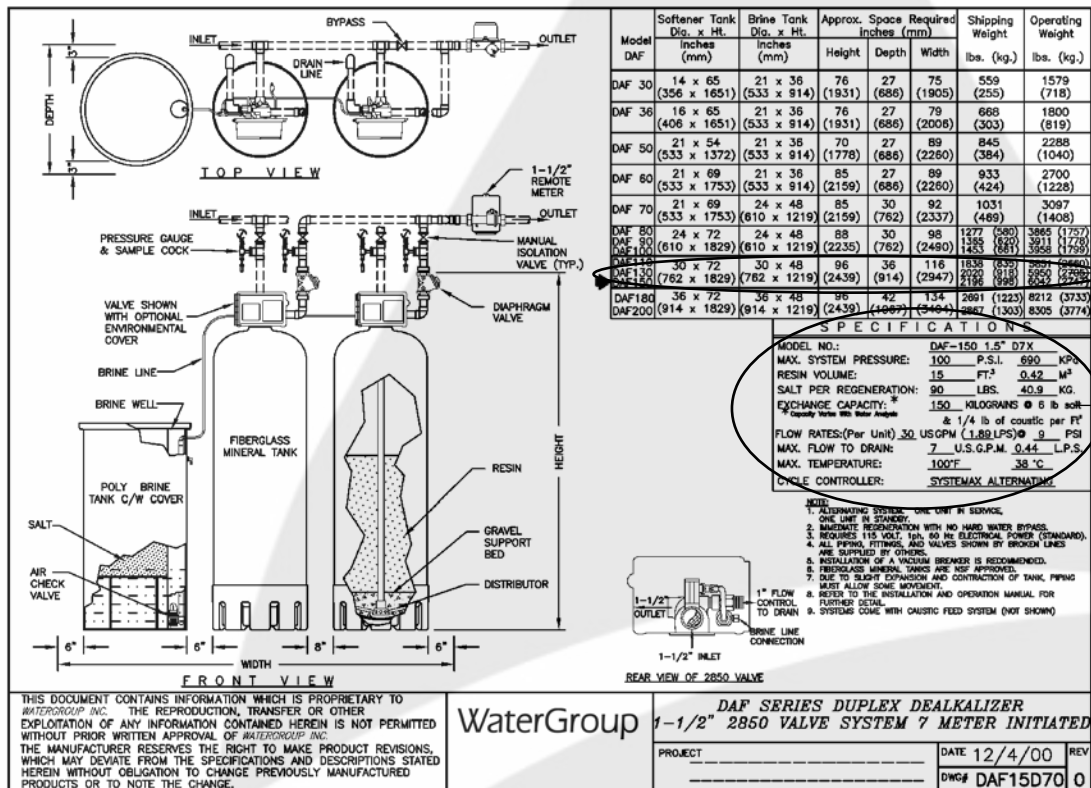
The following example explains how the model number works:



Need a Drawing?

Drawings can be provided for all standard single and duplex DAF series commercial Chloride Anion Dealkalizers with your quotation. Many drawings are also available for optional product setups such as 3200NXT Electronic Timers. Please ask your area representative or customer service if you require a drawing along with your commercial equipment quotation.

DAF Chloride Anion Dealkalizers drawings are supplied with the appropriate model highlighted, and corresponding performance specifications automatically filled in as shown in the following example.



Highlighted Model

Complete Model Number and Specifications

DAF Chloride Anion Dealkalizers drawings include all pertinent information such as:

- System type and operating description
- Mineral and Brine Tank Dimensions
- Approximate Installation Space Required (in the configuration shown)
- Shipping and Operating Weight
- Service Flow rates for Critical Applications, 15 psi and 25 psi pressure drops
- Maximum Flow rate to drain during backwash
- Electrical Information and Controller Type
- Piping layout, installation notes and accessories



Hotels, car washes, laundromats, apartment buildings, industry and food producers require high quality water to meet the demands of their customers. Water containing turbidity, iron, manganese and sulfur has a negative impact on the ability of a business or institution to supply quality products and services.

The WaterGroup line of commercial filtration systems features top mounted integral control valves of brass construction with Teflon coated internals and light-weight fiberglass media tanks. This design allows quick installation with simple automatic operation and a very high degree of reliability.

Technical Specifications and Features

Filter System

- Maximum recommended operating pressure for all filters is 100 psig (690 kPa)
- Maximum recommended operating temperature for all filters is 100°F (38°C)

Main Control Valve (Top Mounted Valve Systems)

- Calendar clock regeneration is standard
- Valve body constructed of lead-free brass*
- Main piston constructed of Teflon coated lead-free brass* with no raw water bypass feature standard on most models. Raw water bypass is available as an option.
- Standard cycle timer controls service, backwash and rinse
- Standard 115 volt electrical requirement
- Simple threaded (NPT) service inlet and outlet connections
- CSA certified valves (in Canada)

* as defined under Section 1417(d) of the U.S.E.P.A. Safe Drinking Water Act.

Filter Tanks and Internals

- Seamless polyethylene liner wrapped with a continuous filament wound/epoxy resin fiberglass shell
- PVC hub/lateral flow distributor and riser tube with washed quartz support bed
- Tanks up to and including 24" diameter are manufactured by WaterGroup Companies Inc.

Warranty

All equipment manufactured by WaterGroup Companies Inc./WaterGroup Inc. and is warranted against defects in material or workmanship for the following periods:

- Fiberglass tanks - 5 years
- Fleck control valve and electronics - 5 years
- All other components are for a period of one year

Optional Features

- Pressure differential initiated regeneration
- Meter initiated regeneration
- Treated water regeneration system
- 3200NXT network timer
- Triplex and quad systems available

System Controls & Configurations

1. **Configurations** - Filtration systems are available in single, duplex and multi-unit configurations, operating in parallel. Selection is based on service flow rate, installation space and available regeneration flow rate. Duplex and multi-unit systems feature sequential regeneration with electronic interlock.
2. **Regeneration Initiation** - Initiation of filter regeneration can be by one of the following:
 - a. Calendar Clock (standard unit regeneration) - interval determined by preset number of days
 - b. Pressure Differential (optional) - regeneration interval determined by preset filter pressure drop
 - c. Meter Initiated (optional) - regeneration interval determined by preset water volume
3. **3200NXT Network Timer** - The 3200NXT allows all valves to be identical in configuration. This allows for simple system expansion in the future without needing to replace existing controls. The control also makes initial setup simple and allows modifications to the system operation to be done in the field. The 3200NXT control also includes additional diagnostic functionality to assist with system troubleshooting.
4. **Control Housings** - Two types of control housings are available:
 - a. A removable cover is standard on 2750 and 2850 valves. Also available is a NEMA 3R environmental cover. The environmental cover includes a clear observation window which permits inspection of internal controls.
 - b. The NEMA 3R environmental cover is standard on 3150 valves.

Commercial Water Filtration Specifications



System Selection

The following example explains how the model number works:

AMM 36 - 2 F T D 0 CC

AMM → **Type of Filter**
 AAC - Activated Carbon
 ACF - Chem Free
 AMG - Manganese Greensand
 AMM - Multi-Media
 AVR - Neutralizing

36 → **Filter Diameter Inches**
 1" - 2750
 2" - 3150
 2.5" - Diaphragm Valve Nest
 3" - Diaphragm Valve Nest

2 → **Valve Size Inches**
 1" - 2750
 2" - 3150
 2.5" - Diaphragm Valve Nest
 3" - Diaphragm Valve Nest

F → **Type of Tank**
 F - Fiberglass
 S - Steel

T → **Type of Valve**
 T - Top Mount
 D - Diaphragm
 S - Side Mount

D → **Number or Type of Unit**
 S - Single; D - Duplex; T - Triplex
 Q - Quadraplex
 M - Middle (used for expansion of systems)

0 → **Special Option Number**
 0 - Standard Mechanical System
 8 - NXT w/o Special Options
 X - Non-Standard Unit

CC → **Initiation Type**
 CC - Calendar Clock (delayed regeneration)
 PD - Pressure Differential (immediate regeneration)
 MI - Meter Initiated (immediate regeneration)

AMG SERIES - Manganese Greensand Filter

Iron (Fe) and manganese (Mn) in concentrations as low as 0.3 ppm and 0.05 ppm respectively can cause staining and sludge formation. Hydrogen sulfide gas dissolved in water causes an offensive odor in concentrations as low as 1.0 ppm. The Watergroup® manganese greensand filters remove iron, manganese and hydrogen sulfide from water using an oxidation and filtration process. Oxidation of the objectionable elements is accomplished by injecting a potassium permanganate solution into the water, upstream of the filters. Filtration media consists of a layer of anthrafil on top of the manganese greensand bed.

Model	Media Volume <i>cu.ft (cu.m.)</i>	Flow Rates Single - Max. Service			Flow Rates Backwash <i>USGPM (LPS)</i>	Flow Rates Duplex - Max. Service			Tank Dia. x Hgt. <i>Inches (mm)</i>	Minimum Space Required ¹ - <i>Inches (mm)</i>			Shipping Weight Single <i>Lbs (Kg)</i>	
		ppm (Fe + 2Mn) 0-3	<i>USGPM (LPS)</i> 3-8	<i>USGPM (LPS)</i> 8-15		ppm (Fe + 2Mn) 0-3	<i>USGPM (LPS)</i> 3-8	<i>USGPM (LPS)</i> 8-15		Height	Depth	Width Single Duplex		
AMG Series														
AMG 14-1"	2.75 (.078)	5 (0.32)	3 (0.19)	2 (0.13)	10 (0.63)	10 (0.63)	6 (0.38)	4 (0.25)	14x65 (356x1651)	76 (1930)	26 (660)	26 (660)	46 (1168)	450 (205)
AMG 16-1"	3.5 (.099)	7 (0.44)	4 (0.25)	3 (0.19)	15 (0.95)	14 (0.88)	8 (0.51)	6 (0.38)	16x65 (406x1651)	76 (1930)	28 (711)	28 (711)	50 (1270)	525 (239)
AMG 21-1.5"	6.0 (.170)	12 (0.76)	7 (0.44)	5 (0.32)	25 (1.58)	24 (1.52)	14 (0.88)	10 (0.63)	21x69 (533x1753)	85 (2159)	33 (838)	33 (838)	60 (1524)	820 (373)
AMG 24-1.5"	8.0 (.227)	16 (1.01)	9 (0.57)	6 (0.38)	30 (1.90)	32 (2.02)	18 (1.14)	12 (0.76)	24x72 (610x1829)	88 (2235)	36 (914)	36 (914)	66 (1676)	1075 (488)
AMG 30-2"	12.5 (.354)	25 (1.58)	15 (0.95)	10 (0.63)	50 (3.16)	50 (3.16)	30 (1.90)	20 (1.26)	30x72 (762x1829)	99 (2515)	42 (1067)	42 (1067)	78 (1981)	1570 (714)
AMG 36-2"	17.5 (.496)	35 (2.21)	21 (1.33)	14 (0.88)	70 (4.42)	70 (4.42)	42 (2.65)	28 (1.76)	36x72 (914x1829)	101 (2565)	48 (1219)	48 (1219)	90 (2286)	2175 (989)
AMG 42-2" ⁽¹⁾	24 (.680)	48 (3.03)	29 (1.82)	19 (1.21)	95 (6.00)	96 (6.06)	58 (3.64)	38 (2.40)	42x72 (1067x1829)	110 (2794)	54 (1372)	54 (1372)	102 (2591)	3350 (1523)
AMG 42-2.5"	24 (.680)	48 (3.03)	29 (1.82)	19 (1.21)	96 (6.07)	96 (6.06)	58 (3.64)	38 (2.40)	42x72 (1067x1829)	107 (2718)	72 (1829)	54 (1372)	104 (2642)	5900 (2677)
AMG 48-2.5"	31 (.878)	63 (3.96)	38 (2.38)	25 (1.58)	126 (7.92)	126 (7.92)	76 (4.76)	50 (3.16)	48x72 (1219x1829)	107 (2718)	78 (1982)	60 (1524)	116 (2947)	7650 (3470)
AMG 63-3"	54 (1.53)	108 (6.81)	65 (4.09)	43 (2.73)	216 (13.63)	216 (13.63)	130 (8.18)	86 (5.46)	63x86 (1600x2185)	107 (2718)	93 (2363)	75 (1905)	146 (3709)	14,300 (6487)

⁽¹⁾ Must have 60 psig available to regenerate the valve at the specified backwash flow.

ACF SERIES - Chemical Free Iron Filter

The presence of iron (Fe) in concentrations as low as 0.3 ppm can cause staining and sludge formation. The Watergroup chemical free iron filters remove iron and dissolved hydrogen sulfide gas from water without the use of chemical oxidants.

Model	Media Volume cu.ft (cu.m.)	Flow Rates - USGPM (LPS)					Tank Dia. x Hgt. In. (mm)	Minimum Space Required*			Shipping Weight Single Lbs (Kg)
		Single		Backwash	Duplex			Height	Depth	Width	
		Service	Peak ¹			Service	Peak ¹				
ACF Series											
ACF 14-1"	2.75 (.078)	3 (0.19)	5 (0.32)	10 (0.63)	6 (0.38)	10 (0.63)	14x65 (356x1651)	76 (1930)	26 (660)	26 (660)	440 (200)
ACF 16-1"	3.5 (.099)	4 (0.25)	7 (0.44)	15 (0.95)	8 (0.51)	14 (0.88)	16x65 (406x1651)	76 (1930)	28 (711)	28 (711)	520 (237)
ACF 21-1.5"	6.0 (.170)	7 (0.44)	12 (0.63)	25 (1.58)	14 (0.88)	24 (1.52)	21x69 (533x1753)	85 (2159)	33 (838)	33 (838)	830 (377)
ACF 24-1.5"	8.0 (.227)	9 (0.57)	16 (1.01)	30 (1.90)	18 (1.14)	32 (2.02)	24x72 (610x1829)	88 (2235)	36 (914)	36 (914)	1075 (489)
ACF 30-2"	12.5 (.354)	15 (0.95)	25 (1.58)	50 (3.16)	30 (1.90)	50 (3.16)	30x72 (762x1829)	99 (2515)	42 (1067)	42 (1067)	1605 (730)
ACF 36-2"	17.6 (.498)	21 (1.33)	35 (2.21)	70 (4.42)	42 (2.65)	70 (4.42)	36x72 (914x1829)	101 (2565)	48 (1219)	48 (1219)	2235 (1016)
ACF 42-2" ⁽²⁾	24 (.680)	29 (1.82)	48 (3.03)	95 (6.00)	58 (3.64)	96 (6.06)	42x72 (1067x1829)	110 (2794)	54 (1372)	54 (1372)	3083 (1398)
ACF 42-2.5"	24 (.680)	29 (1.82)	48 (3.03)	96 (6.07)	58 (3.64)	96 (6.06)	42x72 (1067x1829)	107 (2718)	72 (1829)	54 (1372)	6200 (2813)
ACF 48-2.5"	31 (.878)	38 (2.38)	63 (3.96)	126 (7.92)	76 (4.76)	126 (7.92)	48x72 (1219x1829)	107 (2718)	78 (1982)	60 (1524)	8050 (3652)
ACF 63-3"	54 (1.53)	65 (4.09)	108 (6.81)	216 (13.63)	130 (8.18)	216 (13.63)	63x86 (1600x2185)	107 (2718)	93 (2363)	75 (1905)	14,700 (6668)

⁽¹⁾ Must have 60 psig available to regenerate the valve at the specified backwash flow.

AVR SERIES - Neutralizing Filters

Every year hotels, apartment buildings, schools, industry and hospitals spend millions of dollars on replacement of corroded copper piping and components because of low pH water supply. The Watergroup neutralizing filters effectively and safely adjust the pH of this aggressive water without the use of chemicals. The result is conditioned water which reduces the corrosion and failure of copper water lines and eliminates any high turbidity levels that may occur in the water supply.

Model	Media Volume cu.ft. (cu.m.)	Flow Rates - USGPM (LPS)					Tank Dia. x Hgt. In. (mm)	Minimum Space Required				Shipping Weight Single Lbs (Kg)
		Single		Backwash	Duplex			Height	Depth	Width		
		Service	Peak¹		Service	Peak³				Single	Duplex	
AVR Series												
AVR 14-1"	2.75 (.078)	5 (0.32)	11 (0.69)	12 (0.76)	10 (0.64)	22 (1.39)	14x65 (356x1651)	76 (1930)	26 (660)	26 (660)	46 (1168)	460 (209)
AVR 16-1"	3.5 (.099)	7 (0.44)	14 (0.88)	15 (0.95)	14 (0.88)	28 (1.77)	16x65 (406x1651)	76 (1930)	28 (711)	28 (711)	50 (1270)	545 (248)
AVR 21-1.5"	6.0 (.170)	12 (0.76)	25 (1.58)	30 (1.90)	24 (1.52)	50 (3.15)	21x69 (533x1753)	85 (2159)	33 (838)	33 (838)	60 (1524)	880 (400)
AVR 24-1.5"	8.0 (.227)	15 (0.95)	33 (2.08)	40 (2.53)	30 (1.90)	66 (4.16)	24x72 (610x1829)	88 (2235)	36 (914)	36 (914)	66 (1676)	1145 (521)
AVR 30-2"	12.5 (.354)	24 (1.52)	52 (3.28)	60 (3.79)	48 (3.02)	104 (6.56)	30x72 (762x1829)	99 (2515)	42 (1067)	42 (1067)	78 (1981)	1710 (778)
AVR 36-2"	17.6 (.498)	35 (2.21)	74 (4.66)	85 (5.36)	70 (4.42)	148 (9.33)	36x72 (914x1829)	101 (2565)	48 (1219)	48 (1219)	90 (2286)	2390 (1086)
AVR 42-2.5"	24 (.680)	48 (3.03)	96 (6.06)	120 (7.59)	96 (6.06)	192 (12.12)	42x72 (1067x1829)	107 (2718)	72 (1829)	54 (1372)	104 (2642)	6200 (2813)
AVR 48-2.5"	31 (.878)	63 (3.96)	126 (7.92)	157 (9.90)	126 (7.92)	252 (15.84)	48x72 (1219x1829)	107 (2718)	78 (1982)	60 (1524)	116 (2947)	8150 (3697)
AVR 63-3"	54 (1.53)	108 (6.81)	216 (13.62)	270 (17.03)	216 (13.63)	432 (27.24)	63x86 (1600x2185)	107 (2718)	93 (2363)	75 (1905)	146 (3709)	15,100 (6850)

AAC SERIES - Activated Carbon Filter

Water containing dissolved or suspended organic material will exhibit tastes, odors and colors which are offensive to potable water users and troublesome to processes such as those in the food and beverage industry. Excess chlorine can also cause taste and odor problems. The Watergroup activated carbon filters are specially designed to ensure that water passes down through the filter bed evenly and with sufficient contact time to allow for the effective adsorption of impurities.

Model	Media Volume cu.ft. (cu.m.)	Flow Rates - USGPM (LPS)					Tank Dia. x Hgt. In. (mm)	Minimum Space Required				Shipping Weight Single Lbs (Kg)
		Single		Backwash	Duplex			Height	Depth	Width		
		Service	RO²		Service	RO²				Single	Duplex	
AAC Series												
AAC 14-1"	2.75 (.078)	6 (0.38)	2.5 (0.16)	10 (0.63)	12 (0.76)	5 (0.31)	14x65 (356x1651)	76 (1930)	26 (660)	26 (660)	46 (1168)	260 (118)
AAC 16-1"	3.5 (.099)	8 (0.51)	3.5 (0.22)	15 (0.95)	16 (1.01)	7 (0.44)	16x65 (406x1651)	76 (1930)	28 (711)	28 (711)	50 (1270)	290 (132)
AAC 21-1.5"	6.0 (.170)	14 (0.88)	6 (0.38)	25 (1.58)	28 (1.76)	12 (0.76)	21x69 (533x1753)	85 (2159)	33 (838)	33 (838)	60 (1524)	440 (200)
AAC 24-1.5"	8.0 (.227)	19 (1.20)	8 (0.50)	30 (1.90)	38 (2.40)	16 (1.01)	24x72 (610x1829)	88 (2235)	36 (914)	36 (914)	66 (1676)	560 (255)
AAC 30-2"	12.5 (.354)	29 (1.83)	12 (0.76)	50 (3.16)	58 (3.66)	24 (1.51)	30x72 (762x1829)	99 (2515)	42 (1067)	42 (1067)	78 (1981)	800 (364)
AAC 36-2"	17.6 (.498)	42 (2.65)	18 (1.14)	70 (4.42)	84 (5.31)	36 (2.27)	36x72 (914x1829)	101 (2565)	48 (1219)	48 (1219)	90 (2286)	1100 (500)
AAC 42-2" ^(B)	24 (.680)	58 (3.64)	24 (1.52)	95 (6.00)	116 (7.28)	48 (3.04)	42x72 (1067x1829)	110 (2794)	54 (1372)	54 (1372)	102 (2591)	1991 (903)
AAC 42-2.5"	24 (.680)	58 (3.64)	24 (1.52)	96 (6.07)	116 (7.28)	48 (3.04)	42x72 (1067x1829)	107 (2718)	72 (1829)	54 (1372)	104 (2642)	4500 (2042)
AAC 48-2.5"	31 (.878)	75 (4.75)	31 (1.98)	126 (7.92)	150 (9.50)	62 (3.96)	48x72 (1219x1829)	107 (2718)	78 (1982)	60 (1524)	116 (2947)	6450 (2926)
AAC 63-3"	54 (1.53)	130 (8.18)	54 (3.41)	216 (13.63)	260 (16.36)	108 (6.82)	63x86 (1600x2185)	107 (2718)	93 (2363)	75 (1905)	146 (3709)	11,300 (5126)

⁽¹⁾ Must have 60 psig available to regenerate the valve at the specified backwash flow.

AMM SERIES - Multi-Media Filter

Multi-media filters effectively remove suspended matter, turbidity, dirt and rust particles from water in the range of 15-20 microns. Three layers of filter media, anthracite, filter sand and garnet, enable the multi-media filter to perform superb depth filtration. In addition this method of filtration permits higher flow rates and longer service runs.

Model	Media Volume cu.ft. (cu.m.)	Flow Rates - USGPM (LPS)					Tank Dia. x Hgt. In. (mm)	Minimum Space Required			Shipping Weight Single Lbs (Kg)	
		Single		Backwash	Duplex			Height	Depth	Width		
		Service	RO ²		Service	RO ²				Single		Duplex
AMM Series												
AMM 14-1"	2.75 (.078)	10 (0.63)	8 (0.50)	12 (0.76)	20 (1.26)	16 (1.01)	14x65 (356x1651)	76 (1930)	26 (660)	26 (660)	46 (1168)	420 (191)
AMM 16-1"	3.5 (.099)	14 (0.88)	11 (0.69)	15 (0.95)	28 (1.77)	22 (1.39)	16x65 (406x1651)	76 (1930)	28 (711)	28 (711)	50 (1270)	490 (223)
AMM 21-1.5"	6.0 (.170)	24 (1.51)	19 (1.20)	30 (1.90)	48 (3.03)	38 (2.40)	21x69 (533x1753)	85 (2159)	33 (838)	33 (838)	60 (1524)	755 (343)
AMM 24-1.5"	8.0 (.227)	30 (1.89)	25 (1.58)	40 (2.53)	60 (3.79)	50 (3.16)	24x72 (610x1829)	88 (2235)	36 (914)	36 (914)	66 (1676)	1015 (416)
AMM 30-2"	12.5 (.354)	48 (3.03)	39 (2.46)	60 (3.79)	96 (6.06)	78 (4.92)	30x72 (762x1829)	99 (2515)	42 (1067)	42 (1067)	78 (1981)	1500 (682)
AMM 36-2"	17.6 (.498)	69 (4.35)	57 (3.60)	85 (5.36)	138 (8.71)	114 (7.19)	36x72 (914x1829)	101 (2565)	48 (1219)	48 (1219)	90 (2286)	2105 (957)
AMM 42-2.5"	24 (.680)	96 (6.07)	77 (4.85)	120 (7.59)	192 (12.14)	154 (9.70)	42x72 (1067x1829)	107 (2718)	72 (1829)	54 (1372)	104 (2642)	3500 (1588)
AMM 48-2.5"	31 (.878)	126 (7.92)	100 (6.34)	157 (9.90)	252 (15.84)	200 (12.68)	48x72 (1219x1829)	107 (2718)	78 (1982)	60 (1524)	116 (2947)	4400 (1996)
AMM 63-3"	54 (1.53)	216 (13.63)	173 (10.90)	270 (17.03)	432 (27.26)	346 (21.80)	63x86 (1600x2185)	107 (2718)	93 (2363)	75 (1905)	146 (3709)	8300 (3765)

Notes for all tables:

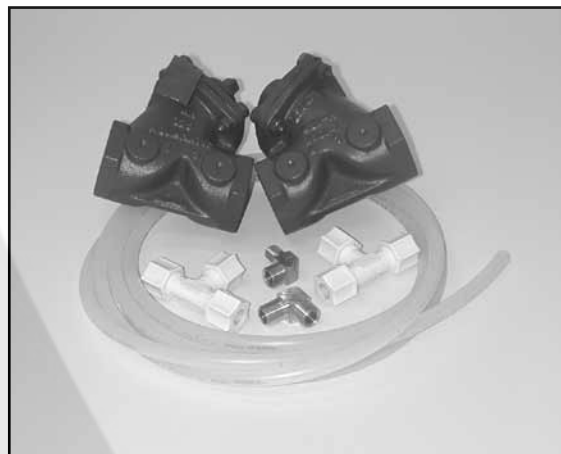
- 1- Installation dimensions do not include potassium permanganate chemical feed system (tank 21" diameter x 36" height).
- 2- Use RO column when sizing pre-treatment for reverse osmosis equipment.

- 3- Peak flow rates valid only for short periods of time (5 minutes or less).
- 4- Installation dimensions do not include hydrocharger assembly.

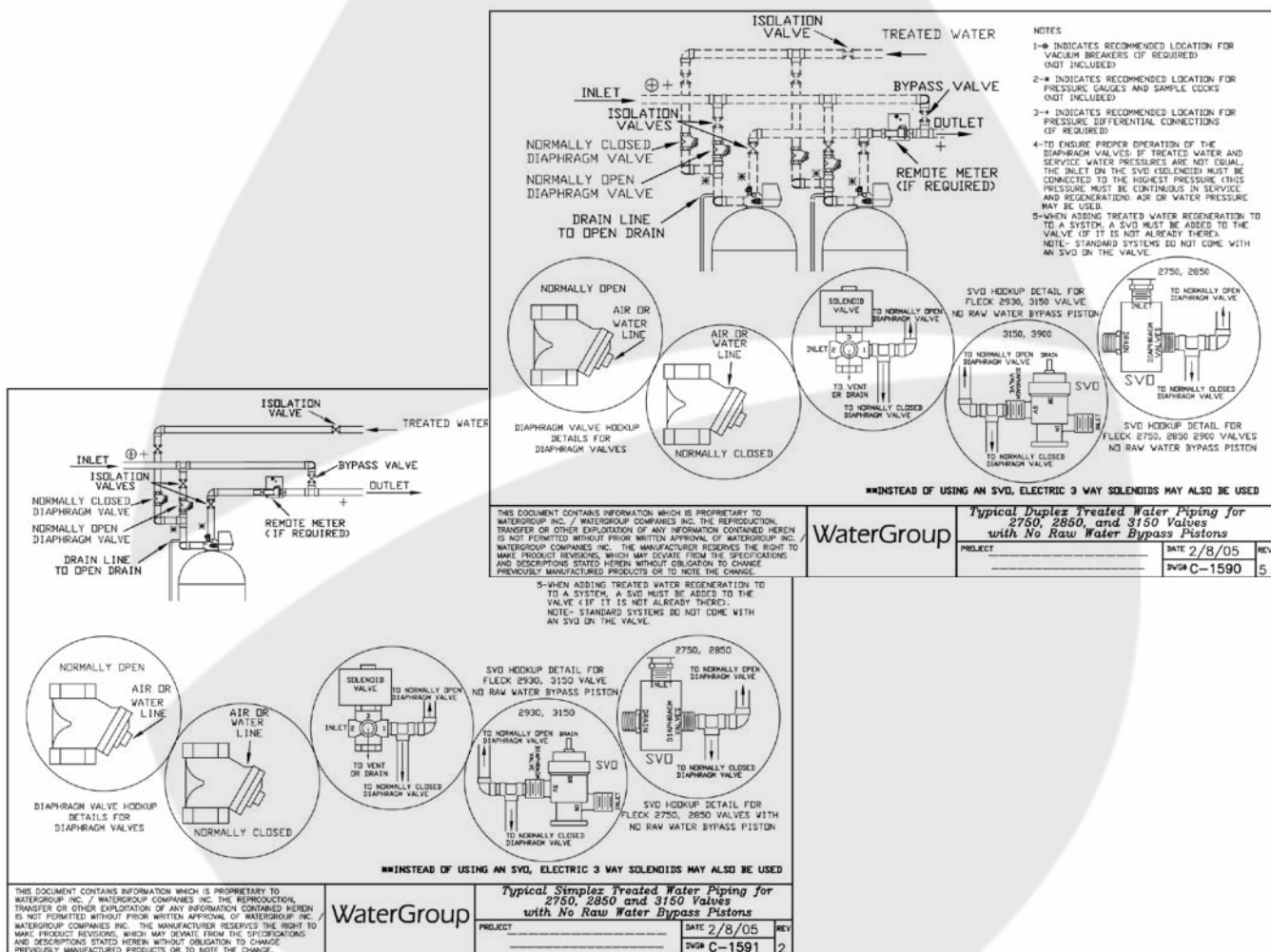
Treated Water Backwash Kits

Treated water backwash kits can be added to any commercial filter system. These kits allow a filter to switch the source of supply water for backwash so that clean water is used. Kits consist of two diaphragm valves and all the necessary parts for each Fleck Control valve in the system. Kits also include all the necessary fittings and tubing required.

- #19609 - 1" Treated Water Backwash Kit
- #19608 - 1.5" Treated Water Backwash Kit
- #19610 - 2" Treated Water Backwash Kit



Engineered Drawings are also available depicting single and duplex installations:



9000 Control Valve



9000 Features

- Perfect for light commercial/heavy residential systems that require twin tank conditioning capabilities
- Excellent flow rates - up to 24 gpm (peak)
- 5 cycle control delivers controlled upflow backwash, downflow brining, slow rinse, rapid rinse, timed brine refill and downflow service all performed with conditioned water
- Backwash capacity handles tanks up to 16" diameter
- Choice of 3/4" or 1" meters satisfies wide range of operational needs

9000 Options

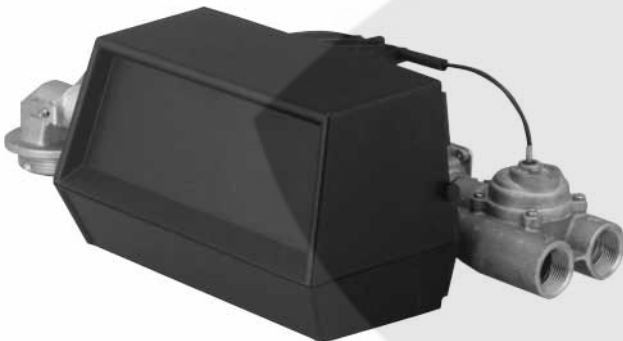
- Bypass valve (Noryl®* or lead-free brass**)
- Hot water (150°F max, 1" only)
- Window cover
- Nickel plating
- No hard water bypass
- Auxiliary switches

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



9000 Econominder with 3/4" meter



9000 Econominder with 1" Meter

Valve Specifications

Valve material	Lead-free brass**
Inlet/Outlet	3/4", 1", 1-1/4"
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Flow rate (50 psi inlet)	1" meter	3/4" meter
Continuous (15 psi drop)	21 GPM	18 GPM
Peak (25 psi drop)	28 GPM	24 GPM
CV (flow at 1 psi drop)	5.1	4.8
Max. backwash (25 psi drop)	8.5 GPM	8.5 GPM

Flow Rates (50 psi Inlet) - System†

Flow rate (50 psi inlet)	1" meter	3/4" meter
Continuous (15 psi drop)	17 GPM	13 GPM
Peak (25 psi drop)	24 GPM	20 GPM
Max. backwash (25 psi drop)	7 GPM	7 GPM

Regeneration

Downflow/Upflow	Downflow only
Adjustable cycles	Yes
Time available	164 or 82 minutes

Meter Information

Meter accuracy range	
1"	0.7 - 40 GPM +/- 5%
3/4"	0.25 - 15 GPM +/- 5%
Meter capacity range (gal.)	
1"	Standard: 310 - 5,270 Extended: 1,550 - 26,350
3/4"	Standard: 125 - 2,125 Extended: 625 - 10,625

Dimensions

Distributor pilot	1.050" pipe O.D.
Drain line	1/2" NPTF
Brine line	1600 - 3/8"
Mounting base	2-1/2" - 8 NPSM
Height from top of tank	6-1/2"

Typical Applications

Water softener	6" - 16" diameter
----------------	-------------------

Additional Information

Injector brine system	1600
Electrical rating	24V, 110V, 220V - 50 Hz, 60 Hz
Max. VA	8.9
Estimated shipping weight	3/4" Metered valve: 19 lbs. 1" Metered valve: 23 lbs.
Pressure	Hydrostatic: 300 psi Working: 20 - 125 psi
Temperature	34° - 110°F

Approvals

WQA Gold Seal system	1.0 - 6.0 cu.ft.
----------------------	------------------

*Noryl is a registered trademark of General Electric Company.

**As defined in the Federal Safe Drinking Water Act; the product also meets California Proposition 65 Standards

†On largest recommended softener tank without bypass



9500 Features

- Ideal for 1-1/2" commercial systems requiring flow rates up to 52 gpm (peak)
- Easily adjustable 5-cycle downflow brining control
- Backwash capability handles up to 24" diameter tanks, eliminating excessive, space-wasting multiple tank installations
- Rugged, long life construction featuring lead-free brass valve body
- Total flexibility in meter and timer setting
- Satisfies operational needs from 310 to 53,125 gallons
- Uses conditioned water for regeneration

9500 Options

- Hot water service (150°F)
- ET Electronic timer
- Nickel plating
- Sleeved to 1" meter
- Extended range meter

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



Valve Specifications

Valve material	Lead-free brass*
Inlet/Outlet	1-1/2" NPTF
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Continuous (15 psi drop)	43 GPM
Peak (25 psi drop)	55 GPM
CV (flow at 1 psi drop)	11.1
Max. backwash (25 psi drop)	16 GPM

Regeneration

Downflow/Upflow	Downflow only
Adjustable cycles	Yes
Time available	Electromechanical: 82 or 164 minutes

Meter Information

Meter accuracy range 1-1/2"	1.5 - 75 GPM
Meter capacity range 1-1/2"	Standard: 625 - 10,625 (gal.)
	Extended: 3,125 - 53,125

Dimensions

Distributor pilot	1.9" O.D. (1.5" pipe)
Drain line	1" NPTM
Brine line	1/2" - 3/8"
Mounting base	4" - 8 UN
Height from top of tank	6-1/4"

Typical Applications

Water softener	10" - 24" diameter
Iron filter	N/A
Sediment filter	14" diameter
Carbon filter	14" diameter
Neutralizing filter	14" diameter

Additional Information

Injector brine system	3/8" - 1600, 3/8" - 1700
Electrical rating	24V, 110V, 220V - 50 Hz, 60 Hz
Max. VA	8.9
Estimated shipping weight	Metered valve: 48 lbs.
Pressure	Hydrostatic: 300 psi Working: 25 - 125 psi
Temperature	34° - 110°F

*As defined in the Federal Safe Drinking Water Act; the product also meets California Proposition 65 Standards

†On largest recommended softener tank. The 9500 uses conditioned water for regeneration. During regeneration, the service flow will be decreased at the same rate as the drain line flow control during backwash and rapid rinse cycles.

2750 Control Valve



2750 Features

- Suitable for large residential/light commercial applications
- Excellent flow rates - up to 29 gpm (peak)
- Fully adjustable 5-cycle control delivers controlled upflow backwash, downflow brining and slow rinse, rapid rinse, timed brine refill and downflow service
- Backwash capacity handles tanks up to 24" diameter
- Choice of 7 or 12 day clock, manual or meter initiated regeneration
- Valve body is solid lead-free brass
- Hard water bypass feature is standard
- Time-tested, hydraulically balanced piston, seal and spacer concept to pilot service flow and regeneration

2750 Options

- Backwash filter
- Hot water service (time clock 180°F, meter 150°F)
- Meter initiated regeneration
- Manual operation
- Service valve operator
- No hard water bypass piston (downflow)
- Upflow models available with pressure regulated injector (specify 1600 or 1700 brine system)
- Environmental cover
- Variable brining
- Auxiliary switch

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



Valve Specifications

Valve material	Lead-free brass*
Inlet/Outlet	1" NPTM
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Continuous (15 psi drop)	26 GPM
Peak (25 psi drop)	33 GPM
CV (flow at 1 psi drop)	3.8
Max. backwash (25 psi drop)	25 GPM

Regeneration

Downflow/Upflow	Both
Adjustable cycles	Yes
Time available	Electromechanical: 164 minutes

Meter Information

Meter accuracy range	3/4" - .25 - 15 GPM +/- 5% 1" - 0.7 - 40 GPM +/- 5%
Meter capacity range (gal.)	Electromechanical: Standard: 310 - 5,270 Extended: 1,550 - 26,350

Dimensions

Distributor pilot	1.05" O.D. (1.75" pipe)
Drain line	3/4" NPTF
Brine line	3/8" & 1/2"
Mounting base	2-1/2" - 8 NPSM
Height from top of tank	6-1/2"

Typical Applications

Water softener	10" - 24" diameter
Iron filter	10" - 21" diameter
Sediment filter	10" - 21" diameter
Carbon filter	10" - 21" diameter
Neutralizing filter	10" - 21" diameter

Additional Information

Injector brine system	3/8" - 1600, 3/8" - 1650, 1/2" - 1700
Electrical rating	24V, 110V, 220V - 50 Hz, 60 Hz
Max. VA	74
Estimated shipping weight	Time clock: 13 lbs. Metered valve: 26 lbs.
Pressure	Hydrostatic: 300 psi Working: 20 - 125 psi
Temperature	34° - 110°F

*As defined in the Federal Safe Drinking Water Act; the product also meets California Proposition 65 Standards



2850 Features

- 1-1/2" top mount control valve, ideal for smaller size commercial/industrial applications
- Fully adjustable 5-cycle control delivers controlled upflow backwash, downflow brining, slow rinse, rapid rinse and downflow service
- Choice of 7 or 12 day clock manual or meter initiated regeneration
- Solid, lead-free brass valve body
- Time-tested, hydraulically balanced piston, seal and spacer concept to pilot service flow and regeneration
- Backwash capacity handles tanks up to 30" diameter
- Peak flow rate is 56 gpm with a backwash capability of 49 gpm. Ideal for filter applications.

2850 Options

- Backwash filter
- Hot water service (150°F)
- Meter initiated regeneration
- Manual operation
- Service valve operator
- No hard water bypass piston
- ET Electronic timer
- Environmental cover
- Nickel plating
- Multi-unit systems with interlocked valves
- Side Mount

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



Valve Specifications

Valve material	Lead-free brass*
Inlet/Outlet	1" NPTM
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Continuous (15 psi drop)	26 GPM
Peak (25 psi drop)	33 GPM
CV (flow at 1 psi drop)	3.8
Max. backwash (25 psi drop)	25 GPM

Regeneration

Downflow/Upflow	Both
Adjustable cycles	Yes
Time available	Electromechanical: 164 minutes

Meter Information

Meter accuracy range	3/4" - .25 - 15 GPM +/- 5% 1" - 0.7 - 40 GPM +/- 5%
Meter capacity range (gal.)	Electromechanical: Standard: 310 - 5,270 Extended: 1,550 - 26,350

Dimensions

Distributor pilot	1.05" O.D. (1.75" pipe)
Drain line	3/4" NPTF
Brine line	3/8" & 1/2"
Mounting base	2-1/2" - 8 NPSM
Height from top of tank	6-1/2"

Typical Applications

Water softener	10" - 24" diameter
Iron filter	10" - 21" diameter
Sediment filter	10" - 21" diameter
Carbon filter	10" - 21" diameter
Neutralizing filter	10" - 21" diameter

Additional Information

Injector brine system	3/8" - 1600, 3/8" - 1650, 1/2" - 1700
Electrical rating	24V, 110V, 220V - 50 Hz, 60 Hz
Max. VA	74
Estimated shipping weight	Time clock: 13 lbs. Metered valve: 26 lbs.
Pressure	Hydrostatic: 300 psi Working: 20 - 125 psi
Temperature	34° - 110°F

*As defined in the Federal Safe Drinking Water Act; the product also meets California Proposition 65 Standards

2900s Control Valve



2900s Features

- Incorporates 2 time-tested, hydraulically balanced pistons to independently pilot service flow and regeneration
- Suitable for use with single or multiple tank systems
- Backwashes softener tanks up to 36" diameter
- Continuous flow rate of 106 gpm
- Available with 7 or 12 day timer or meter to control regeneration
- Lead-free brass* valve body for superior strength and durability

2900s Options

- Meter initiated regeneration
- No hard water bypass
- Electronic timer
- Service valve operator
- Auxiliary switches
- Hot water (time clock downflow only - 180°F)
- Environmental cover
- Upflow regeneration
- Side Mount
- Treated water regeneration

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



Valve Specifications

Valve material	Lead-free brass*
Inlet/Outlet	2"
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Regeneration Direction	Downflow	Upflow
Treated Water Regeneration	No Yes	No Yes
Continuous (15 psi drop)	106	104
Peak (25 psi drop)	140	135
CV (flow at 1 psi drop)	27-3/10	26-9/10
Max. backwash (25 psi drop)	36	26

Regeneration

Downflow/Upflow	Both
Adjustable cycles	Yes
Time available	Electromechanical: 164 mins
	3200NXT: 99 mins/cycle
	3214NXT: 240 mins/cycle
	XT: Up to 240 mins/cycle

Meter Information

Meter accuracy range	3 - 150 GPM +/- 5%
Meter capacity range (gal.)	Standard: 1,250 - 21,250
	3200NXT: 2,900,000
	3214NXT: 9,900,000
	XT: 1,000 - 9,900,000

Dimensions

Distributor pilot	1-9/10" O.D.
Drain line	1" NPTM
Injector Brine System	1600 & 1650 - 3/8"
	1700 & 1710 - 1/2"
Mounting base	4" - 8 UN
Height from top of tank	12"

Additional Information

Electrical rating	24V, 110V, 220V - 50 Hz, 60 Hz
Max. VA	143
Estimated shipping weight	Time clock: 33 lbs.
	Metered valve: 40 lbs.
Pressure	Hydrostatic: 300 psi
	Working: 20 - 125 psi
Temperature	34° - 110°F

Typical Applications

Water Softener	14" - 36" diameter
Filters	14" - 30" diameter

*As defined in the U.S. EPA Safe Drinking Water Act; the product also meets California Proposition 65 Standards

- Based on 10 GPM/sq.ft. for filter applications.



3150 Features

- Fully adjustable 5-cycle control is efficient and reliable; delivers controlled upflow backwash, downflow brining and downflow service
- Versatile, top or side mounting suitable for commercial or industrial applications
- Backwash capacity accommodates tanks up to 60" diameter
- Solid, lead-free brass construction for superior strength and durability
- Protective NEMA 3R enclosure is water resistant, rain-tight, corrosion resistant and UV stable
- Flexible 7 or 12 day clock or meter initiated regeneration

3150 Options

- Backwash filter
- Meter initiated regeneration
- Service valve operator
- Side mount
- Electronic timer
- Hot water (time clock 180°F; metered valve 150°F)
- Manual operation
- No hard water bypass piston
- Upflow regeneration
- Auxiliary switch

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



Valve Specifications

Valve material	Lead-free brass*
Inlet/Outlet	2" NPTF
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Flow Rate (50 psi inlet)	Top mount	Side mount
Continuous (15 psi drop)	95 GPM	100 GPM
Peak (25 psi drop)	124 GPM	129 GPM
CV (flow at 1 psi drop)	24.8	25.9
Max. backwash (25 psi drop)	105 GPM	109 GPM

Regeneration

Downflow/Upflow	Both
Adjustable cycles	Yes
Time available	Electromechanical: 164 mins

Meter Information

Meter accuracy range	3 - 150 GPM +/- 5%
Meter capacity range (gal.)	Standard: 1,250 - 21,250 Extended: 6,250 - 106,250

Dimensions

Distributor pilot	2.375" O.D. (2" pipe)
Drain line	2" NPTF
Brine line	1" NPTM
Mounting base	Top mount: 4" - 8 UN
Height from top of tank	10"

Typical Applications

Water Softener	24" - 63" diameter
Iron Filter	24" - 42" diameter
Sediment Filter	24" - 42" diameter
Carbon Filter	24" - 42" diameter
Neutralizing Filter	24" - 42" diameter

Additional Information

Injector brine system	1" - 1800
Electrical rating	24V, 110V - 50 Hz, 60 Hz
Max. VA	87
Estimated shipping weight	Time clock: 39 lbs. Metered valve: 46 lbs.
Pressure	Hydrostatic: 300 psi Working: 20 - 125 psi
Temperature	34° - 110°F

*As defined in the Federal Safe Drinking Water Act; the product also meets California Proposition 65 Standards

3900 Control Valve



3900 Features

- Fully adjustable 5-cycle control delivers controlled upflow backwash, downflow brining, slow rinse, rapid rinse and downflow service
- Designed for single tank or multi-tank systems, alternating or interlock
- Continuous flow rate of 250 GPM
- Protective NEMA 3R enclosure is water resistant, rain-tight, corrosion resistant and UV stable
- Optional no hard water bypass during regeneration
- Choice of 7 or 12 day clock or meter initiated
- No hard water bypass

3900 Options

- Backwash filter
- Meter initiated regeneration
- Upflow regeneration
- Electronic timer
- Service valve operator
- Auxiliary switches
- Side mount

Cycles

1. Backwash (Upflow)
2. Brine & Slow Rinse (Downflow)
3. Rapid Rinse (Downflow)
4. Brine Tank Refill
5. Service (Downflow)



Valve Specifications

Valve material	Lead-free brass*
Inlet/Outlet	3" NPTF
Cycles	5

Flow Rates (50 psi Inlet) - Valve Alone

Flow Rate (50 psi inlet)	Top mount
Continuous (15 psi drop)	250 GPM
Peak (25 psi drop)	325 GPM
CV (flow at 1 psi drop)	65
Max. backwash (25 psi drop)	100 GPM

Regeneration

Downflow/Upflow	Both
Adjustable cycles	Yes
Time available	Electromechanical: 164 mins

Meter Information

Meter accuracy range	7 - 300 GPM +/- 5%
Meter capacity range (gal.)	Standard: 3,750 - 63,750 Extended: 18,750 - 318,750

Dimensions

Distributor pilot	3.5" O.D. (2" pipe)
Drain line	2" NPTF
Brine line	1" NPTM
Mounting base	Top: 6" - 8 threaded or flange
Height from top of tank	15"

Typical Applications

Water Softener	24" - 63" diameter
Iron Filter	24" - 42" diameter
Sediment Filter	24" - 42" diameter
Carbon Filter	24" - 42" diameter
Neutralizing Filter	24" - 42" diameter

Additional Information

Injector brine system	1" - 1800
Electrical rating	24V, 110V, 220V - 50 Hz, 60 Hz
Max. VA	171
Estimated shipping weight	Time clock: 93 lbs. Metered valve: 115 lbs.
Pressure	Hydrostatic: 300 psi Working: 20 - 125 psi
Temperature	34° - 110°F

*As defined in the Federal Safe Drinking Water Act; the product also meets California Proposition 65 Standards





The commercial XT controller has a full text, two-line, sixteen character LCD backlit display. Also included is a power backup to maintain the time of day during power failures. The polycarbonate housing is UV-stable and flame retardant.

System Types

Meter Delayed Weekly Reserve
 Meter Delayed Variable Reserve
 Meter Delayed Fixed Reserve
 Meter Immediate
 Remote Signal Start Delayed
 Remote Signal Start Immediate
 Time Clock Delayed
 Twin Tank
 Volume Override Delayed
 Volume Override Immediate

Product Features

Shift Key: Allows digit selection in user and master programming modes

Diagnostics

- Current flow rate
- Peak flow rate (can be reset)
- Totalizer (can be reset)
- Hours between last two regenerations
- Hours since last regeneration
- Volume remaining (adjustable)
- Software version

User Programming Mode

Master Programming Mode

Programmable Auxiliary Relay Output

- Dry contact relay (fused at 3 amps)
- Program entire regeneration
- Program during cycle position

LED Status Indicator

- Blue: In service
- Green: In regeneration
- Red: Error

System Types

Meter Delayed Weekly Reserve	Single Valve
Meter Delayed Variable Reserve	Single Valve
Meter Delayed Fixed Reserve	Single Valve
Meter Immediate	Single Valve
Remote Signal Start Delayed	Single Valve
Remote signal Start Immediate	Single Valve
Time Clock Delayed	Single Valve
Twin Tank	Single Valve
Volume Override Delayed	Single Valve
Volume Override Immediate	Single Valve

Regenerant Flow

Downflow, Upflow Variable Fill, Upflow Brine First, Downflow DB BW, Upflow Backwash, Backwash Filter

Regeneration Type

Time Clock Delayed, Meter Immediate, Meter Delayed Fixed Reserve, Meter Delayed Variable Reserve, Meter Delayed Weekly Reserve, Remote Signal Start Immediate, Remote Signal Start Delayed, Volume Override Immediate, Volume Override Delayed, Twin Tank

Valve Type

2510, 2750, 2850, 2850s, 2900, 3150, 3900, 9000, 9100, 9500, Proprietary A B E

Generic Meter Guidelines

Meter power supply is + 19V DC, up to 10 mA. 1 - 150 pulses per gallon/liter output. Hall effect sensor with open collector output, board will sink up to 10 mA at 5V DC. Pulse rate generated must not exceed 100 pulses per second (100 Hz) or 6,000 pulses per minute.

Electrical Rating

24V with 120 or 240 VAC, 50/60 Hz Wall Mount Transformer

Operating Temperature

32° - 122°F (0°C - 50°C)

Humidity

95% RH, Non-Condensing



The 3200NXT Network Controller uses on-board communication capabilities to link multiple commercial valves (via off-the-shelf CAT3, CAT5, or better cables) for a variety of system types. The 3200NXT is configured for use with 2750, 2850s, 2900s, 3150, and 3900 Control Valves, and also supports stager valves using butterfly or notched cams.

Features

- 2x16 character backlit LCD display
- Networks up to four valves
- Field-configurable for System Types 4, 5, 6, 7, and 9
- Auxiliary inputs and outputs
 - Remote signal start input
 - Remote lockout input
 - Programmable relay output/chemical pump output
- Easy installation with plug-in wiring harnesses
- Front panel diagnostics button
 - Flow rate
 - Peak flow rate
 - Totalizer
 - Hours between last two regenerations
 - Hours since last regeneration
 - Adjustable volume remaining
 - Valve position
 - Software version
- Easy time of day adjustment
 - Simply push the up or down button on the lead (#1) controller; time of day is automatically copied to the remaining controllers
- Five configurable cycle steps
- Remote signal start can be used simultaneously with time clock, meter immediate, or meter delayed regeneration triggers
 - Allows monitoring of flow and volume information in RSS applications

Three programming levels

- User mode
- Master programming
- Diagnostics mode

System Types

System 4	Single Valve	Time Clock	No Meter
		Delayed	One Meter
		Immediate	One Meter
		Remote Signal Start	Optional Meter
System 5 (Interlock)	2 - 4 Valves	Immediate	All Meters
		Remote Signal Start	Optional Meter
System 6 (Series)	2 - 4 Valves	Immediate	All Meters
		Remote Signal Start	Optional Meter
System 7 (Alternating)	2 Valves	Immediate	One Meter
		Remote Signal Start	Optional Meter
System 9 (Alternating)	2 - 4 Valves	Immediate	All Meters
		Remote Signal Start	Optional Meter

Regenerant Flow

Downflow, Upflow Brine First, Upflow Brine Refill First

Generic Meter Guidelines

Open collector output.

Pulse rate generated must not exceed 100 pulses per second (100 Hz) or 6,000 pulses per minute.

Support for meter outputs in the range of 1-255 gallons (25.5 m³) for every 1-255 pulses. Example: 35 gallons/100 pulses (= 3.5 gallons/10 pulses, = 0.35 gallons/1 pulse).

Meter must operate at 5 VDC.

Electrical Rating

24 VAC Pentair® Transformers:

115 VAC +/- 20% input, 24 VAC output

230 VAC +/- 20% input, 24 VAC output

Humidity

95% RH, Non-Condensing



The 3214NXT Demand Flow Network Controller is available to configure with all commercial 2750, 2850, 2900, 3150, and 3900 Control Valves. This demand flow system can be programmed to bring multiple units to the service position and back to standby based on system demand flow. The 3214NXT Demand Flow Network Controller uses on-board communication capabilities to link multiple valves via standard CAT3, CAT5, or better communication cables.

Features

- Network two to four valves
- Simple, on-site network programming
- Easy installation with plug-in wiring harnesses
- Shift key allows digit selecting in programming
- 2x16 character LCD backlit display (letter or digit codes not needed)
- Valve, piston, and cam type default storage
- User and master programming modes
- Diagnostic mode:
 - Current flow rate
 - Peak flow rate (can be reset)
 - Totalizer (can be reset)
 - Hours between last two regenerations
 - Hours since last regeneration
 - Volume remaining (adjustable)
 - Valve addresses

Options

- CAT 3 networking cable kit
- Remote lock
- Programmable for Fleck® and generic meters
- Programmable auxiliary relay output:
 - Dry contact relay (fused at 3 amps)
 - Program entire regeneration or during any part of regeneration
- Chemical pump output (volume and time)

Three programming levels

- User mode
- Master programming
- Diagnostics mode

System Types

System Type 14	2 - 4 Valves (meter on each valve)
----------------	------------------------------------

Regenerant Flow

Downflow, Upflow Brine Draw First, Upflow Refill First
--

Regeneration Type

Meter Immediate

Generic Meter Guidelines

Open collector output.

Board will sink up to 1-mA @ 5 V DC.

Support for meter outputs in the range of 1-255 gallons (25.5 m ³) for every 1-255 pulses. Example: 35 gallons/100 pulses (= 3.5 gallons/10 pulses, = 0.35 gallons/1 pulse).
--

Electrical Rating

24 VAC Pentair® Transformers:

115 VAC +/- 20% input, 24 VAC output

230 VAC +/- 20% input, 24 VAC output

Humidity

95% RH, Non-Condensing



System Configurations

System Type 4	Single Unit Operation
Regeneration Types	Time Clock Delayed Meter Delayed Meter Immediate Day of Week
Electrical Rating	24, 120 or 240 VAC (with appropriate transformer) 50/60 Hz
Operating Temperature Range	32° F - 120° F (0° C - 49° C)

SXT Controls provide easy, step-by-step programming at the touch of a button. The same SXT Control drives 6 different Fleck valves, saving you time in installation, service and training. The SXT Controls are available on the 5600, ProFlo, 2510, 2750, TwinFlo, and 9000.

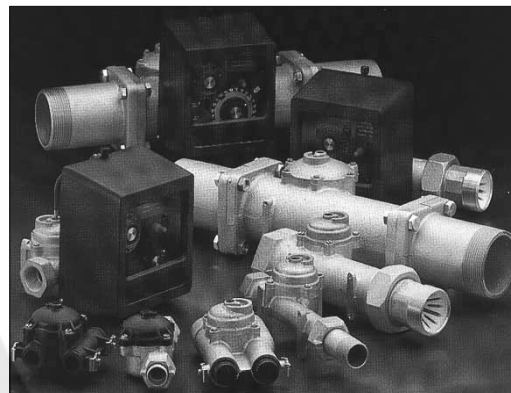
Unlike other electronic valves, the SXT Control performs without switching out cams or fumbling with jumpers, pins and cryptic calculations.

A large backlit LCD display alternates between time of day, soft water remaining or days to regeneration, and tank in service (twin tank systems only). A valve featuring the SXT Controller is the best entry-level solution for all your residential water treatment applications.

Features

- Easy, user-friendly programming
- Large, blue backlit LCD display
- 48 hour internal power backup capacitor
- True time of day in hours and minutes
- Volume of soft water remaining
- Regeneration steps and cycle time remaining
- Service and self diagnostic indicator
- Quick and easy setup of capacity, regeneration time, and day override
- Advanced programming options including up to 6 independently adjustable cycle times
- Programming is stored in memory and will not be lost due to power outages
- Electronic step-by-step regeneration
- Regeneration tonight and regenerate now option

- Benefit from demand regeneration on virtually any system. In sizes from 3/4" to 3", including standard or extended range as well as remote reset meters, Econominder® controls can be used with single or multiple tank softeners with application ranges from 125 to 63,750 gallons (standard range) and 625 to 318,750 (extended range) requiring immediate or delayed regeneration.
- Made of brass or tough, corrosion-resistant plastic to provide dependable service
- Simple and sound mechanical design has only one instream moving part - the meter impeller. Flow accuracy range is $\pm 5\%$ from 0.25 - 300 gpm. C_v range is 6.8 - 135 gpm
- Water flow drives mechanics - meter registers even during power outages
- Meter is on conditioned water



General Meter Applications

A meter is the most efficient method of monitoring water usage and initiating timely regenerations. Average to extreme water hardness indicates the use of a standard range meter. Lower than average water hardness indicates the use of an extended range meter.

Remote reset meters, although available for any commercial/industrial installation, are generally used to signal regenerations on series or alternating multiple tanks systems.

Commercial/Industrial Applications

System 4 - Single Tank with Meter Control

Delayed Regeneration - When meter zeros out, unit remains in service until 2:00 a.m., then regenerates automatically

Immediate Regeneration - When meter zeros out, unit goes immediately into regeneration

System 5 Interlock - Two or More Tanks with Metered Control
All units in service at the same time. When one meter zeros out, that unit starts regeneration. Other units remain in service even if they zero out during this time.

System 6 Series (Filters only) - Two or More Tanks with Controls, One Remote Reset Meter

All units in service at the same time. The remote reset meter monitors the entire system's capacity. When meter zeros out, the 'lead' unit regenerates. Upon returning to service, subsequent units regenerate as needed.

System 7 Alternating - Two or More Tanks with Controls, One Remote Reset Meter

One unit is on standby and all other units are in service. When meter zeros out, the standby unit goes into a regeneration cycle.

Remote Reset Meter Options

Include immediate or delayed regeneration and standard or extended range.

Meter Size	Accuracy Range (+/- 5%) gpm	C_v	Capacity Range Standard (gals)	Capacity Range Extended (gals)
3/4" Inline Only	0.25 - 15.0	6.8	125 - 2,125	625 - 10,625
1" Inline or Remote Reset	0.70 - 40.0	18	310 - 5,270	1,150 - 26,350
1-1/2" Inline or Remote Reset	1.50 - 75.0	40	625 - 10,625	3,125 - 53,125
2" Inline or Remote Reset	3.00 - 150.0	70	1,250 - 21,250	6,250 - 106,250
3" Inline or Remote Reset	7.00 - 300.0	135	3,750 - 63,750	18,750 - 318,750

Meter	Style	Material	Plumbing Connections
3/4"	5600/9000 2500	Noryl Brass w/Noryl Cover	Inlet/Outlet - O-Ring Quick Connect Inlet/Outlet - Union, Meter Unit
1"	9000 2750	Brass Brass	Inlet/Outlet - Female NPT Inlet - Male NPT with Union Outlet - Female NPT
1-1/2"	2850/9500	Brass	Inlet - Male NPT with Union Outlet - Female NPT
2"	2900	Brass	Inlet - Male NPT with Union Outlet - Female NPT
3"	3900	Brass	Inlet/Outlet - Male NPT with Union

Standard range meter showing in-stream impeller



Extended range meters

WGR+ Commercial Reverse Osmosis System



Water solutions using reverse osmosis technology.

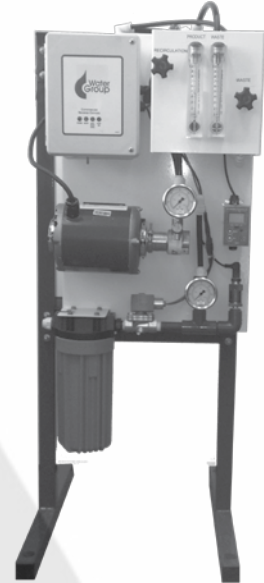
WaterGroup, a recognized leader in the North American Water Treatment market for over 40 years, has support and service across North America and around the world. Our WGR+ RO uses our market and technical expertise for a comprehensive yet affordable solution for applications up to 4,000 gallons per day and removes up to 98% of total dissolved solids in raw commercial feed water.

Standard Features

- Floor Mount Design
- Easy panel access for serviceability
- Rotary vane pump
- Inlet solenoid valve
- Drain flush solenoid
- Concentrate and recirculation throttling valves
- Pressure indicators
- FRP membrane housings
- Rotometer style flow meters
- Tank level control input
- Pre-treatment lockout
- Startup flush
- Auto flush
- Indicator lights
- UL listed

Optional Features & Accessories

- Storage Tanks
 - Level Controls
 - Chemical Feed Pumps
 - TDS Monitor Kit
 - Ultraviolet Sterilization
 - Pretreatment lockout kit for Fleck® Control Valves
 - Pressurized Storage System
 - Stainless Steel Pumps
 - Additional Customization
- Available on Request*



Spec/Model#	T-250	T-500	T-750	T-1000	T-1200	T-1700	T-2200	T-2000F	T-4000F
Part #	2675	2676	2677	2678	2679	2680	2681	2682	2683
Mount Type	Floor Stand								
Performance*									
Maximum Productivity* (GPD)	250	500	750	1,000	1,200	1,700	2,200	2,000	4,000
Permeate Flow (gpm)	0.17	0.35	0.52	0.69	0.83	1.18	1.53	1.40	2.80
Concentrate Flow (gpm)	0.51	0.35	0.52	0.69	0.83	1.18	1.53	4.17	2.78
Max. Operating Pressure (psi)	150	150	150	150	150	150	150	150	150
Recovery (Adjustable)	25%	50%	50%	50%	50%	50%	50%	25%	50%
Rejection %	98	98	98	98	98	98	98	98	98
Membrane									
Type	Extra Low Energy								
Membrane Manufacturer	Filmtec								
Membrane Size	2.5" x 21"	2.5" x 21"	2.5" x 21"	2.5" x 21"	2.5" x 40"	2.5" x 40"	2.5" x 40"	4" x 40"	4" x 40"
Membrane Array	1	1-1	1-1-1	1-1-1-1	1-1	1-1-1	1-1-1-1	1	1-1
Number of Membranes	1	2	3	4	2	3	4	1	2
Installation Connections									
Inlet (inches)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Permeate (inches)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Concentrate (inches)	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Minimum Inlet Pressure (psi)	20	20	20	20	20	20	20	20	20
Motor									
Power (HP)	1/3	1/3	1/3	1/3	3/4	3/4	3/4	3/4	3/4
Thermal Motor Protection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pump	Brass								



WGR+ Commercial Reverse Osmosis System

Spec/Model#	T-250	T-500	T-750	T-1000	T-1200	T-1700	T-2200	T-2000F	T-4000F
Controller									
Programmable Flush Modes (2)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Programmable Time Delay Start (2)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fused Control Circuit	✓	✓	✓	✓	✓	✓	✓	✓	✓
Membrane AutoFlush (2)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pre-Treatment Lockout	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tank Level Input	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nema 4 Fiberglass Enclosure	✓	✓	✓	✓	✓	✓	✓	✓	✓
On/Off Switch	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digital TDS Meter	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Digital Temperature Meter	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Material of Conctruction									
Frame	Powder Coated Steel								
Membrane Vessel	FRP								
Plumbing	SCH 80 PVC/PE/Nylon								
Prefilter									
Micron	5	5	5	5	5	5	5	5	5
Type	Sediment								
Size	2.5" X 10"	2.5" X 10"	2.5" X 10"	2.5" X 10"	2.5" X 10"	2.5" X 10"	2.5" X 10"	2.5" X 10"	2.5" X 10"
Low Pressure Shut off	✓	✓	✓	✓	✓	✓	✓	✓	✓
Membrane AutoFlush	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automatic Inlet Solenoid Valve	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flow Meters									
Permeate	✓	✓	✓	✓	✓	✓	✓	✓	✓
Concentrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
Needle Valves									
Waste	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recirculation	✓	✓	✓	✓	✓	✓	✓	✓	✓
UL (Canada & USA) Approval	✓	✓	✓	✓	✓	✓	✓	✓	✓
Electrical Requirement									
Voltage	115	115	115	115	115	115	115	115	115
Frequency	60	60	60	60	60	60	60	60	60
Max Amps	8	8	8	8	12	12	12	12	12
Weight (lbs)	77	81	92	96	88	103	111	97	129
Warranty	1	1	1	1	1	1	1	1	1
Options									
Tank Float Switch	Optional								
50 Hz Electrical Requirement	Optional								
Repressurization Pump System	Optional								
Other Membrane Types	Optional								
TDS Meter	Optional								
Temperature Meter	Optional								

* Determined by Membrane Manufacturer in following conditions - 500 ppm NaCl Solution, 77°F water temperature, 150 psi pressure. Actual flow rates may vary depending on the pre-treatment used, water conditions, system size, membrane array and applied pressure

** Please see water temperature conversion charts to determine the actual production rate of each installation. Chlorine reduction and other Pre-treatment may be required.

*** Do not use water that is microbiologically unsafe without adequate treatment before or after the system
For 220V Models, please add -230 to the Item # for ordering purposes

MacRO Series Commercial Reverse Osmosis System



Water solutions using reverse osmosis technology.

WaterGroup, a recognized leader in the North American Water Treatment market for over 40 years, has support and service across North America and around the world. Our WG Macro Series RO uses our market and technical expertise for a comprehensive yet affordable solution for applications up to 12,700 gallons per day and removes up to 98% of total dissolved solids in raw commercial feed water.

Standard Features

- Painted Steel Frame Design
- Energy Efficient Multi-stage Stainless Steel Pump
- FRP Membrane Housings
- Inlet Solenoid Valve
- Pretreatment Sediment Filter
- Concentrate and Recirculation Throttling Valves
- Pump Supply Pressure Gauge
- TDS Monitoring of Water Quality and Rejection
- Low Pressure Switch and Auto Restart
- Connection for Pretreatment Signal Switch and Level Control
- Elapsed run time monitor
- Visual and Audible Alarms
- System Flow Rate Monitoring
- User Selectable Flush Options
- Rotameter Style Flow Meters
- Programmable flush modes

Optional Features & Accessories

- Storage Tanks
 - Level Controls
 - Chemical Feed Pumps
 - Ultraviolet Sterilization
 - Pressurized Storage System
 - Additional Customization
- Available on Request*



Spec/Model#	MacRO-2	MacRO-3	MacRO-4	MacRO-5	MacRO-6
Mount Type	Floor Stand				
Performance (25 deg C)					
Maximum Productivity* (GPD)	5,000 GPD	7,800 GPD	10,400 GPD	11,520 GPD	12,700 GPD
Permeate Flow	3.61 GPM	5.41 GPM	7.22 GPM	8.00 GPM	8.81 GPM
Concentrate Flow	3.61 GPM	2.32 GPM	2.41 GPM	2.67 GPM	2.94 GPM
Recycle Flow	1.00 GPM	1.16 GPM	1.00 GPM	2.00 GPM	1.00 GPM
Feed Flow	7.22 GPM	7.73 GPM	9.63 GPM	10.67 GPM	11.75 GPM
Operating Pressure (psi)	120-175 psi	120-175 psi	120-175 psi	120-175 psi	120-175 psi
Recovery (Adjustable)	50%	70%	75%	75%	75%
Rejection %	98% avg	98% avg	98% avg	98% avg	98% avg
Membrane					
Type	Low Energy (XLE)				
Manufacturer	Filmtec				
Membrane Size	4" X 40"	4" X 40"	4" X 40"	4" X 40"	4" X 40"
Membrane Array	1-1	1-1-1	1-1-1-1	2-1-1-1	2-2-1-1
Number of Membranes	2	3	4	5	6
Installation Connections					
Inlet (inches)	3/4" Hose	3/4" Hose	3/4" Hose	3/4" Hose	3/4" Hose
Permeate (inches)	1/2" Tubing				
Concentrate (inches)	1/2" Tubing				
Minimum Inlet Pressure (psi)	30	30	30	30	30

Spec/Model#	MacRO-2	MacRO-3	MacRO-4	MacRO-5	MacRO-6
Motor					
Power (HP)	1.0 HP	1.5 HP	1.5 HP	1.5 HP	1.5 HP
Thermal Motor Protection	✓	✓	✓	✓	✓
Pump	Stainless Steel				
Controller					
2 Line LCD Display	✓	✓	✓	✓	✓
Digital Product Temperature Display	✓	✓	✓	✓	✓
23 Programmable Parameters	✓	✓	✓	✓	✓
Programmable Flush Modes	✓	✓	✓	✓	✓
Programmable Time Delay Start	✓	✓	✓	✓	✓
Fused Control Circuit	✓	✓	✓	✓	✓
Membrane AutoFlush (Programmable)	✓	✓	✓	✓	✓
Pre-Treatment Lockout	✓	✓	✓	✓	✓
Tank Level Input	✓	✓	✓	✓	✓
Nema 4 Fiberglass Enclosure	✓	✓	✓	✓	✓
On/Off Switch	✓	✓	✓	✓	✓
Digital TDS Meter	✓	✓	✓	✓	✓
Material of Contruccion					
Frame	Powder-Coated Steel				
Membrane Vessel	Fiber Reinforced Plastic				
Plumbing	SCH80 PVC / Nylon Tubing	SCH80 / Nylon Tubing			
Prefilter					
Micron	5	5	5	5	5
Type	Sediment				
Size	10" BB	10" BB	10" BB	10" BB	10" BB
Low Pressure Shut off	✓	✓	✓	✓	✓
Membrane AutoFlush	✓	✓	✓	✓	✓
Permeate Check Valve	✓	✓	✓	✓	✓
Automatic Inlet Solenoid Valve	✓	✓	✓	✓	✓
Flow Meters					
Permeate	✓	✓	✓	✓	✓
Concentrate	✓	✓	✓	✓	✓
Recirculation	✓	✓	✓	✓	✓
Needle Valves					
Waste	✓	✓	✓	✓	✓
Recirculation	✓	✓	✓	✓	✓
CSA Approval	Optional				
Electrical Requirement					
Voltage	220V, 1PH	220V, 1PH	220V, 1PH	220V, 1PH	220V, 1PH
Frequency	60 HZ	60 HZ	60 HZ	60 HZ	60 HZ
Max Amps	15A	15A	15A	15A	15A
Weight (lbs)	220	240	260	280	300
Warranty	1 Year				
Options					
Tank Level Float Switch	Optional				
50 Hz Electrical Requirement	Optional				
Repressurization Pump System	Optional				
Other Membrane Types	Optional				
CSA Approval****	Optional				

* Determined by Membrane Manufacturer in following conditions - 1000 ppm NaCl Solution, 77°F water temperature, 140 psi pressure. Actual flow rates may vary depending on the pre-treatment used, water conditions, system size, membrane array and applied pressure

** Please see water temperature conversion charts to determine the actual production rate of each installation. Chlorine reduction and other Pre-treatment may be required

*** Do not use water that is microbiologically unsafe without adequate treatment before or after the system

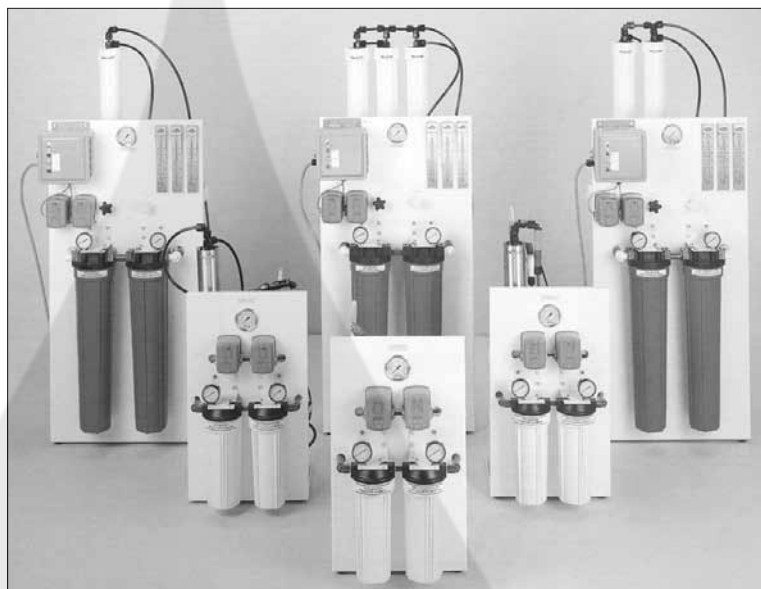
**** For CSA Approved Models, add -CSA to the part # for ordering purposes

WGR Series Commercial Reverse Osmosis



The WGR Series Commercial Reverse Osmosis Systems remove up to 99% of the total dissolved solids (TDS) in raw commercial feedwater, producing high quality process water for applications such as:

- Boiler Feed
- Humidification Systems
- Drinking Water
- Industrial Processes
- Food and Beverage Processing
- Spot Free Rinse



Performance Specifications

Item Number	2610	2611	2612	2613	2614	2615
Model	WGR-150	WGR-300	WGR-450	WGR-600	WGR-1200	WGR-1800
Capacity (GPD) ⁽¹⁾	150	300	450	600	1200	1800
Maximum Operating Pressure (psi)	190					
Typical TDS Rejection	> 97%	> 97%	> 97%	> 97%	> 97%	> 97%
Recovery	up to 50%	up to 50%	up to 50%	up to 50%	up to 50%	up to 50%
Membranes	1	1	2	1	2	3
Dimensions, H x W x D (inches)	32 x 14 x 20			53 x 22 x 24		
Inlet Connection	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Motor (HP)	1/4	1/3	1/3	1/2	3/4	3/4
Electrical (Standard)	115V/1Ph/60Hz					
Shipping Weight (lbs)	50	50	55	155	163	170

⁽¹⁾ The capacity denotes the system production in U.S. Gallons per Day as defined by the membrane specifications and the feedwater conditions of 2000 ppm (of NaCl), 25°C (77°F), 200 psi operating pressure and outlet to atmosphere.

Feed Water Requirements

Minimum Feed Pressure (psi)	30	Hydrogen Sulfide (H ₂ S)	0.00 mg/L
Maximum Feed Pressure (psi)	85	Organics Tolerance ⁽²⁾	0 mg/L
Temperature Range	40 - 100°F (4 - 37°C)	Oil (Hydrocarbons) Tolerance	0 mg/L
Total Dissolved Solids (TDS)	<2000 ppm	Turbidity ⁽²⁾	<1 NTU
Hardness	<10 Grains/USGal as CaCO ₃	SDI (Silt Density Index)	<5
Total Iron (Fe)	<0.1 mg/L	Chlorine Tolerance ⁽²⁾	0 mg/L
Manganese (Mn)	<0.05 mg/L	pH Range	2.0 - 11.0

⁽²⁾ Sediment and Carbon pre-filters, standard on the WGR Series must be replaced regularly to protect membranes. These feed requirements also include that the water be potable before treatment by a WGR Series RO system.

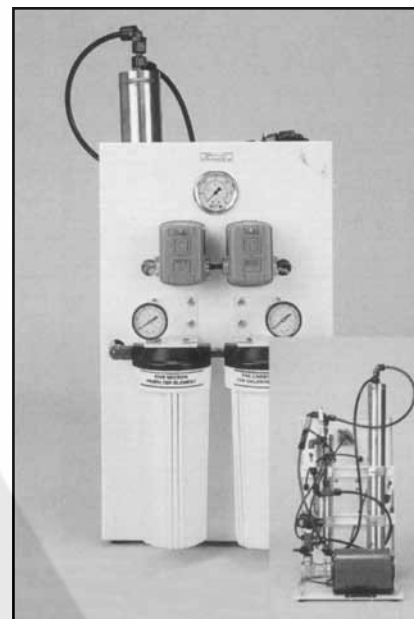


WGR 150, 300 and 450 System Features

- Membranes: Thin Film Composite (TFC) for maximum rejection of impurities
- Membrane Housings: WGR 150, 300 and 450 housings are stainless steel
- Process Pump: Direct coupled rotary vane pump, designed for continuous high pressure service
- Frame: Corrosion and scratch resistant powder coated steel
- Prefilters: 5 Micron Pre-Filter - for the removal of sediment
Radial Flow Activated Carbon Pre-Filter - for the removal of chlorine
- Inlet Isolation Valve: Provides a convenient shut-off for easy pre-filter replacement
- Inlet Low Pressure Shutoff Switch: Automatic protection for the process pump should insufficient feed water pressure be available.
- Outlet Tank Full Shutoff Switch: System will automatically start when tank pressure falls below 30psi and stop when pressure reaches 50 psi.
- Simple Maintenance / Inspection: WGR Series components are strategically located on the frame for easy access and inspection.

WGR 150, 300 and 450 Optional Features

- a. Stainless Steel Process Pump - replaces standard brass process pump
- b. Float Switch - mechanical tank full float switch for atmospheric type storage tanks
- c. Low Energy Membranes (WGR 300 only)



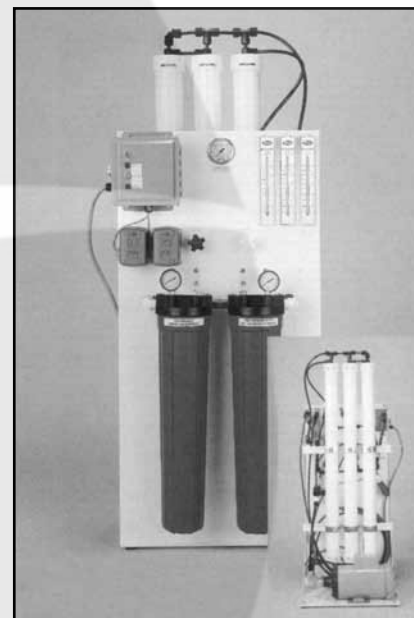
WGR 450 shown above

WGR 600, 1200 and 1800 System Features

- Membranes: Thin Film Composite (TFC) for maximum rejection of impurities
- Membrane Housings: WGR 600, 1200 and 1800 housings are PVC
- Process Pump: Direct coupled rotary vane pump, designed for continuous high pressure service
- Frame: Corrosion and scratch resistant powder coated steel
- Prefilters: 5 Micron Pre-Filter - for the removal of sediment
Radial Flow Activated Carbon Pre-Filter - for the removal of chlorine
- Flow Meters: Product, Reject and Recycle stream flow meters for monitoring of operating conditions.
- Control Box: NEMA 12X rated control box with ON/OFF switch and mode indicator lights
- Air Purge: System automatically purges air out of process pump and membranes before startup
- Inlet Isolation Valve: Provides a convenient shut-off for easy pre-filter replacement
- Inlet Low Pressure Shutoff Switch: Automatic protection for the process pump should insufficient feed water pressure be available.
- Tank Full Pressure Switch: System will automatically start when tank pressure falls below 30psi and stop when pressure reaches 50 psi.
- Simple Maintenance / Inspection: WGR Series components are strategically located on the frame for easy access and inspection.

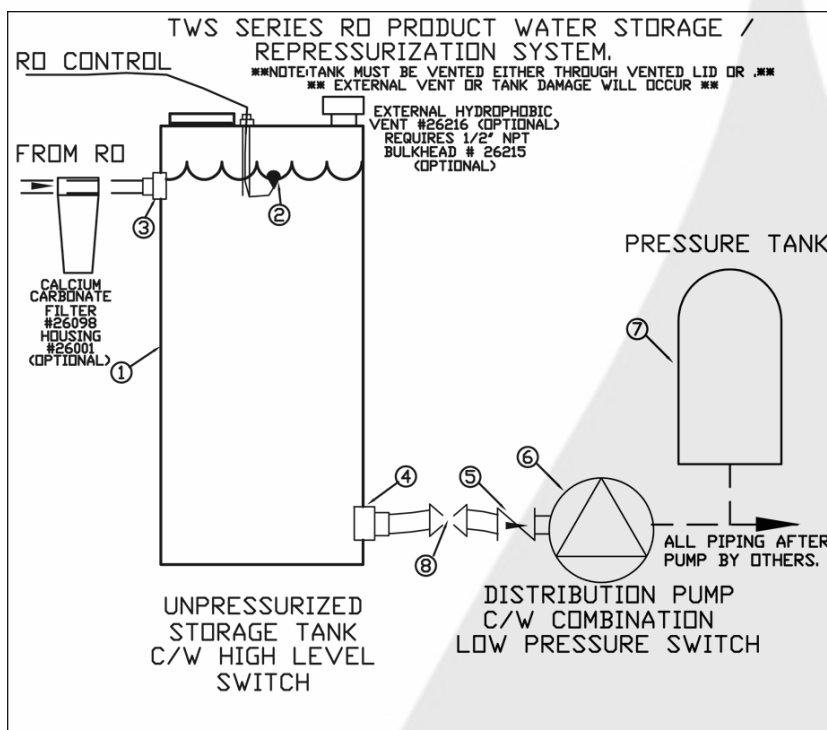
WGR 600, 1200 and 1800 Optional Features

- a. Stainless Steel Membrane Housings - replaces standard PVC membrane housings
- b. Stainless Steel Process Pump - replaces standard brass process pump
- c. Float Switch - mechanical tank full float switch for atmospheric type storage tanks
- d. 230V / 1 Ph / 60Hz - Optional Electrical
- e. Automatic Flush - allows unit to automatically flush membranes for 1 minute every two hours of consecutive operation.
- f. Low Energy Membranes (WGR 600, 1200 and 1800)



WGR 1800 shown above

TWS Series Storage System



Part	Model	Approx Storage Capacity
26200	TWS 0	Items 2 - 7 (no tank included)
2620	TWS 150	150 US Gallons 23"W x 34"L x 60"H
2621	TWS 300	300 US Gallons 29"W x 48"L x 75"H
2622	TWS 500	500 US Gallons 48" Dia. x 98"H

TWS Series RO Product Water Storage Systems

Include the following components (shipped loose)

Item	Part	Description
1	95096 + 95098 Tank	150 USG (nominal) oval poly storage tank c/w 8" vented lid. Dimensions (approx) 25" W x 34" L x 60" H Tank fittings shipped loose as installations vary.
2	RO Control Float	High level RO shutdown (green) float Contact Open (white & black - common) on high level Contact Closed (red & black - common) on high level Contacts rated for 1/2 hp Float wiring to be installed through the top of the tank using the bulkhead, liquid tight, female adapter and 1' of PVC pipe (included with package)
3	Tank Inlet	3/4" bulkhead c/w 3/8" tubing connection
4	Tank Outlet	1.25" bulkhead c/w hose adapters and 5' of braided hose (included with package) Recommend bulkhead approx 3" from bottom of tank. Do not install on tank molding seam. Bulkhead can be installed by sliding the bulkhead fitting down a rod or wire into the outlet hole
5	Check Valve	1.25" check valve c/w close nipple (included)
6	Pump	3/4 hp stainless steel pump Produces approx 10 USGPM @40 psi. All wetted parts are stainless steel or Noryl. Pump has a 1.25" NPT suction and 1" NPT discharge. Pump c/w combination low pressure-pressure switch. If the pump starts to run dry, the pump will shut off and will have to be manually started using the start 'lever' on the pressure switch. Voltage is 115V (#6042-01) or 230V (#6043-02). NOTE: All piping after pump by others.
7	Pressure Tank	Tank is compatible with RO water. Drawdown (20/40 psi) is approx 7.5 USG. Dimensions 16" Dia x 29' H. Connection is 1" MPT
8	Ball Valve	Optional ball valve to isolate pump from RO Storage Tank

FILMTEC Membranes

General Specifications (complete specification sheets available upon request)

Item #	Model	Applied Pressure, psig (bar)	Permeate Flow Rate, gpd (m³/d)	Stabilized Salt Rejection, (%)	Maximum Feed Flow Rate, gpm (m³/h)	Typical Recovery Rate (%)
2" Elements						
92014	TW30-2013	225 (15.5)	100 (0.4)	99.0	3 (0.7)	5
92003	TW30-2026	225 (15.5)	220 (0.8)	99.0	3 (0.7)	10
2.5" Elements						
92011	TW30-2514	225 (15.5)	175 (0.66)	99.0	6 (1.4)	5
92007	TW30-2521	225 (15.5)	300 (1.14)	99.0	6 (1.4)	8
92021	TW30-2540	225 (15.5)	650 (2.46)	99.0	6 (1.4)	15
92038	XLE-2540	100 (6.9)	770 (2.9)	99.0	6 (1.4)	15
4" Elements						
92013	TW30-4014	225 (15.5)	475 (1.80)	99.0	17 (3.9)	5
92006	TW30-4021	225 (15.5)	900 (3.41)	99.0	17 (3.9)	8
92012	TW30-4040	225 (15.5)	2200 (8.33)	99.0	17 (3.9)	15
92036	XLE-4040	100 (6.9)	2400 (9.1)	99.0	14 (3.2)	15
92037	BW30-4040	225 (15.5)	2200 (8.33)	99.5	16 (3.6)	15
92039	BW30LE-4040	150 (10.3)	2000 (7.7)	99.0	16 (3.6)	15

Membrane Housings

Item #	Vessel Size	Material	Port Connections, inches	End Cap	Maximum Pressure psig (bar)
92030	2514	Stainless Steel	End, 1/4"	PVC with U-Pin	300 (20.7)
92029	2521	Stainless Steel	End, 1/4"	PVC with U-Pin	300 (20.7)
92033	2540	Stainless Steel	End, 1/4"	PVC with U-Pin	300 (20.7)
92030	4040	Stainless Steel	End, 1/2"	PVC with U-Pin	300 (20.7)
92028	2540	PVC	End, 1/4"	PVC with U-Pin	225 (15.5)
92019	4040	PVC	End, 1/2"	PVC with U-Pin	225 (15.5)



Request for Commercial Bid



Sales Agent Name _____ Date _____

Company Name _____ Job # _____

Contact Person _____

Address _____

City _____ State/Prov. _____ Zip Code/Postal Code _____

Phone _____ Fax _____ E-mail _____

Site Location _____

Water Sample or Water Report Attached?: _____ Yes _____ No If "No", please provide the following:

Water analysis: Hardness _____ Iron _____

Manganese _____ pH _____

TDS _____

Other _____

What is desired water quality? _____

Application: _____

Hot and Cold Hot Only

Water Source: Municipal Private Well

Plumbing Size _____ Water Usage per Day _____ gallons

Flow Rate _____ gpm Pressure Range _____ psi

Peak Flow _____ gpm Number of Hours of Operation _____

Drain Capacity _____ gpm Water Temperature _____ °F

Voltage _____ Pumping Flow Rate _____

Pressure System: Constant Variable

Space Restrictions _____

Special requirements or other relevant information:

Water Conditioning Products

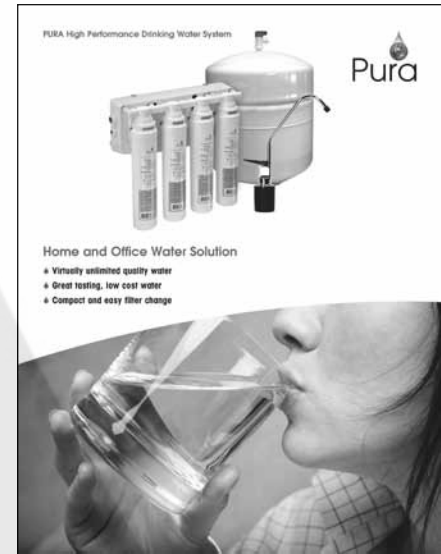




#57455 DURO Softener and Filters Brochure (full color)



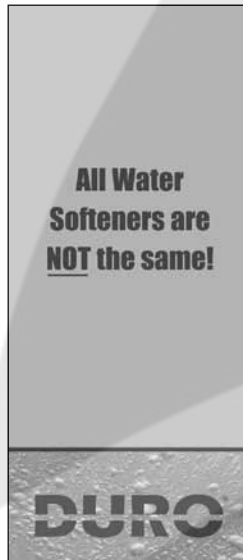
#57456 WaterGroup Softeners and Filters Brochure (full color)



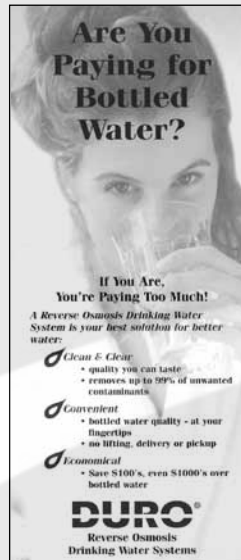
#57436 Reverse Osmosis Drinking Water Systems Brochure (full color)



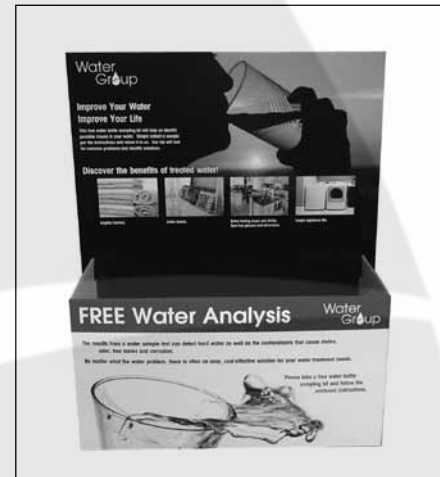
#57121 All Products Mailer (full color)



#57122 Good, Better & Best Mailer (2 color)



#57119 Reverse Osmosis Mailer (full color)



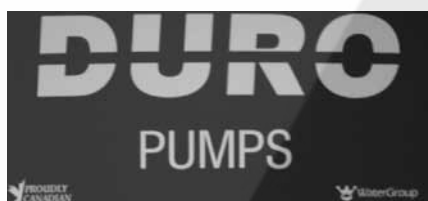
57336 - POP Water Bottle Sample Display - WaterGroup



57094 - Banner (Blue on White)



57107 - Authorized Dealer Truck Decal
12"H x 26"W (Blue on White)



57116 - Wall/Window Card Pumps;
12"H x 25"W (White on Blue)



57155 - Wall/Window Card Pumps Bilingual;
7-3/4"H x 17-1/2"W (White on Blue)



57156 - Wall/Window Card Water Treatment Bilingual;
7-3/4"H x 17-1/2"W (White on Blue)



57272 - Window Decal;
3-1/2"H x 9"W (Blue on Clear)



57521 - Softener Ad Mat (Black & White)



57522 - Filter Ad Mat (Black & White)



57544 - RO Ad Mat (Black & White)



57543 - RO Ad Mat Cost Comparison (B&W)

Softeners

- 57455 Duro Softeners and Filters Brochure
- 57122 Good, Better, Best Pamphlet
- 57093 (F) Econoflo Softeners SXT
- 57131 (F) Econoflo Softeners MI
- 57087 (F) Iron Guard Spec Sheet
- 57026 (F) High Flow 7000SXT Softener Spec Sheet
- 57083 (F) Mini Cabinet Softener Brochure

Filters

- 57456 WaterGroup Specialty Water Treatment Solutions
- 57019EF Automatic Mixed Bed Filter Spec Sheet
- 57020 (F) Organic Color Removal Spec Sheet
- 57029 Chloramine Removal Filter
- 57138 Econoflo Upflow Neutralizer Spec Sheet
- 57257 Super Filter Sell Sheet
- 57397 (F) Combination Softener Tannin Sell Sheet
- 57066EF Air Pump & Retention Tank Kit Sell Sheet
- 57084 (F) Ultra Micro Filter Sell Sheet

Filter Systems

- 51803 Side Stream Filter Systems Sell Sheet
- 57802 (F) Shower Filters Sell Sheet

Drinking Water Systems

- 57001 (F) Economy RO Brochure
- 57027 (F) RO Designer Faucets Sell Sheet
- 57803 (F) Value Faucets Sell Sheet
- 57119 Duro "Are You Paying for Bottled Water" Envelope Stuffer
- 57518 (F) 1240 Series Drinking Water Systems
- 57400 (F) Remote Water Chiller Sell Sheet

Ultraviolet Disinfection System

- 57017 (F) Pura UV Brochure
- 57021 (F) Pura UVSS Sell Sheet
- 57022 Pura Stainless Steel UV Poster
- 57453 Pura ABuv Brochure

Aqua Flo

- 57004 (F) Aqua Flo Filters & Cartridges Brochure
- 57399 (F) Aqua Flo Ultra 2 Under Sink Filter System
- 57452 Aqua Flo Housing Brochure
- 57472 Aqua Flo Cartridges Brochure

Distillers

- 57005 Precision Water Systems Mailer
- 57619 PWS 8-M
- 57620 PWS 8-5 & 5-3
- 57622 PWS 12-12 & 12-20

Miscellaneous

- 57000 (F) Well Tanks Brochure (Canada)
- 57009 Resin Cleaner and Feeders
- 57800 (F) TDS-3 Meter Sell Sheet
- 57801 (F) Waterproof pH Pen Sell Sheet

Commercial

- 57088 (F) Softeners Brochure
- 57425 (F) Filters Brochure
- 57067 WGR Series RO Brochure
- 51838 Commercial Drawings CD

Sales Aids

- 57094 Duro Banner (48"W x 22"H) Hemmed & Grommets
- 57107 Authorized Dealer Truck Decal (12"H x 9"W)
- 57272 Water Conditioning Products Window Decal (3.5"H x 9"W)
- 57155 Wall/Window Cards Small - Pumps (Bilingual) (7-3/4"H x 17.5"W)
- 57156 Wall/Window Cards Small - Water Treatment (Bilingual) (7-3/4"H x 17.5"W)
- 57116 Wall/Window Cards Large - Pumps (12"H x 25"W)
- 57121 Duro All Products Mailer
- 57336 POP Water Bottle Sample Display - WaterGroup
- 57421 Presentation Folder - WaterGroup

Ad Mats

- 57521 Softener Ad Mat
- 57522 Filter Ad Mat
- 57543 Reverse Osmosis Ad Mat - Cost Comparison
- 57544 Reverse Osmosis Ad Mat

(F) These items are available in French. Please add an 'F' to the end of the item number when ordering.

*These are special order items. Please call Customer Service.

Water Conditioning Products



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 (CaCl_2O_2) - 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.

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 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 are 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 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%.

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.)

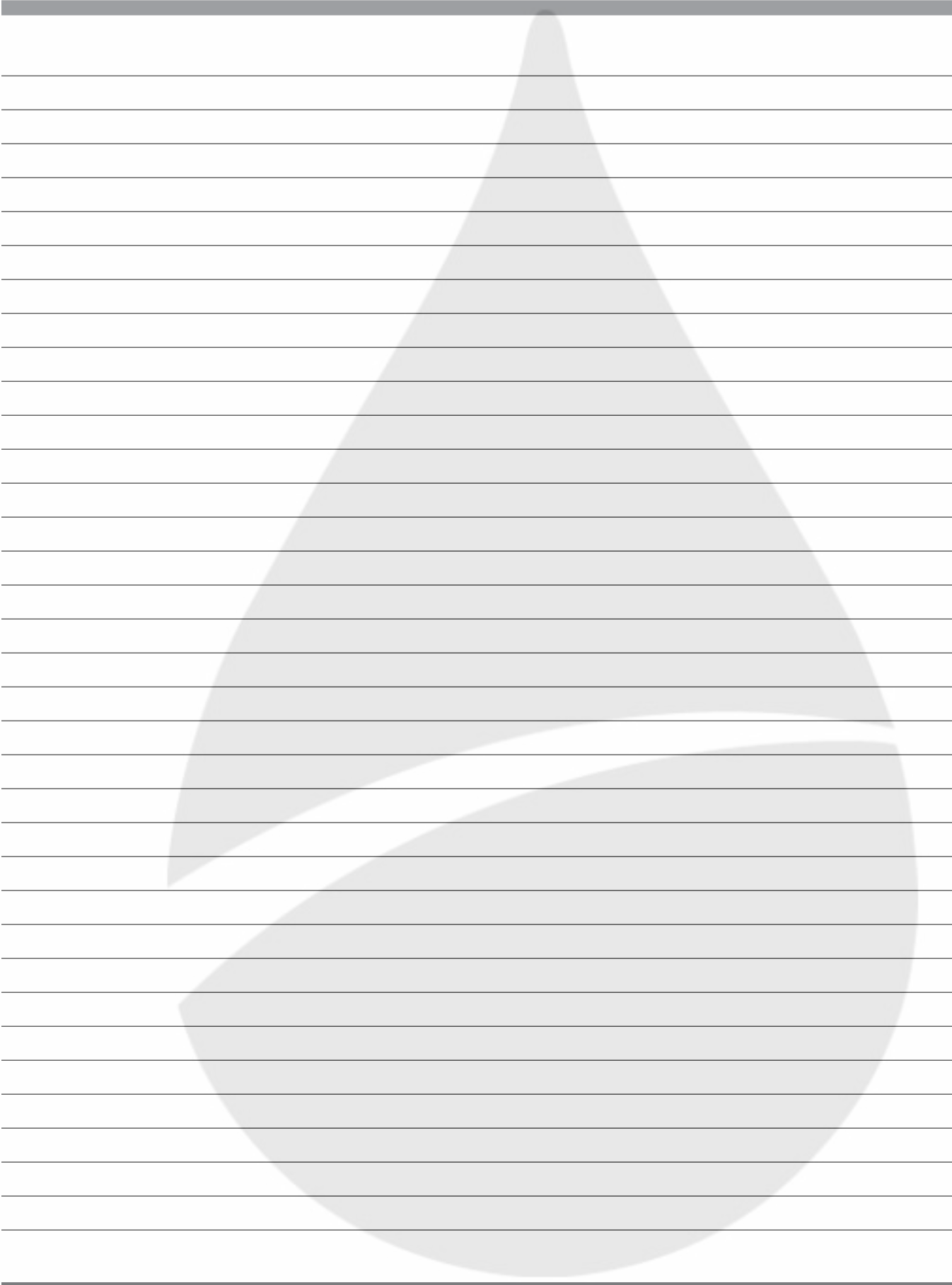
Toxic Organics - Carbon-based chemicals which are frequently found in our water supplies and are harmful to human health. They are usually from agricultural and industrial effluents and hazardous waste dumps (e.g. TCE, PCB, DCBP, pesticides, etc.)

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.



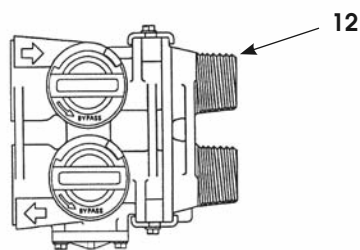
Water Conditioning Products

6200 Water Softeners	272	Econoflo Upflow Neutralizer	327
6200 SXT Water Softeners	274	Automatic Mixed Bed Filter	328
DUROsoft EM Water Softeners	277	Organic Color Removal (Tannins) Filter.....	329
DUROsoft MM Water Softeners.....	285	Chloramines Removal Filter	330
High Flow Twin Tank 7000SXT Softener	291	Air Pump & Retention Tank Assembly	331
9100SXT Twin Meter Initiated Water Softener ...	296	Ultra Micro Filter	332
Econoflo SXT Water Softeners	301	2510 Calendar Clock Valve.....	333
Econoflo MI Water Softeners	306	2510 MI Valve	336
Econoflo CC Water Softeners	310	Bypasses	341
Mini Cabinet Softeners	315	PURA High Performance	
Iron Guard and Iron Guard Plus Filter.....	316	Drinking Water System.....	342
Combination Softener and Tannin Filter	317	1240 Series RO Drinking Water Systems.....	343
6200 Filters.....	318	Economy RO Drinking Water Systems	346
Duroclean IF Chemical Free Iron Filter	324	Booster Pump.....	348
Duroclean ISF Iron & Sulfur Filter	325	PURA Product's Drinking Water Systems.....	350
Duroclean Automatic Water Filter	326		

Hot Water Manuals are omitted

All Discontinued Product Parts Breakdowns and Parts Lists can be found at www.watergroup.com in the "Manuals/Catalogues" section.

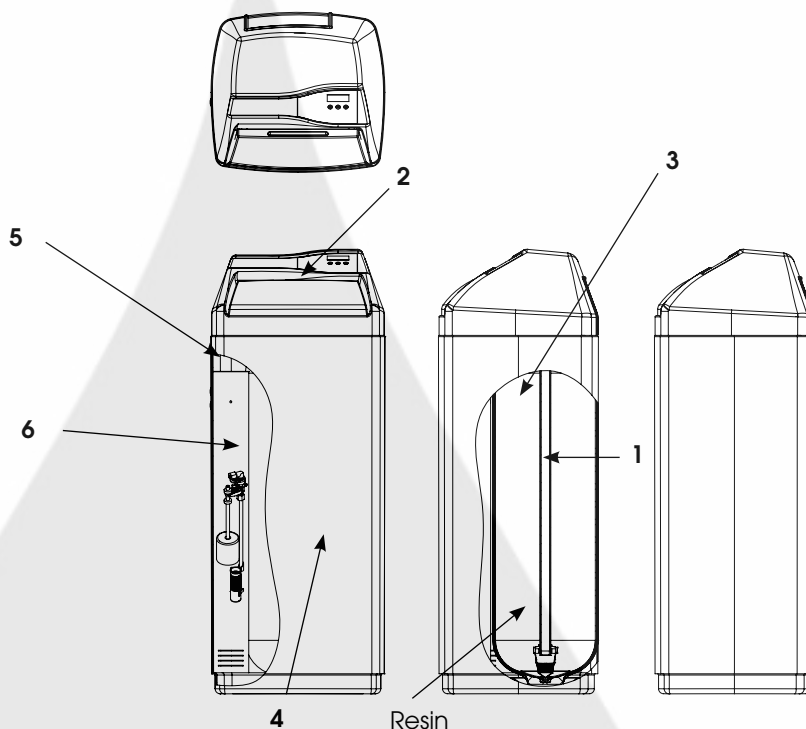
6200 Cabinet Water Softener



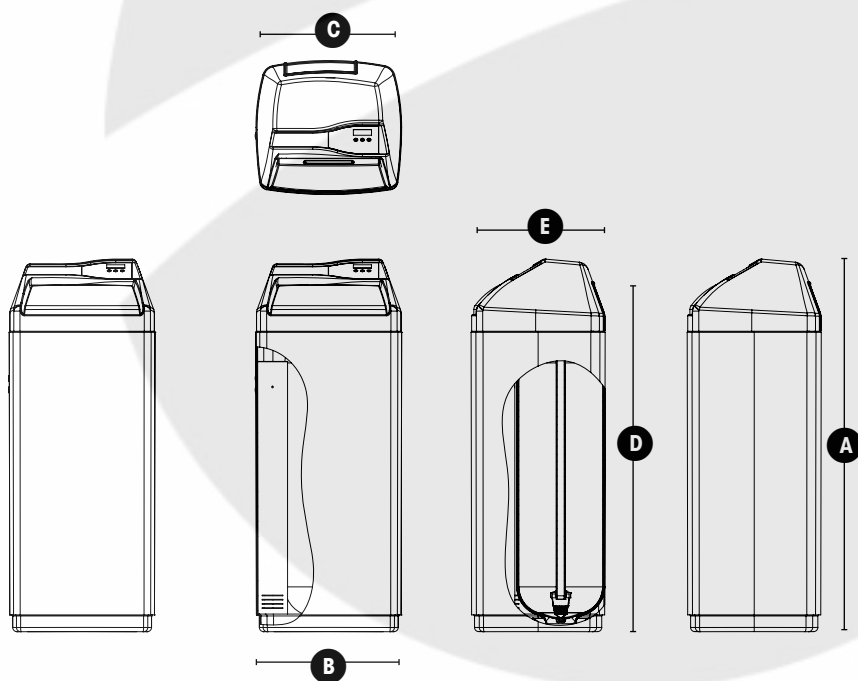
Common Components

Item No.	Part No.	Description
1	19495	Distributor
4	6200C	Cabinet
5	48004	Brine Well Cap
6	13623-2	Safety Float
7	13308	Hose Barb*
10	60626	Meter*
11	18706-02	Yoke*
12	60049	Bypass

*not shown



Part Number	Model Description	Valve (2)	Tank (3)	Resin #21502
4621	DC20SXT	6200201	19354	0.75 CF
4622	DC30SXT	6200202	110354	1.00 CF

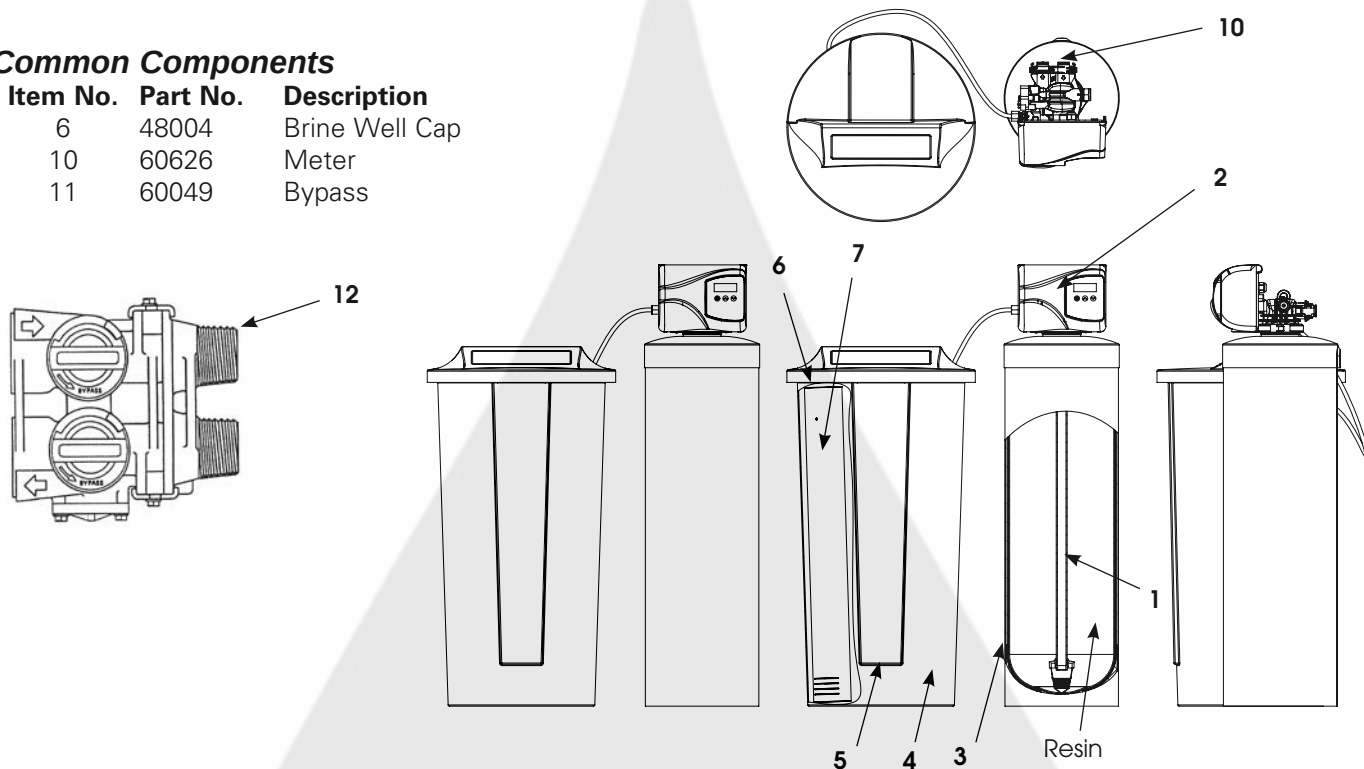


Dimensions (inches)	
	DC20SXT/DC30SXT
A	44
B	17
C	17
D	38
E	17

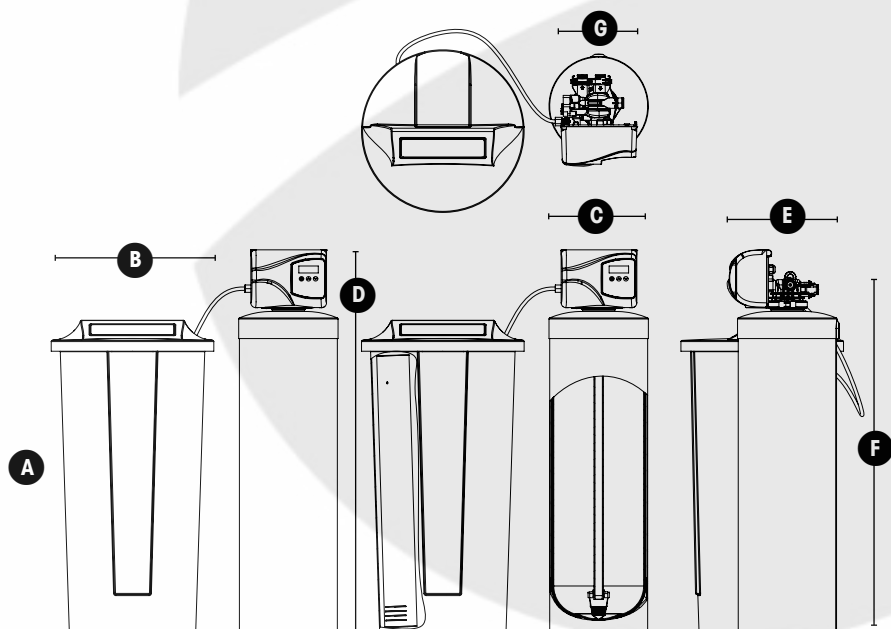
NOTE: For additional information, refer to www.watergroup.com or Operating and Service Manual that is shipped with unit.

Common Components

Item No.	Part No.	Description
6	48004	Brine Well Cap
10	60626	Meter
11	60049	Bypass



Part Number	Model Description	Distributor (1)	Valve (2)	Tank (3)	Brine Tank (4)	Grid (5)	Safety Float (7)	Resin #21502
4623	DT20SXT	19495	6200203	19354	100283	N/A	13624	0.75 CF
4624	DT30SXT	19495	6200204	110354	100283	N/A	13624	1.0 CF
4625	DT40SXT	19478	6200205	110474	100283	N/A	13624	1.5 CF
4626	DT60SXT	19477	6200206	112524	100192	19710	13624	2.0 CF
4627	DT90SXT	60098	6200207	114651	100192	95009-21	13624	2.5 CF



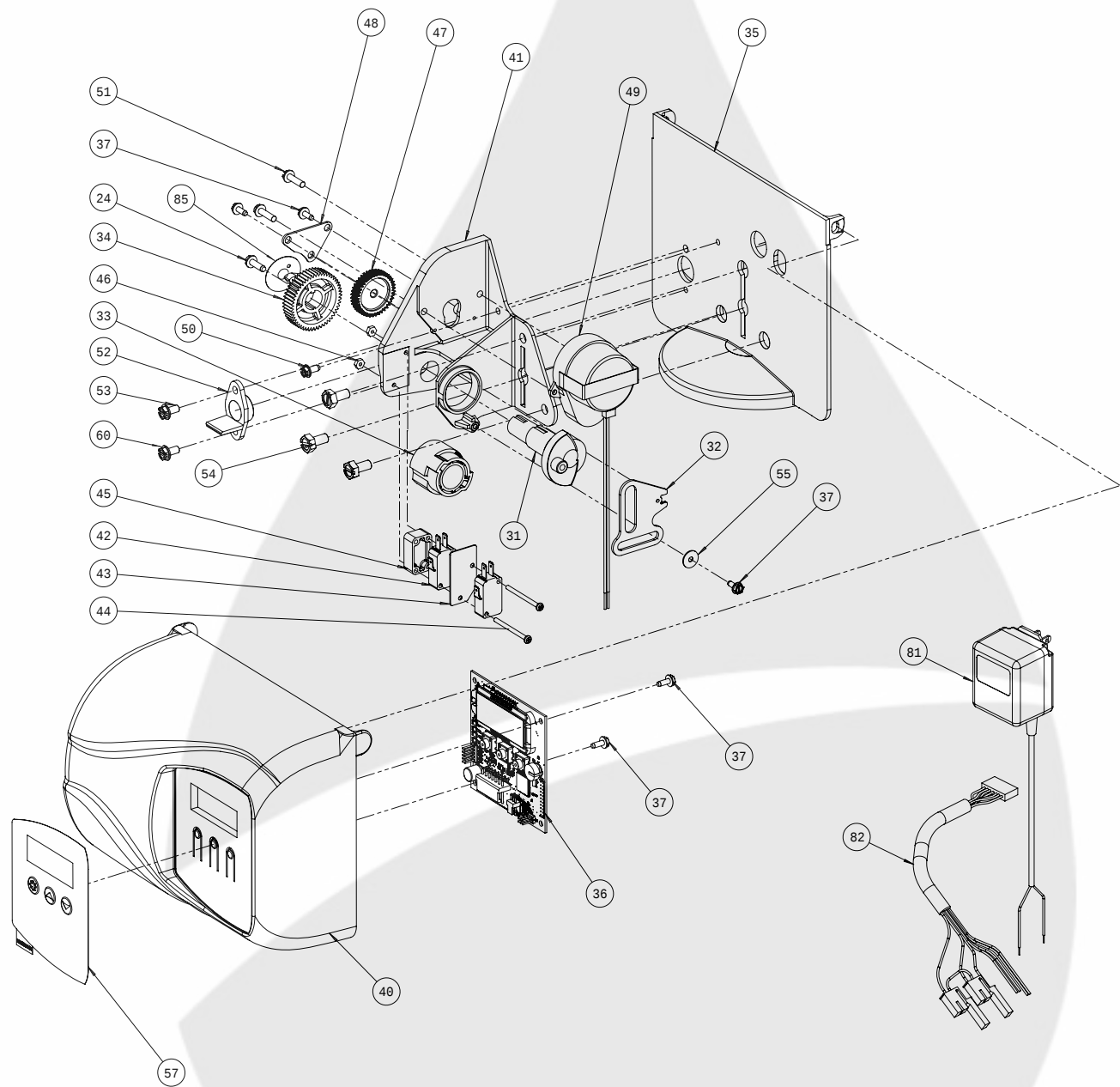
Dimensions (inches)					
	DT20SXT	DT30SXT	DT40SXT	DT60SXT	DT90SXT
A	35	35	36	36	36
B	18	18	21	21	21
C	9	10	10	12	14
D	41	41	53	58	71
E	15	15	15	15	15
F	37	37	49	54	67
G	2	2	2	2	2

NOTE: For additional information, refer to www.watergroup.com or Operating and Service Manual that is shipped with unit.

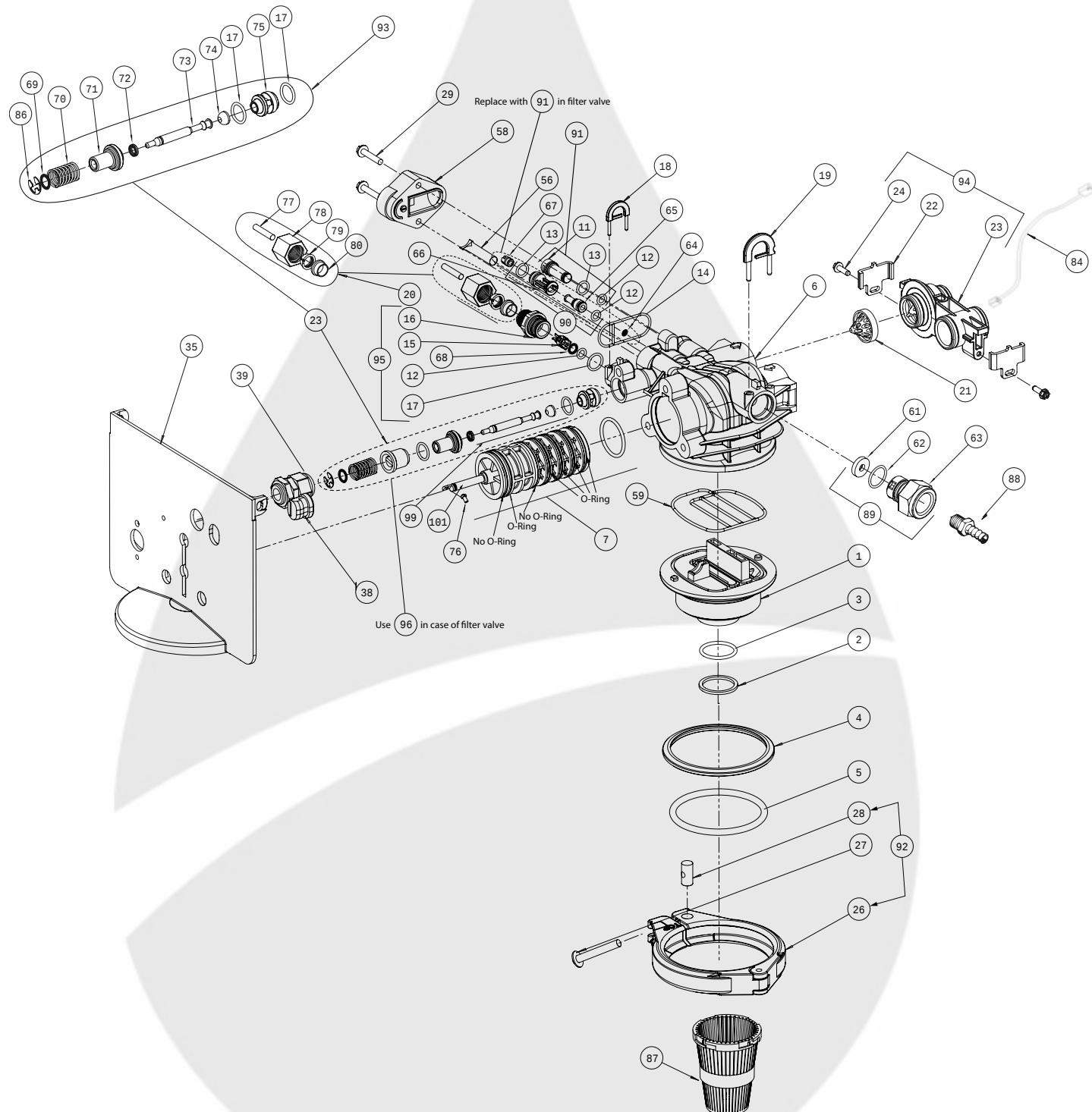
6200 SXT Control Valve



6200 SXT Control Valve Exploded View



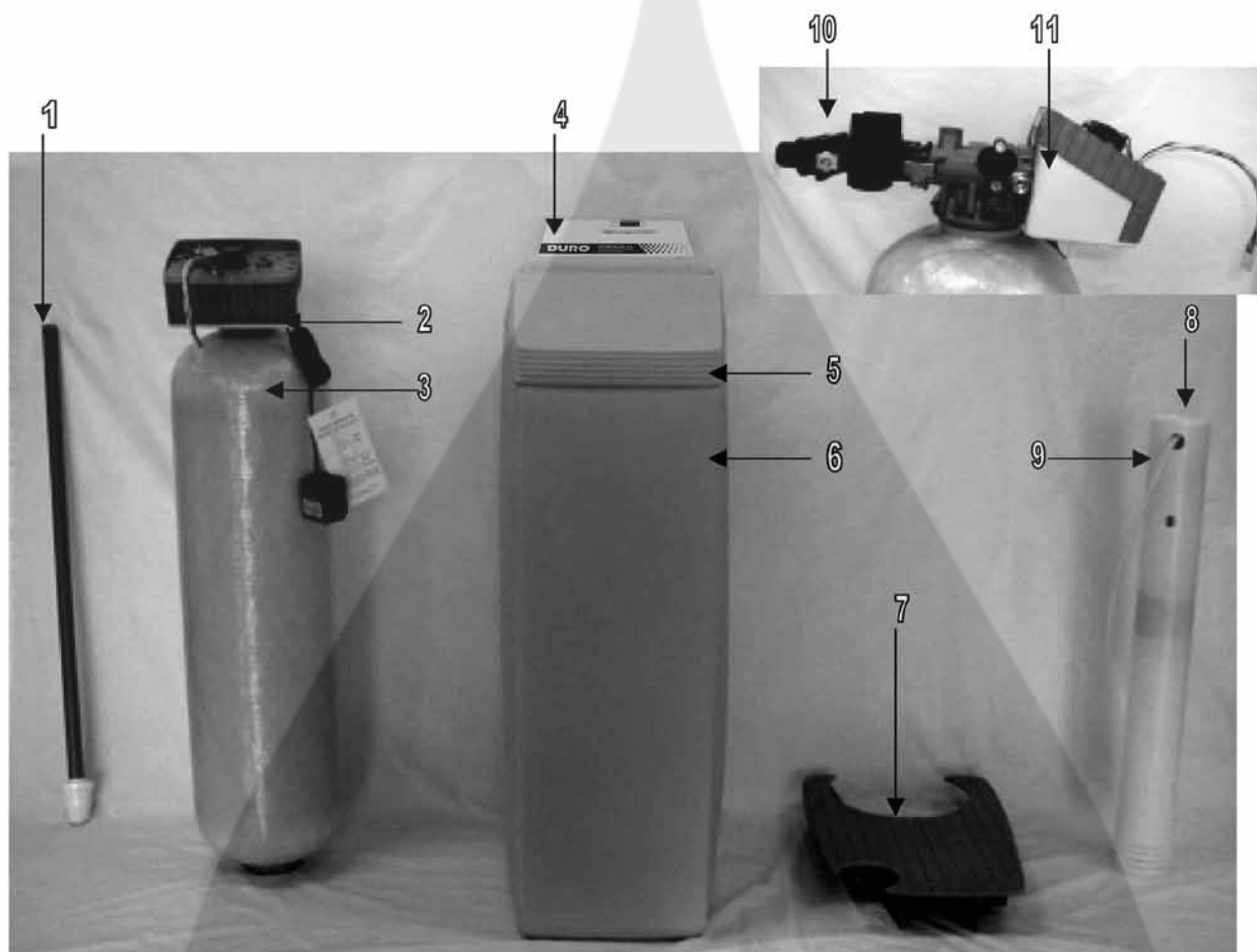
6200 SXT Softener Powerhead Exploded View



Parts List

Item No.	Qty.	Part No.	Description
1	1	19344-05	ADAPTER BASE, 6200
2	1	13030	RETAINER, DISTRIBUTOR
3	1	13304	O-RING, -121
4	1	19197	RING, SLIP
5	1	18303	O-RING, -336
6	1	19350-05	VALVE BODY, 6200
7	1	61799-01	CARTRIDGE, ASSY WGC 6200
11	1	18276	PLUG, INJECTOR
12	3	10141	O-RING, -010
13	2	13771	O-RING, -012
14	1	040064	SEAL, INJECTOR, SOFTENER
14	1	18301	SEAL, INJECTOR, FILTER
15	1	19334	RETAINER, FLOW WASHER, BLFC
16	1	19335	FITTING, BLFC, 3/8
17	3	13302	O-RING, -014
18	1	019484	RETAINER, BLFC
19	1	18312	RETAINER, DRAIN
20	1	19625	NUT ASSY, 3/8, PLASTIC
21	1	14613	FLOW STRAIGHTENER
22	2	19569	CLIP, FLOW METER
23	1	19797	METER ASSY, 3/4" DUAL PORT
24	3	13314	SCREW, SLOT IND HEX, 8-18X.60
26	1	40254	CLAMP, RING, 2510/6200
27	1	40057	SCREW, HEX WASHER HEAD
28	1	19998	SHAFT, DRIVE
29	2	18262	SCREW, #10-24X1
31	1	019493	SHAFT, DRIVE
32	1	019688	LINK, PISTON ROD
33	1	42918	CAM, SWITCH WGC 6200
34	1	42919	CAM, BRINE WGC 6200
35	1	43053-01	BACKPLATE, WGC, 6200, BLACK
35	1	43053-02	BACKPLATE, WGC, 6200, CREAM
36	1	42766-02	CIRCUIT BOARD, SXT CONTROL
37	5	17020	SCREW, STL. HEX WSH, 6-20X3/8
38	1	13547-01	STRAIN RELIEF, FLAT COR
39	1	17967	FITTING ASSY, LIQUID TIGHT, BLK
40	1	43052-01	COVER, WGC, 6200, BLACK
40	1	43052-02	COVER, WGC, 6200, CREAM
41	1	19581	BRACKET, DRIVE, 6200
42	2	10218	SWITCH, MICRO
43	1	10302	INSULATOR, LIMIT SWITCH
44	2	40080	SCREW, RD HD, 4-40 X 1 1/2
45	1	18803	SPACER, SWITCH
46	2	10339	NUT, HEX, 4-40 ZINC PLATED
47	1	43298	GEAR, IDLER, 6200
48	1	19619	BRACKET, IDLER, 6200
49	1	19597	MOTOR, 24V-50Hz/60Hz
50	1	10300	SCREW, HX WASH HEAD, 8 X 3/8
51	2	040050	SCREW, HEX WASHER HEAD
52	1	40055-05	BRACKET, 6200, PLASTIC
53	1	15137	SCREW, HEX WASHER HEAD
54	3	10231	SCREW, SLOT HEX, 1/4-20 X 1/2

Item No.	Qty.	Part No.	Description
55	1	13363	WASHER, HAGUE DRIVE
56	1	40058	SCREEN, INJECTOR
57	1	43054-03	LABEL, NOVATEK 6200, ORANGE
57	1	43054-01	LABEL, DURO 6200, RED
58	1	40079-20	CAP, INJECTOR, ASSY, 6200, 20PSI REGULATED, SOFTENER
58	1	18277	CAP, INJECTOR, FILTER
59	1	19914	SEAL, BASE
60	1	40134	SCREW, SELF, TAP
61	1	1209X	WASHER, FLOW, SPECIFY SIZE, BLFC
62	1	11183	O-RING, 017
63	1	11385-01	DLFC ADAPTER FITTING
64	1	040095	FLOW DISPENSER
65	1	18274-X	NOZZLE, INJECTOR
66	1	18275-X	THROAT, INJECTOR
67	1	18273	GENERATOR, VORTEX
68	1	1209X	WASHER, FLOW, SPECIFY SIZE, BLFC
69	1	16098	WASHER, BRINE, NYLON
70	1	11973	SPRING, BRINE VALVE
71	1	13165	CAP, BRINE VALVE
72	1	12550	RING, QUAD, 009
73	1	13172	STEM, BRINE VALVE
74	1	12626	SEAT, BRINE VALVE
75	1	13167	SPACER, BRINE VALVE
76	1	11335	SCREW, 4-40x3/16
77	1	10332	INSERT, TUBE, 3/8" BRASS
78	1	19321	NUT, 3/8" TUBING
79	1	19623	GRIPPER, NUT, 3/8" TUBING
80	1	19624	SLEEVE, 3/8" TUBING
81	1	19674	TRANSFORMER, 24V
82	1	19474-01	HARNES, POWER, SXT
84	1	19791-01	CABLE, METER
85	1	43107	LABEL, CAM, POSITION
85	1	43121	LABEL, POSITION, CAM, 6200 FILTER VALVE
86	1	11981-01	RING, RETAINING
87	1	18280	COLLECTOR, TOP 1"x .020
88	1	13308 or	HOSE BARB, DLFC, SMALL, BLK, 1/2"
88	1	12388	HOSE BARB, 90°, 1/2"
89	1	60705-XX/ 60706-XX	DLFC ASSEMBLY, X=GPM
90	1	61514-XX	NJECTOR, ASSEMBLY, SPECIFY X=INJECTOR SIZE
91	1	18276-01	PLUG, INJECTOR, SOFTENER, ASSEMBLY
92	1	60503	CLAMP RING ASSEMBLY
93	1	60032	BRINE VALVE ASSEMBLY, 1600
94	1	60626	METER, ELECTRONIC, TURBINE, 3/4"
95	1	60422-XX	BLFC ASSEMBLY, SPECIFY X=GPM
96	1	40947-02	PLUG BRINE VALVE C/W O-RING
97	4	16394	O-RING, 029
98	1	13287	O-RING, 123
99	1	61799	SEAL AND SPACER CARTRIDGE ONLY
100	1	42920	PISTON, UPFLOW, 6200 (not shown)
101	1	19984	PISTON ROD

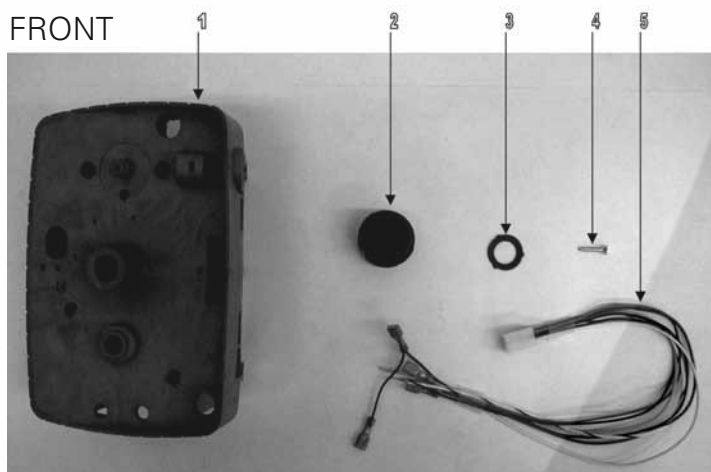


Part No.	Model Description	Valve #2	Tank #3	Grid #7	Resin (21501)	Gravel (22001)
6215	DC20EM	7500-05	19354	19715	0.75 CF	0.065 CF
6216	DC30EM	7500-06	110354	19716	1.00 CF	0.080 CF

Common Components

Item No.	Part No.	Description
1	19495	Distributor
4	19383	Hood (includes 19791-03 meter cable)
5	100293	Lid
6	100294	Cabinet
8	48004	Brine Well Cap
9	13624	Safety Float
10	60049	Bypass
11	19446	Back Cover
NS	12338	Hose Barb

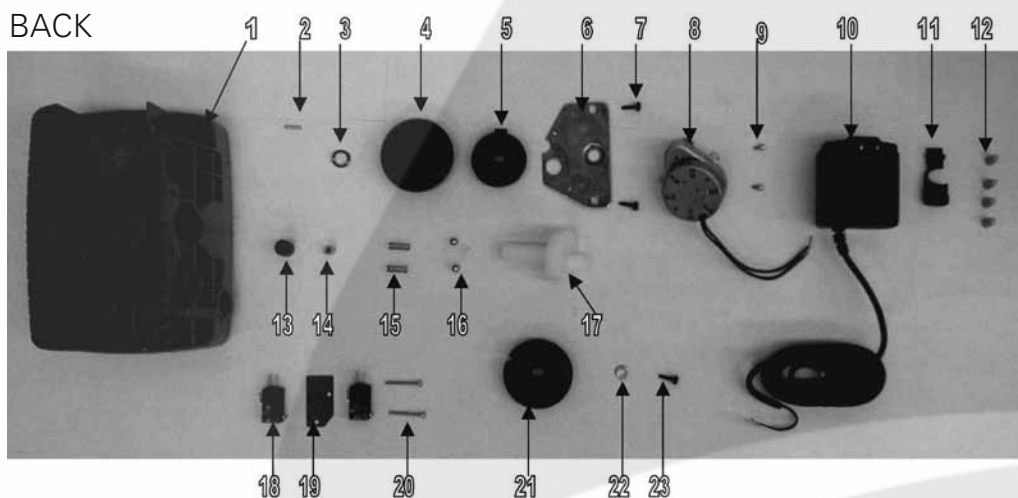
FRONT



7500 Power Head - FRONT

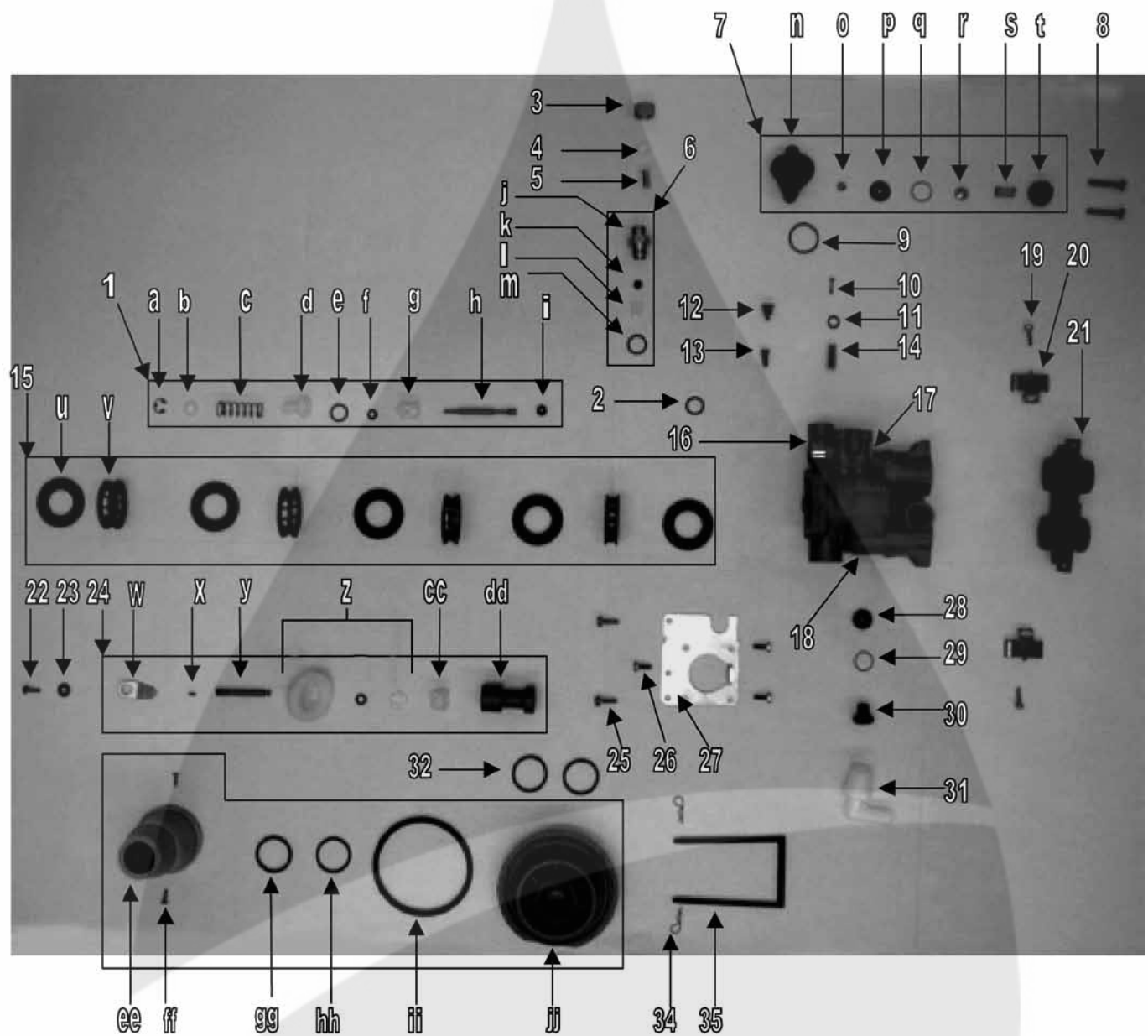
Item No.	Qty Req'd	Part No.	Description
1	1	17055-08	Drive Housing/ Receptacle
2	1	40145	Blue Cycle Cam
3	1	19079	Friction Washer
4	1	15151	Screw
5	1	19474-021	Wire Harness

BACK



7500 Power Head - BACK

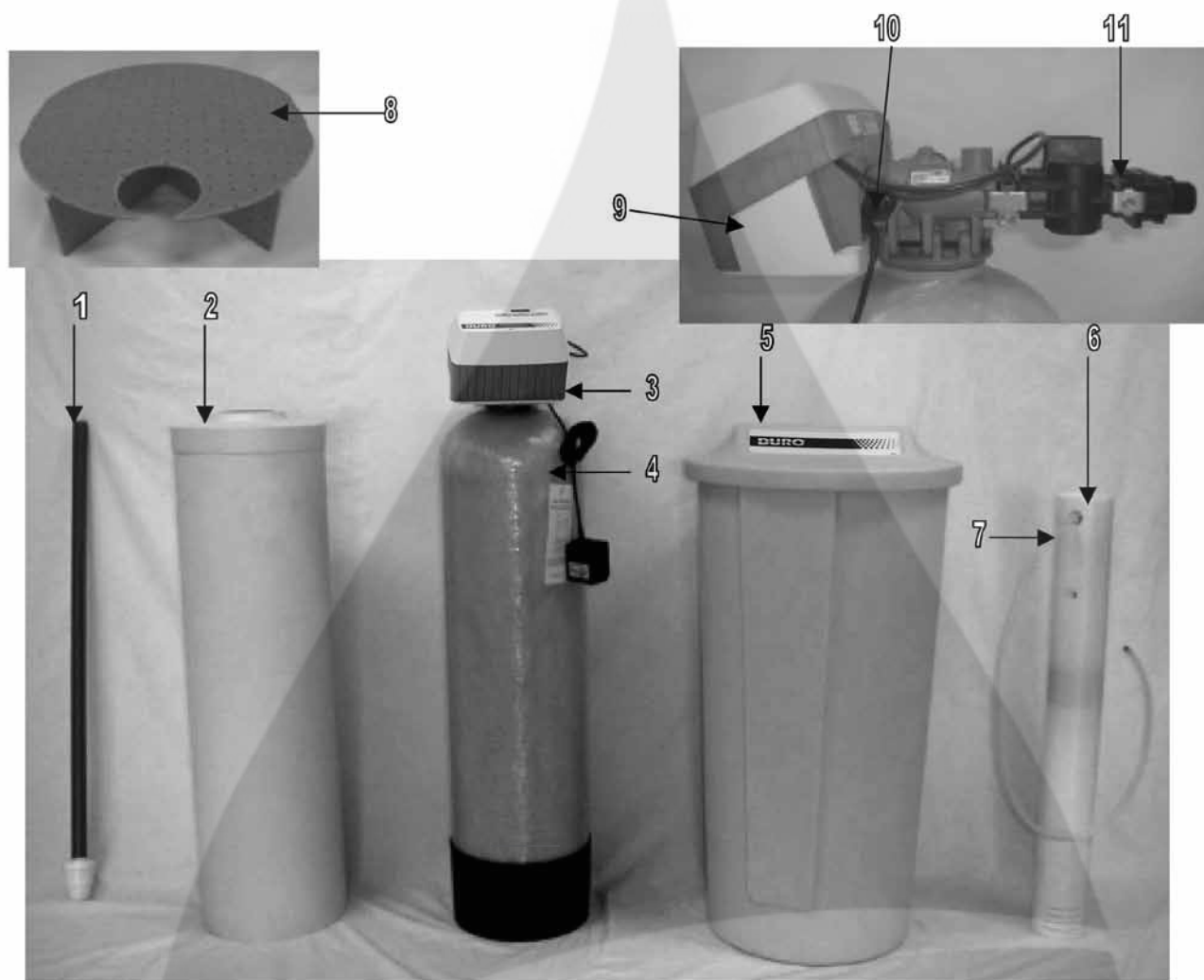
Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	17055-08	Drive Housing/ Receptacle	13	1	17213	Receptacle Retainer
2	1	18655	Roll Pin	14	1	17214	Receptacle
3	1	13299	Curved Washer	15	2	19080	Springs
4	1	13017	Idler Gear	16	2	13300	1/4" Ball
5	1	23045	Drive Gear	17	1	24958-20	Main Gear & Shaft
6	1	13175	Motor Mounting Plate	18	1	10218	Micro Switch (no lever)
7	2	13296	Mounting Screws	19	1	10302	Insulator
8	1	16944	Drive Motor, 24 V	20	2	17876	Screws
9	2	11384	Screws	21	1	1667-03	Brine Valve Cam
10	1	19674	Transformer	22	1	12037	Plain Washer
11	1	13547	Strain Relief	23	1	13296	Screw
12	4	12681	Tan Wire Nut	*Not Shown			19791-03 Meter Cable



DUROsoft EM Cabinet - 7500 Control Valve



Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	19429	Brine Valve Assembly	16	1	12128	BLFC Label, 0.25 GPM
a	1	11981-01	Retaining Ring	17	1	16928	Valve Body
b	1	16098	Brine Washer, Nylon	18	1	13333	Injector Label
c	1	11973	Brine Valve Spring	19	2	13314	Screws
d	1	13165	Brine Valve Cap	20	2	19568	Turbine Meter Clip
e	1	13302	O-Ring	21	1	19797	Turbine Meter
f	1	12550	Quad Ring	22	1	13296	Screw
g	1	13167	Brine Valve Spacer	23	1	13363	Plain Washer
h	1	16670	Brine Valve Stem	24	1	40141-1	Piston Assembly
i	1	12626	Brine Valve Seat	w	1	40140-01	Drive Link
2	1	13302	O-Ring	x	1	13306	Roll Pin
3	1	10329	3/8" Brass Nut	y	1	14469	Piston Rod
4	1	10330	Delrin Sleeve	z	1	13446	End Plug Assembly
5	1	10332	Brass Insert	cc	1	14309	Piston Rod Retainer
6	1	19402	Control .25 Refill	dd	1	40141	Piston
j	1	13244	BLFC Adapter	25	2	12473	Screws
k	1	12094	0.25 GPM Flow Washer	26	3	12112	Screws
l	1	13245	BLFC Button Retainer	27	1	16561	End Plug Retainer
m	1	12977	O-Ring	28	1	12086	1.50 GPM Flow Washer
7	1	19475	Regulator Cap Assembly		1	12087	2.00 GPM Flow Washer
n	1	15449	Regulator Body	29	1	15348	O-Ring
o	1	14846	Pressure Reg Washer	30	1	13173	DLFC Button Retainer
p	1	14847	Regulator Diaphragm	31	1	12338	Hose Barb
q	1	14848	Slip Ring	32	2	13304	O-Ring
r	1	23391	Seat	33	1	19443	Tank Adapter "Softener"
s	1	14850	Regulator Spring	ee	1	13700	Cone
t	1	14851	Regulator Cap	ff	2	13748	Screws
8	2	13315	Screws	gg	1	13030	Distributor Tube
9	1	13303	O-Ring	Retainer			
10	1	23393	Regulator Poppet	hh	1	13304	O-Ring
11	1	13301	O-Ring	ii	1	12281	O-Ring
12	1	10913-00	Violet Injector Nozzle	jj	1	16926-01	Adapter Base
	1	10913-1	White Injector Nozzle	34	2	14915	Cotter Pin
13	1	10914-00	Violet Injector Throat	35	1	16560	Retaining Pin
14	1	15548	Pressure Reg Screen				
15	1	13976	Seal & Spacer Assembly				
u	5	13242	Main Seals				
v	4	14241	Spacers				



Part No.	Model Description	Distributor #1	Jacket #2	Valve #3	Tank #4	Brine Tank #5	Safety Float #7	Grid #8	Resin (21501)	Media (22001)
6210	DT20EM	19495	100503	7500-77	19354	100283	13624	NA	0.75 CF	0.065 CF
6211	DT30EM	19495	100506	7500-78	110354	100283	13624	NA	1.00 CF	0.080 CF
6212	DT40EM	19478	100507	7500-78	110474	100362	13624	19725	1.25 CF	0.080 CF
6213	DT60EM	19477	NA	7500-79	112524	100362	13624	19725	2.00 CF	0.120 CF
6214	DT90EM	60098	NA	7500-80	114651	100362	13624	19726	3.00 CF	0.150 CF

Common Components

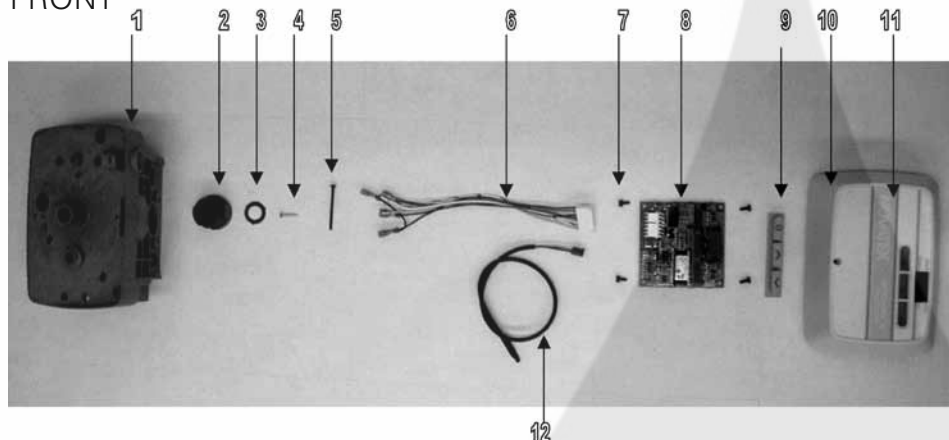
Item No.	Part No.	Description
6	48004	Brine Well Cap
9	19446	Back Cover
10	13308	Hose Barb
11	60049	Bypass

Unit 6214 includes a CPVC tank adapter - Part No. 81041
Distributor 60098 includes hub and laterals.

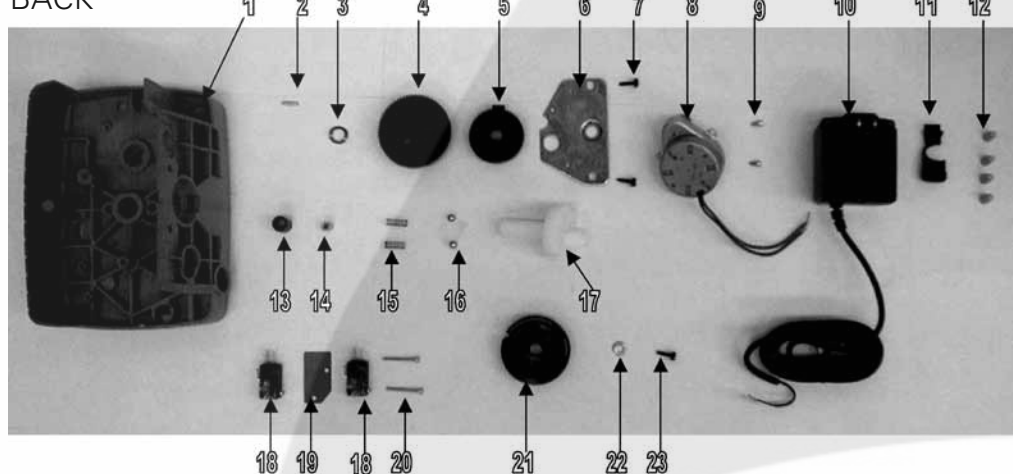
DUROsoft EM Twin Tank - 7500 Power Head



FRONT



BACK



7500 Power Head - FRONT

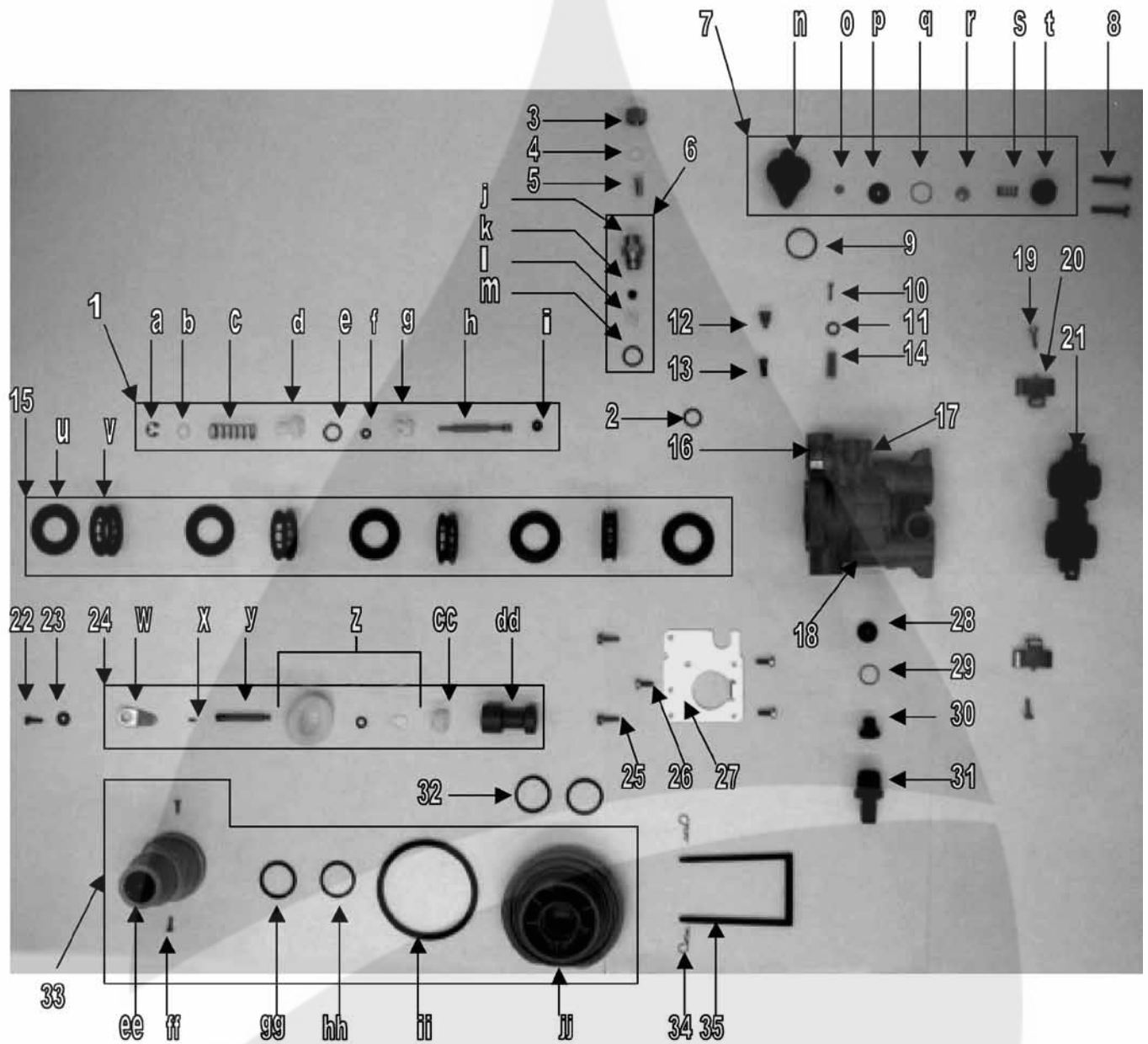
Item No.	Qty Req'd	Part No.	Description
1	1	17055-08	Drive Housing/Receptacle
2	1	40145	Blue Cycle Cam
3	1	19079	Friction Washer
4	1	15151	Screw
5	1	23402	Screw
6	1	19474	Wire Harness
7	4	17020	Screws
8	1	42099-1	Circuit Board
9	1	019473	Rubber Buttons
10	1	23381	Circuit Housing
11	1	51760	Circuit Label
12	1	19791-01	Meter Cable

7500 Power Head - BACK

1	1	17055-02	Drive Housing/Receptacle
2	1	18655	Roll Pin
3	1	13299	Curved Washer
4	1	13017	Idler Gear

7500 Power Head - BACK (cont'd)

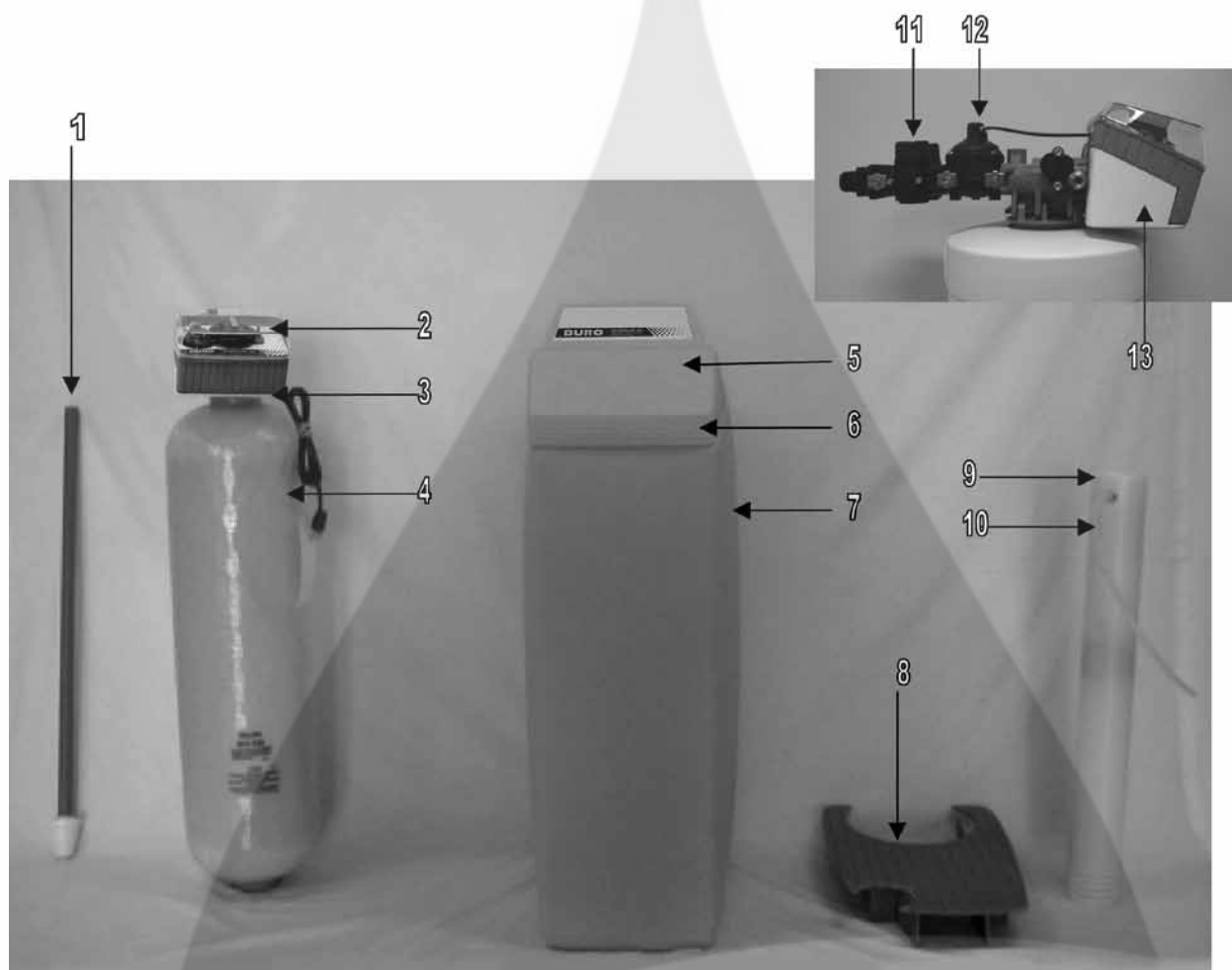
Item No.	Qty Req'd	Part No.	Description
5	1	23045	Drive Gear
6	1	13175	Motor Mounting Plate
7	2	13296	Mounting Screws
8	1	16944	Drive Motor, 24V
9	2	11384	Screws
10	1	19674	Transformer
11	1	13547	Strain Relief
12	4	12681	Tan Wire Nut
13	1	17213	Receptacle Retainer
14	1	17214	Receptacle
15	2	19080	Springs
16	2	13300	1/4" Ball
17	1	24958-20	Main Gear & Shaft
18	2	10218	Micro Switch (no lever)
19	1	10302	Insulator
20	2	17876	Screws
21	1	16667-03	Brine Valve Cam
22	1	12037	Plain Washer
23	1	13296	Screw



DUROsoft EM Twin Tank - 7500 Control Valve



Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	19429	Brine Valve Assembly	16	1	12128	BLFC Label, 0.25 GPM
a	1	11981-01	Retaining Ring		1	10759	0.5 GPM Label
b	1	16098	Brine Washer, Nylon	17	1	16928	Valve Body
c	1	11973	Brine Valve Spring	18	1	13333	Injector Label
d	1	13165	Brine Valve Cap	19	2	13314	Screws
e	1	13302	O-Ring	20	2	19569	Turbine Meter Clip
f	1	12550	Quad Ring	21	1	19797	Turbine Meter
g	1	13167	Brine Valve Spacer	22	1	13296	Screw
h	1	16670	Brine Valve Stem	23	1	13363	Plain Washer
i	1	12626	Brine Valve Seat	24	1	40141-1	Piston Assembly
2	1	13302	O-Ring	w	1	40140-01	Drive Link
3	1	10329	3/8" Brass Nut	x	1	13306	Roll Pin
4	1	10330	Delrin Sleeve	y	1	14469	Piston Rod
5	1	10332	Brass Insert	z	1	13446	End Plug Assembly
6	1	19402	Control .25 Refill	cc	1	14309	Piston Rod Retainer
j	1	13244	BLFC Adapter	dd	1	40141	Piston
k	1	12094	0.25 GPM Flow Washer	25	2	12473	Screws
	1	12095	0.50 GPM Flow Washer	26	3	12112	Screws
l	1	13245	BLFC Button Retainer	27	1	16561	End Plug Retainer
m	1	12977	O-Ring	28	1	12086	1.50 GPM Flow Washer
7	1	19475	Regulator Cap Assembly		1	12087	2.00 GPM Flow Washer
n	1	15449	Regulator Body		1	12089	3.00 GPM Flow Washer
o	1	14846	Pressure Reg Washer		1	12091	4.00 GPM Flow Washer
p	1	14847	Regulator Diaphragm	29	1	15348	O-Ring
q	1	14848	Slip Ring	30	1	13173	DLFC Button Retainer
r	1	23391	Seat	31	1	13308	Hose Barb
s	1	14850	Regulator Spring	32	2	13304	O-Ring
t	1	14851	Regulator Cap	33	1	19443	Tank Adapter "Softener"
8	2	13315	Screws	ee	1	13700	Cone
9	1	13303	O-Ring	ff	2	13748	Screws
10	1	23393	Regulator Poppet	gg	1	13030	Distributor Tube
11	1	13301	O-Ring				
12	1	10913-00	Violet Injector Nozzle	Retainer			
	1	10913-1	White Injector Nozzle	hh	1	13304	O-Ring
	1	10913-0	Reg Injector Nozzle	ii	1	12281	O-Ring
	1	10913-2	Blue Injector Nozzle	jj	1	16926-01	Adapter Base
13	1	10914-00	Violet Injector Throat	34	2	14915	Cotter Pin
	1	10914-0	Red Injector Throat	35	1	16560	Retaining Pin
	1	10914-2	Blue Injector Throat				
14	1	15548	Pressure Reg Screen				
15	1	13976	Seal & Spacer Assembly				
u	5	13242	Main Seals				
v	4	14241	Spacers				



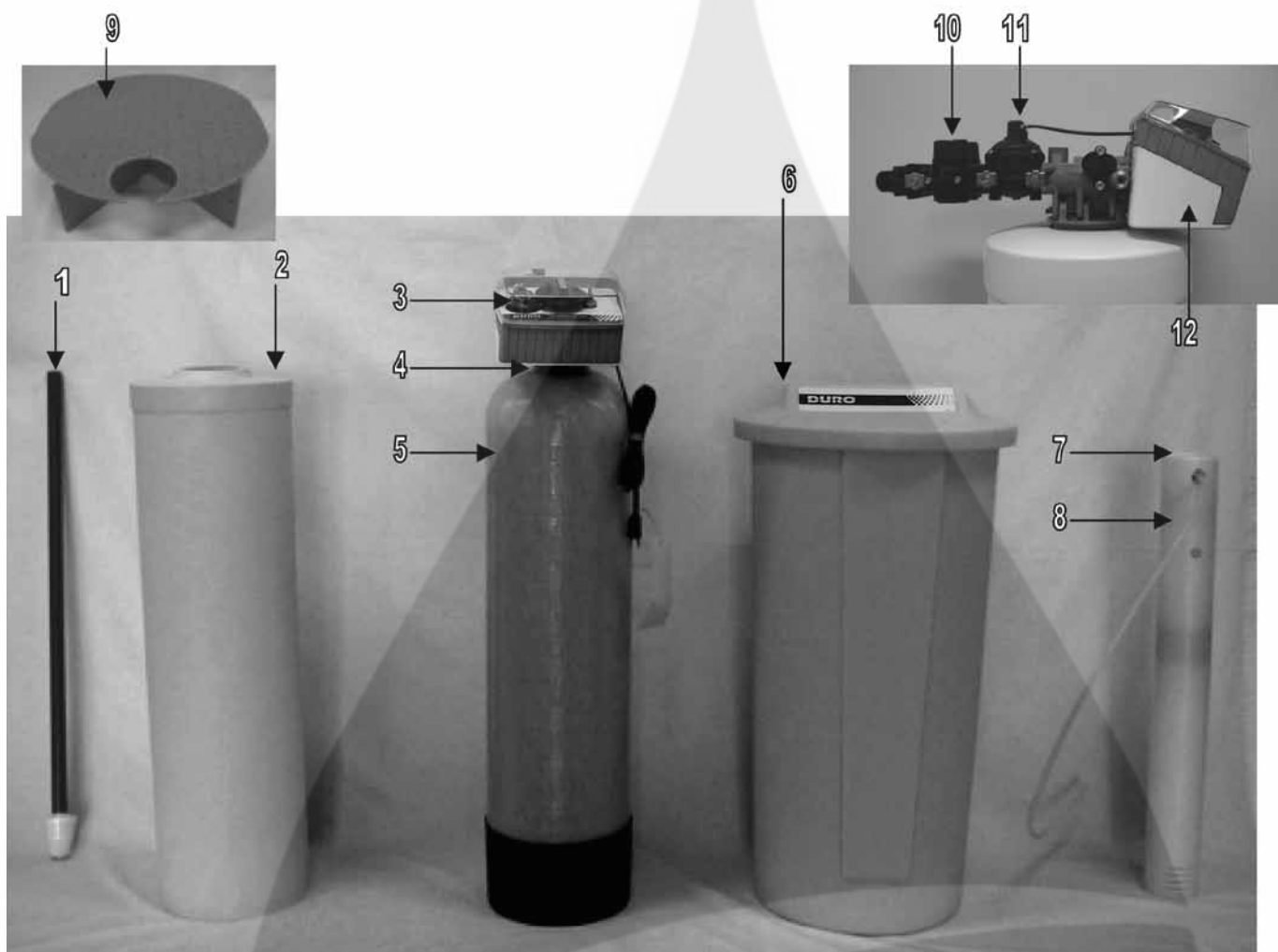
Part No.	Model Description	Valve #3	Tank #4	Grid #8	Resin (21501)	Gravel (22001)
6200	DC20MM	7500-71	19354	19715	0.75 CF	0.065 CF
6201	DC30MM	7500-72	110354	19716	1.00 CF	0.080 CF

Common Components

Item No.	Part No.	Description
1	19495	Distributor
2	16685	Clear Cover
5	100292	Hood
6	100293	Lid
7	100294	Cabinet
9	48004	Brine Well Cap
10	13624	Safety Float
11	60049	Bypass
12	60088-45	45 Degree Meter
13	19446	Back Cover

See 7500 Meter Initiated Valve parts breakdown on the following pages.

DUROsoft MM Twin Tank Water Softener



Part No.	Model Description	Distributor #1	Jacket #2	Valve #4	Tank #5	Brine Tank #6	Safety Float #8	Grid #9	Resin (21501)	Media (22001)
6202	DT20MM	19495	100503	7500-71	19354	100283	13624	NA	0.75 CF	0.065 CF
6203	DT30MM	19495	100506	7500-72	110354	100283	13624	NA	1.00 CF	0.080 CF
6204	DT40MM	19478	100507	7500-73	110474	100362	13624	19725	1.25 CF	0.080 CF
6205	DT60MM	19477	NA	7500-74	112524	100362	13624	19725	2.00 CF	0.120 CF
6206	DT90MM	60098	NA	7500-75	114651	100362	13624	19726	3.00 CF	0.150 CF

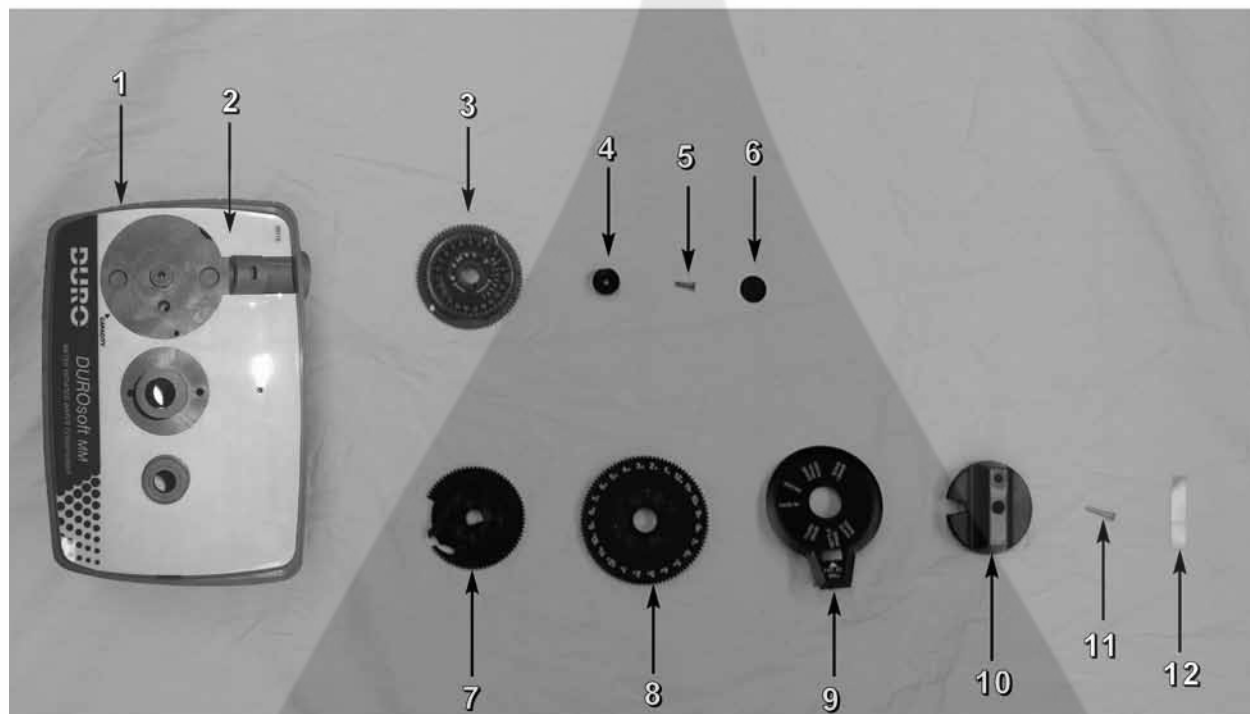
Common Components

Item No.	Part No.	Description
3	16685	Clear Cover
7	48004	Brine Well Cap
10	60049	Bypass
11	60088-45	45 Degree Meter
12	19446	Back Cover

Unit 6206 includes a CPVC tank adapter - Part No. 81041
Distributor 60098 includes hub and laterals.

See 7500 Meter Initiated Valve parts breakdown on the following pages.

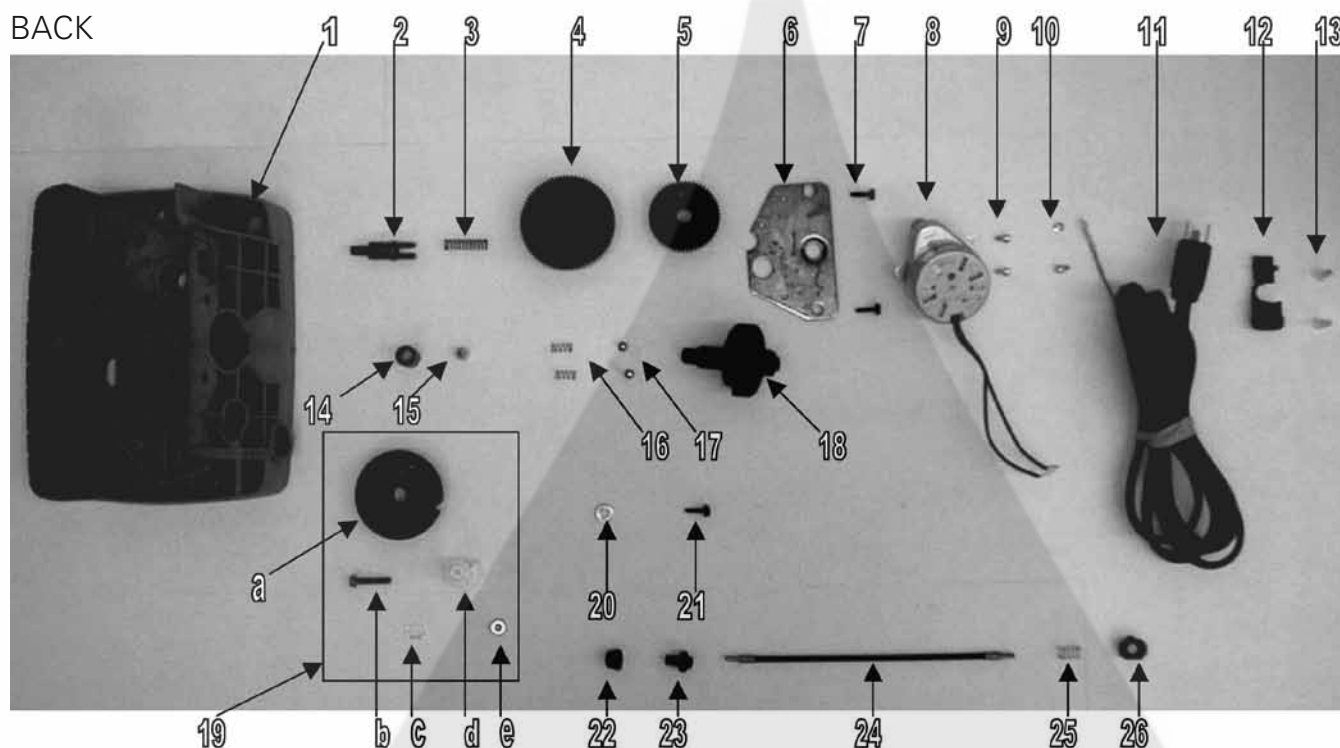
FRONT



7500 Power Head - FRONT

Item No.	Qty Req'd	Part No.	Description
1	1	17055 - 02	Drive Housing / Receptacle
2	1	52113	Duro Label
3	1	14039	Program Wheel Assembly
	1	13803	Program Drive Wheel Gear
	1	13885	Program Wheel Cover
	1	15956	Program Wheel Adjustment Disc
	1	13954	# of People Label
	1	15967	Gallons Label
	2	13898	Screws
4	1	13806	Program Wheel Retainer
5	1	13748	Screw
6	2	13953	Program Wheel Cover Label
7	1	13802	Cycle Actuator Gear
8	1	13973	24 Hour Gear Assembly
9	1	14176	Valve Position Dial
10	1	14177	Control Knob
11	1	15151	Screw
12	1	51543	Silver Label

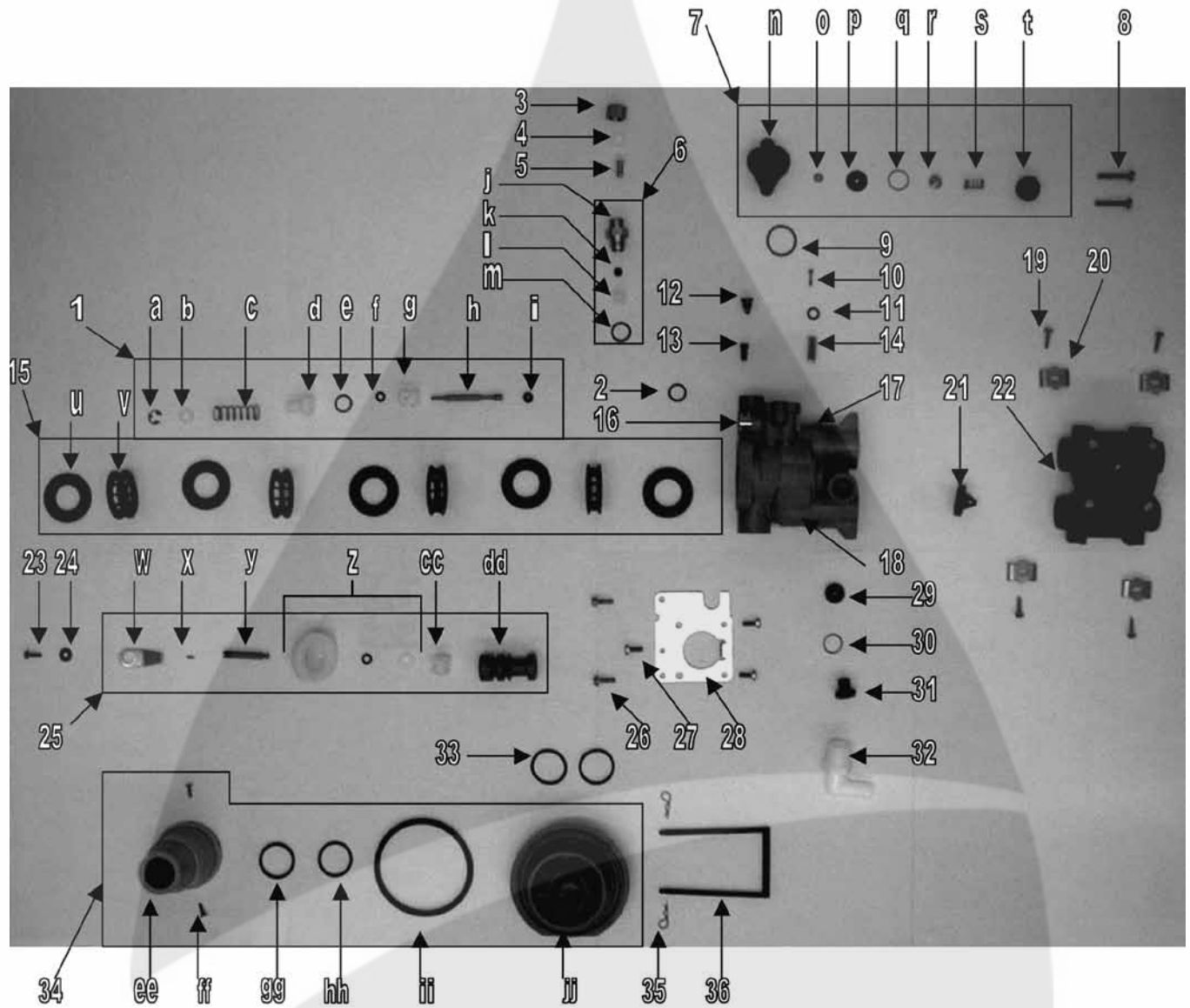
BACK



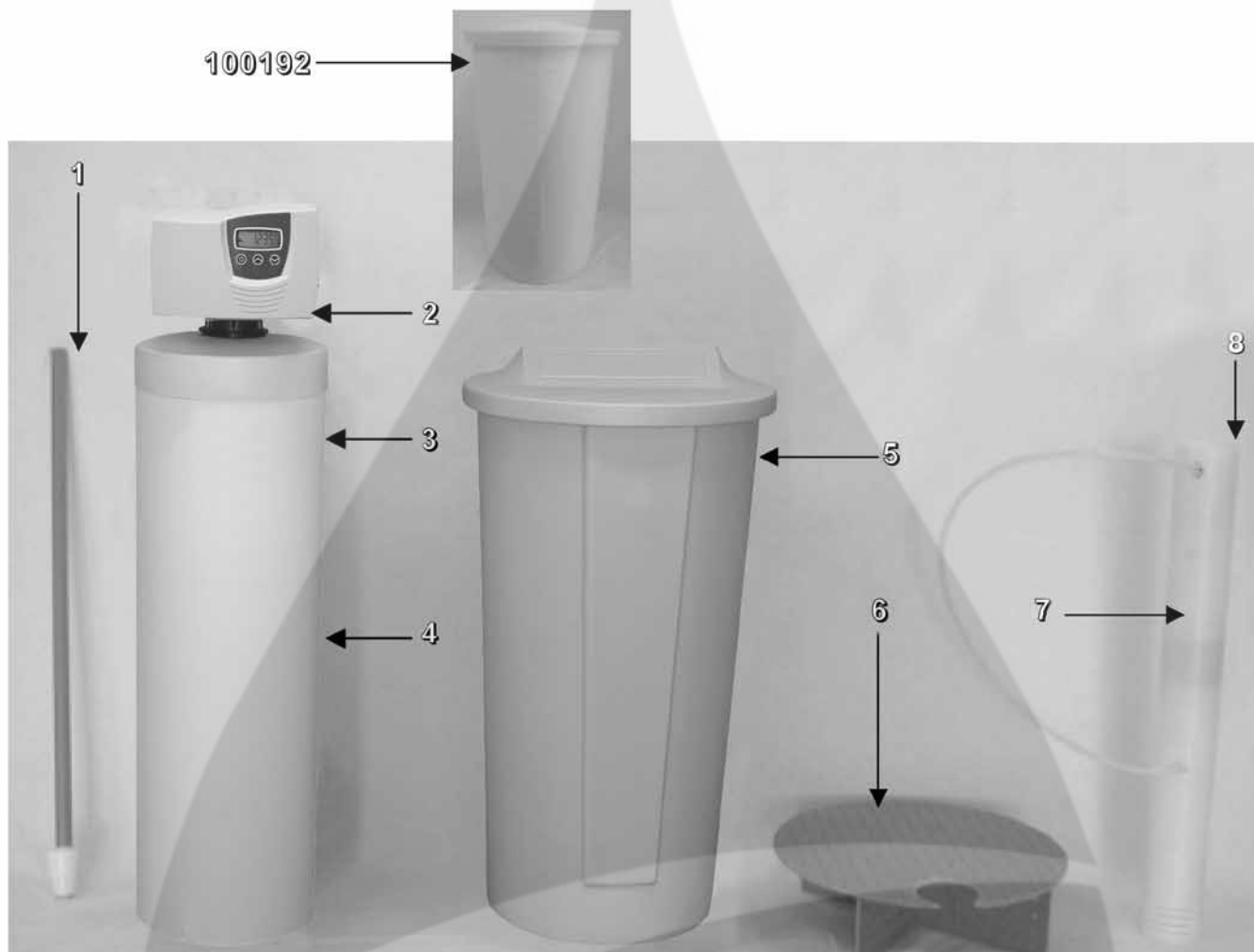
7500 Power Head - BACK

Item No.	Qty Req'd	Part No.	Description
1	1	17055-02	Drive Housing / Receptacle
2	1	13018	Idler Pinion
3	1	13312	Spring
4	1	13017	Idler Gear
5	1	13164	Drive Gear
6	1	13175	Motor Mounting Plate
7	2	13296	Mounting Screws
8	1	18743-1	Drive Motor, 120 V
9	3	11384	Screws
10	1	29702	Lock Washer
11	1	11842	Power Cord
12	1	13547	Strain Relief
13	2	11673	Connectors
14	1	17213	Receptacle Retainer
15	1	17214	Receptacle

Item No.	Qty Req'd	Part No.	Description
16	2	14457	Springs
17	2	13300	1/4" Ball
18	1	13170	Main Gear & Shaft
19	1	19430	7500 Brine Cam Assembly
a	1	16667	Brine Valve Cam
b	1	11081	Hex Nut
c	1	16672	Timed Refill Label
d	1	16671	Timed Refill Cam
e	1	17114	Screw
20	1	12037	Plain Washer
21	1	13296	Screw
22	1	16666	Program Wheel Pinion
23	1	13831	Drive Pinion Clutch
24	1	17737	Meter Cable
25	1	14276	Meter Clutch Sprint
26	1	14253	Clutch Spring Retainer



Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	19429	Brine Valve Assembly	16	1	12128	BLFC Label, 0.25 GPM
a	1	11981-01	Retaining Ring	17	1	16928	Valve Body
b	1	16098	Brine Washer, Nylon	18	1	13333	Injector Label
c	1	11973	Brine Valve Spring	19	2	13314	Screws
d	1	13165	Brine Valve Cap	20	4	13255	Mounting Clip
e	1	13302	O-Ring	21	1	14613	Flow Straightener
f	1	12550	Quad Ring	22	1	60088-45	45 Degree Meter
g	1	13167	Brine Valve Spacer	23	1	13296	Screw
h	1	16670	Brine Valve Stem	24	1	13363	Plain Washer
i	1	12626	Brine Valve Seat	25	1	19434	Piston Assembly
2	1	13302	O-Ring	w	1	16660	Drive Link
3	1	10329	3/8" Brass Nut	x	1	13306	Roll Pin
4	1	10330	Delrin Sleeve	y	1	17730	Piston Rod
5	1	10332	Brass Insert	z	1	13446	End Plug Assembly
6	1	19402	Control .25 Refill	cc	1	14309	Piston Rod Retainer
j	1	13244	BLFC Adapter	dd	1	15701	Upflow Piston
k	1	12094	0.25 GPM Flow Washer	26	2	12473	Screws
l	1	13245	BLFC Button Retainer	27	3	12112	Screws
m	1	12977	O-Ring	28	1	16561	End Plug Retainer
7	1	19475	Regulator Cap Assembly	29	1	12086	1.50 GPM Flow Washer
n	1	15449	Regulator Body		1	12087	2.00 GPM Flow Washer
o	1	14846	Pressure Reg Washer	30	1	15348	O-Ring
p	1	14847	Regulator Diaphragm	31	1	13173	DLFC Button Retainer
q	1	14848	Slip Ring	32	1	12338	Hose Barb
r	1	23391	Seat	33	2	13304	O-Ring
s	1	14850	Regulator Spring	34	1	19443	Tank Adapter "Softener"
t	1	14851	Regulator Cap	ee	1	13700	Cone
8	2	13315	Screws	ff	2	13748	Screws
9	1	13303	O-Ring	gg	1	13030	Distributor Tube
10	1	23393	Regulator Poppet	Retainer			
11	1	13301	O-Ring	hh	1	13304	O-Ring
12	1	10913-00	Violet Injector Nozzle	ii	1	12281	O-Ring
	1	10913-1	White Injector Nozzle	jj	1	16926-01	Adapter Base
13	1	10914-00	Violet Injector Throat	35	2	14915	Cotter Pin
14	1	15548	Pressure Reg Screen	36	1	16560	Retaining Pin
15	1	13976	Seal & Spacer Assembly				
u	5	13242	Main Seals				
v	4	14241	Spacers				

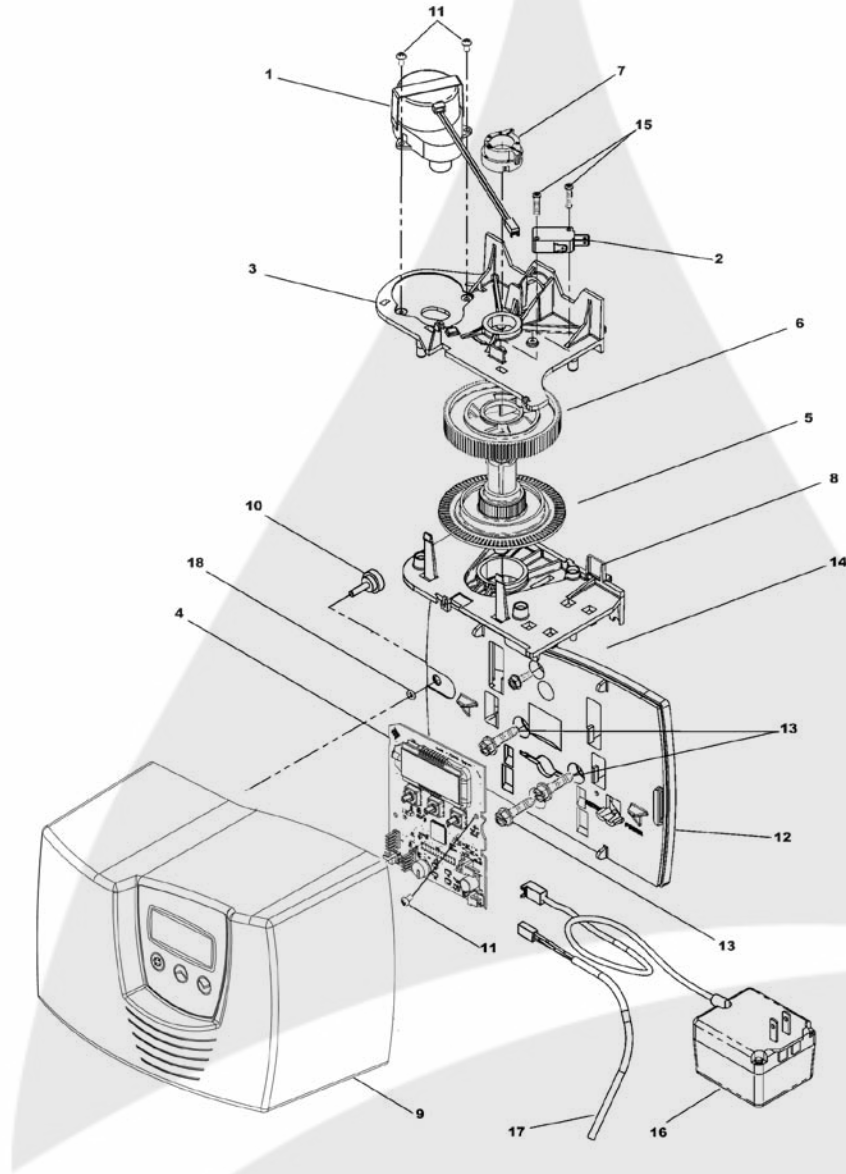


Part No.	Model Description	Distributor #1	Jacket #3	Valve #2	Tank #4	Brine Tank #5	Grid #6	Safety Float #7	Resin (21501)
4200	HF30EM	19495	100506	Call	110354	100283	NA	13624	1.00 CF
4201	HF45EM	19478	100508	Call	110544	100192	19709	13624	1.50 CF
4202	HF60EM	19477	N/A	Call	112524	100192	95009-21	13624	2.00 CF
4203	HF90EM	13860	N/A	Call	114651	100192	19706	13624	3.00 CF

Common Components

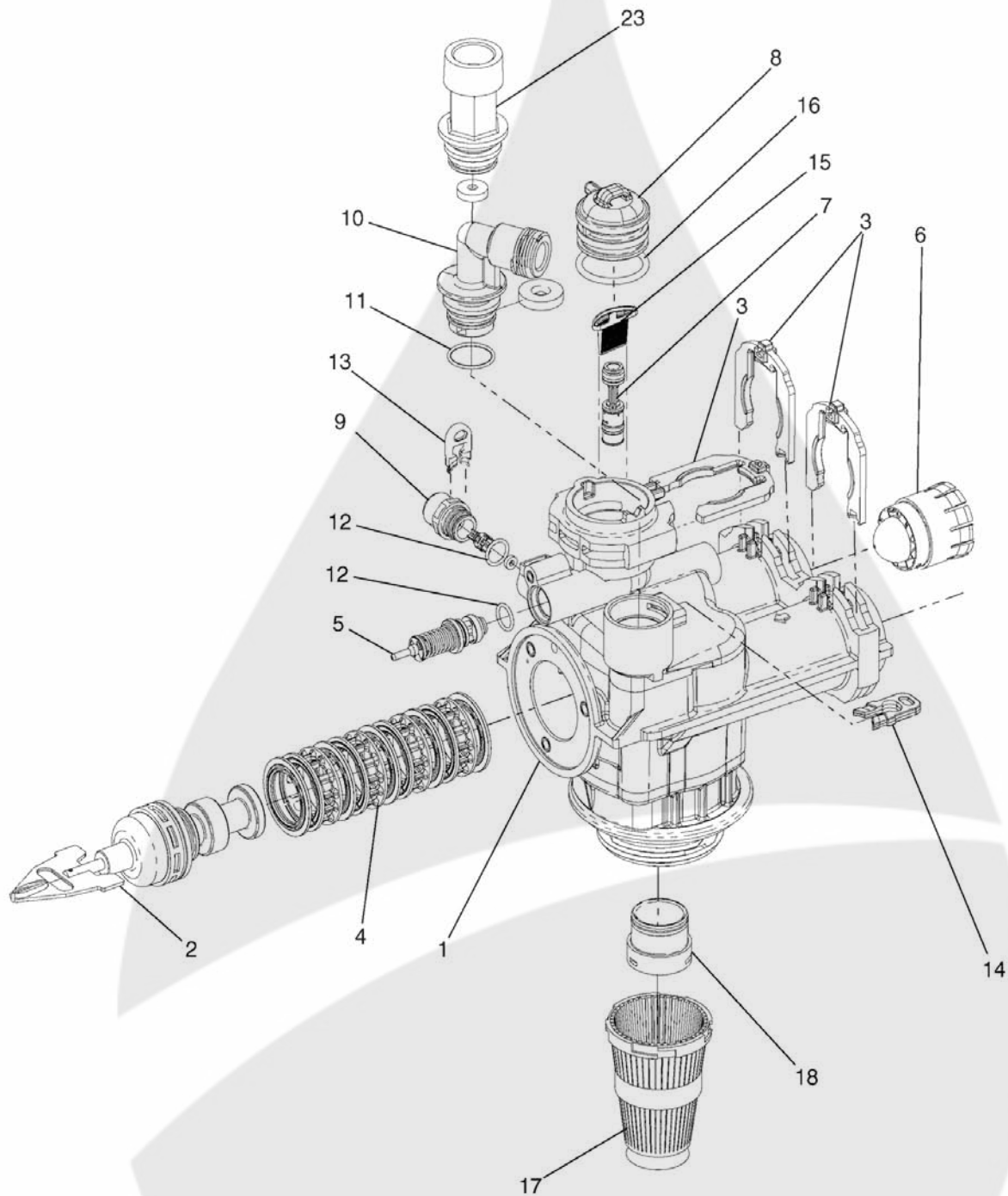
Item No.	Part No.	Description
8	48004	Brine Well Cap

High Flow Twin Tank - 7000SXT Power Head



Item No.	Qty Req'd	Part No.	Description
1	1	40968	Motor
2	1	10218	Optional auxiliary switch
3	1	40978	Plate, upper support
4	1	BR61696	Circuit board
5	1	40702	Shaft, encoder
6	1	40703	Gear, main drive
7	1	40704	Cam, brine, down flow
		40977	Cam, aux. switch/filter
8	1	40979	Plate, lower support
9	1	40709	Cover assembly

Item No.	Qty Req'd	Part No.	Description
10	1	19367	Screw, thumb
11	3	13602	Screw, 6-32x.312"
12	1	40980	Backplate
13	3	40967	Screw, 1/4-20x1.0"
14	1	15727	Screw, 10-24x1/2"
15	2	11805	Screw, 4-40x5/8"
16	1	40981	Transformer, US 24V, 9.6VA
17	1	19791-01	Meter cable assembly, turbine
18	1	41122	O-ring



High Flow Twin Tank - 7000SXT Valve Assembly



Item No.	Qty Req'd	Part No.	Description
1	1	61050	Valve body assembly
2	1	61452-10	Piston assembly, 7000 softener, D/F 35 GPM
		61453-10	Piston assembly, 7000 softener, D/F 28 GPM
		61452-20	Piston assembly, 7000 filter
3	3	40576	Clip, H, plastic
4	1	61438	Seal and spacer kit
5	1	19429	Brine valve, 7000
6	1	40577	Turbine meter assembly
7	1	61XXX	Injector assemblies

Part # Injector

61454-000	#000
61454-00	#00
61454-0	#0
61454-1	#1
61454-2	#2
61454-3	#3
61454-4	#4
61454-5	#5

8	1	40556	Cap, injector
9	1	61XXX	BLFC assemblies

BLFC

<u>Part #</u>	<u>Size</u>	<u>GPM</u>
61450-12	3/8"	0.125
61450-25	3/8"	0.25
61450-50	3/8"	0.50
61450-100	3/8"	1.0
61451-12	1/2"	0.125
61451-25	1/2"	0.25
61451-50	1/2"	0.50
61451-100	1/2"	1.0

Item No.	Qty Req'd	Part No.	Description
10	1	61XXX	DLFC assemblies

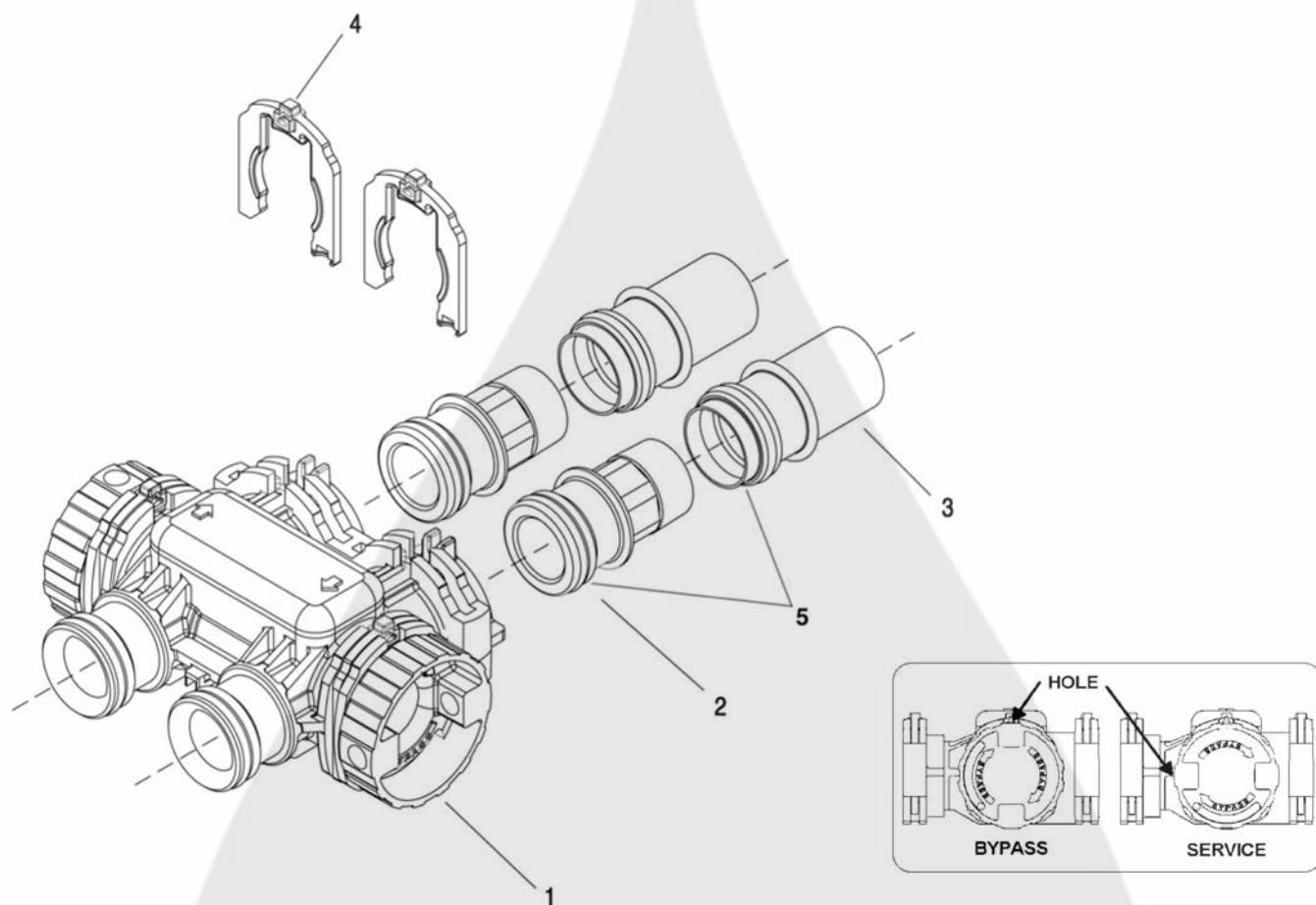
DLFC

<u>Part #</u>	<u>Size</u>	<u>GPM</u>
61455-17	3/4"	1.7
61455-20	3/4"	2.0
61455-24	3/4"	2.4
61455-30	3/4"	3.0
61455-35	3/4"	3.5
61455-40	3/4"	4.0
61455-45	3/4"	4.5
61455-50	3/4"	5.0
61455-60	3/4"	6.0
61455-70	3/4"	7.0

11	1	13303	O-ring, -021
12	2	13302	O-ring, 014
13	1	40946	Clip, brine retaining
14	1	40945	Clip, drain retaining
15	1	40950	Screen, injector
16	1	40951	O-ring, -220
17	1	18280	Collector, top 1"x.011, gray
18	1	61419	Kit, 1.05" dist. adapter
23	1	61XXX	DLFC kits

DLFC

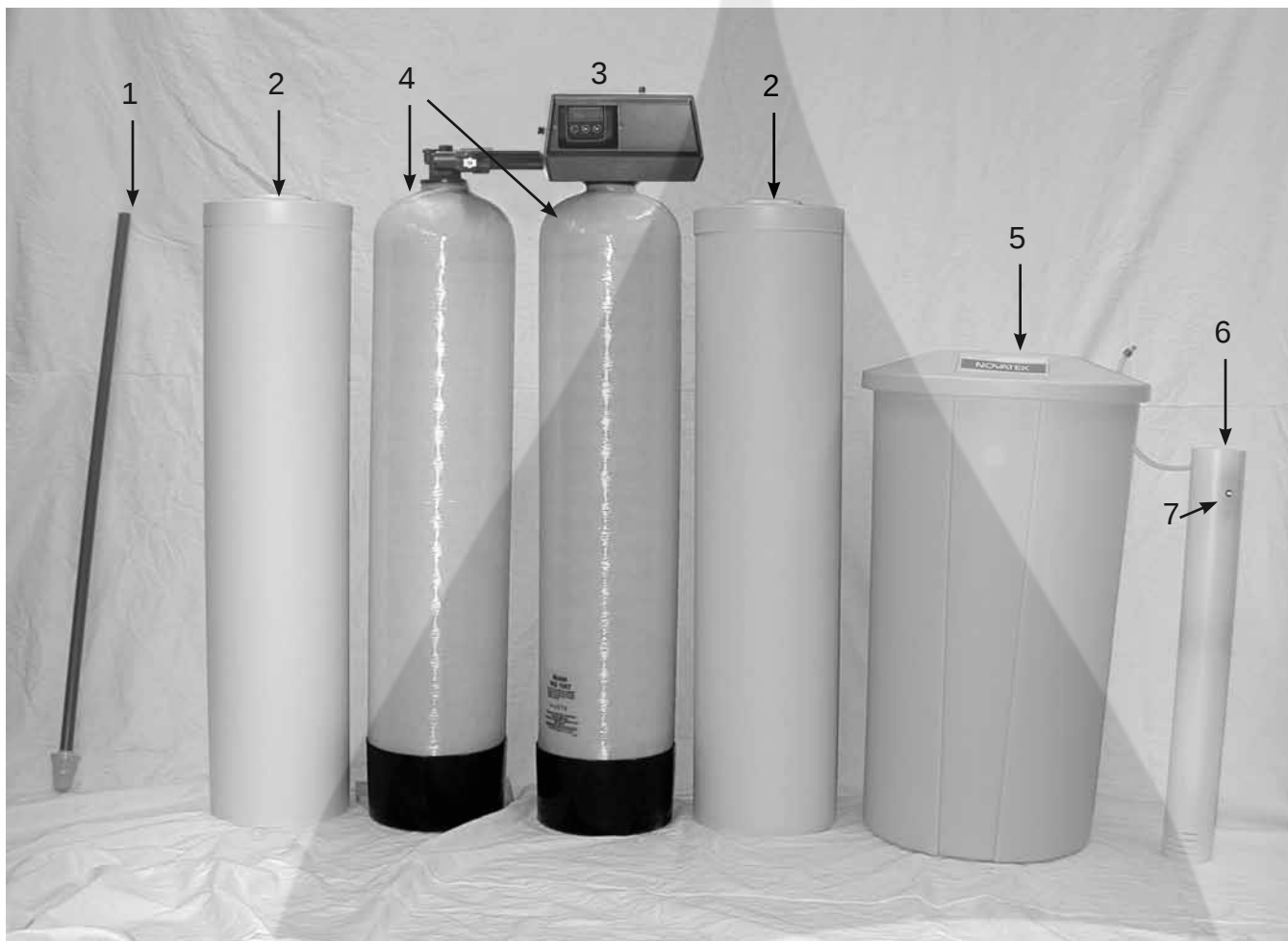
<u>Part #</u>	<u>Size</u>	<u>GPM</u>
61456-8.0	1"	8.0
61456-9.0	1"	9.0
61456-10	1"	10.0
61456-12	1"	12.0
61456-15	1"	15.0
61456-20	1"	20.0
61456-25	1"	25.0
61456-30	1"	30.0



IMPORTANT

To bypass the valve, turn bypass knob on both sides of the valve to bypass position. (See inset)
When returning to service, put the inlet into service before the outlet.

Item No.	Qty Req'd	Part No.	Description
1	1	40569	7000 bypass assembly
2	1	40563-01	Connector, 1" NPT
		40565-01	Connector, 1-1/4" NPT
3	1	61626	Connector, 3/4" & 1" sweat, copper
		41242-01	Connector, 1" & 1-1/4" sweat, copper
		41243-01	Connector, 1-1/4" & 1-1/2" sweat, copper
4	2	40576	Clip, H, plastic
5	1	40951	O-ring



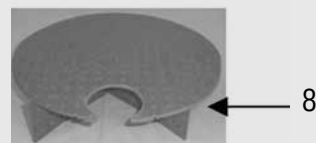
Item No.	Model	Distributor Jacket (1)	Jacket (2)	Valve (3)	Tank (4)	Brine Tank (5)	Grid (8)	Resin (21501)	Gravel (22001)
3220-1	DT30TM	19495	100506	91001-08	110354	100283	NA	2.0 CF	0.16 CF
3221-1	DT40TM	19478	100507	91001-09	110474	100362	19725	2.5 CF	0.16 CF
3222-1	DT45TM	19477	100508	91001-09	110544	100362	19725	3.0 CF	0.16 CF

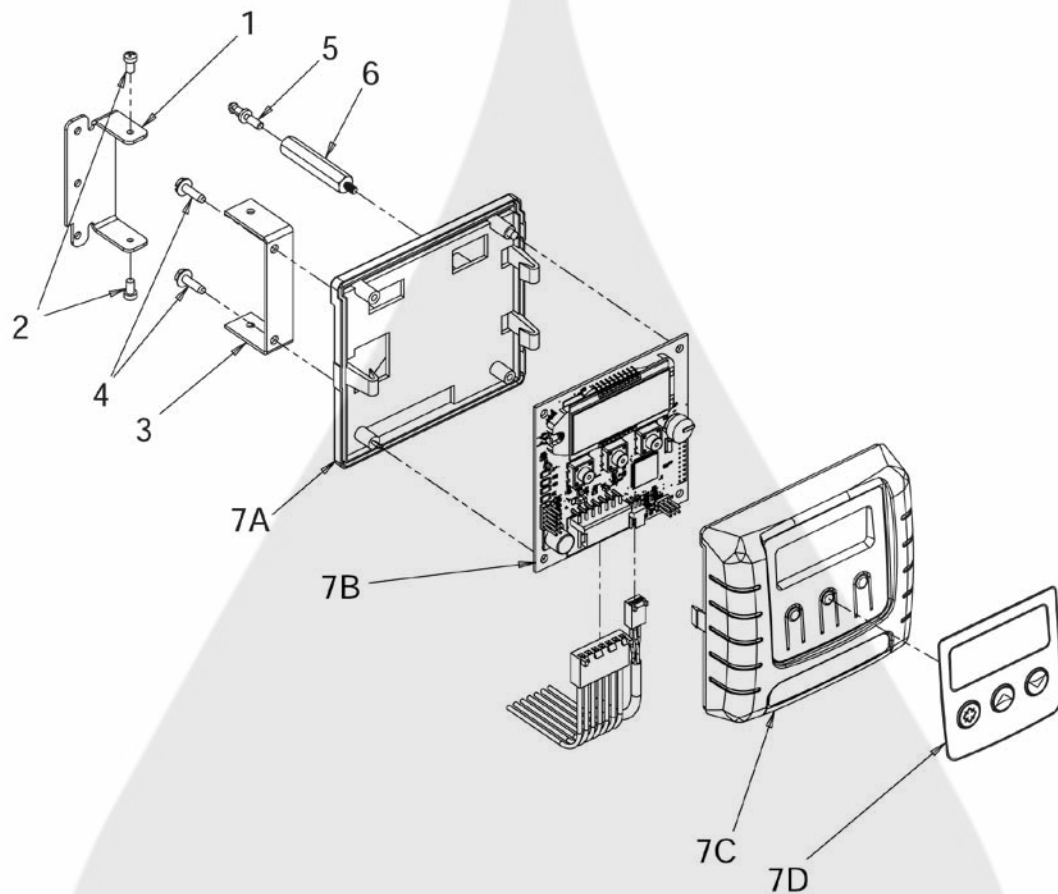
Common Components

Item No.	Part No.	Description
6	48004	Brine Well Cap
7	13624	Safety Float

All units also come with a DLF Control which includes:

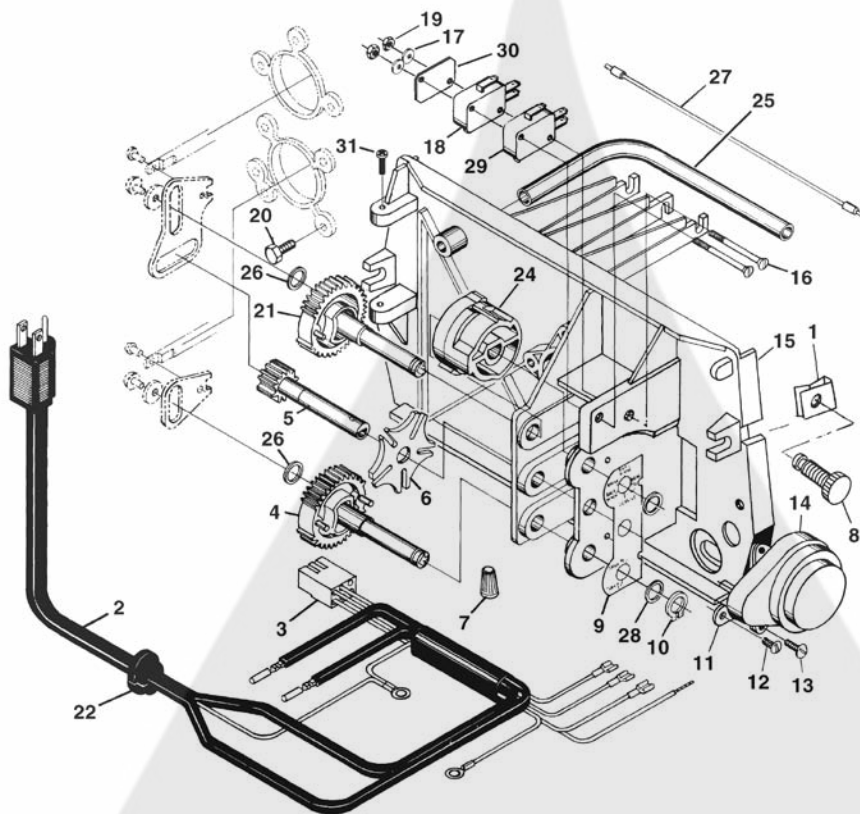
- 11183 O-Ring
- 11385-01 Control Housing
- 12087 2.0 GPM Flow Washer





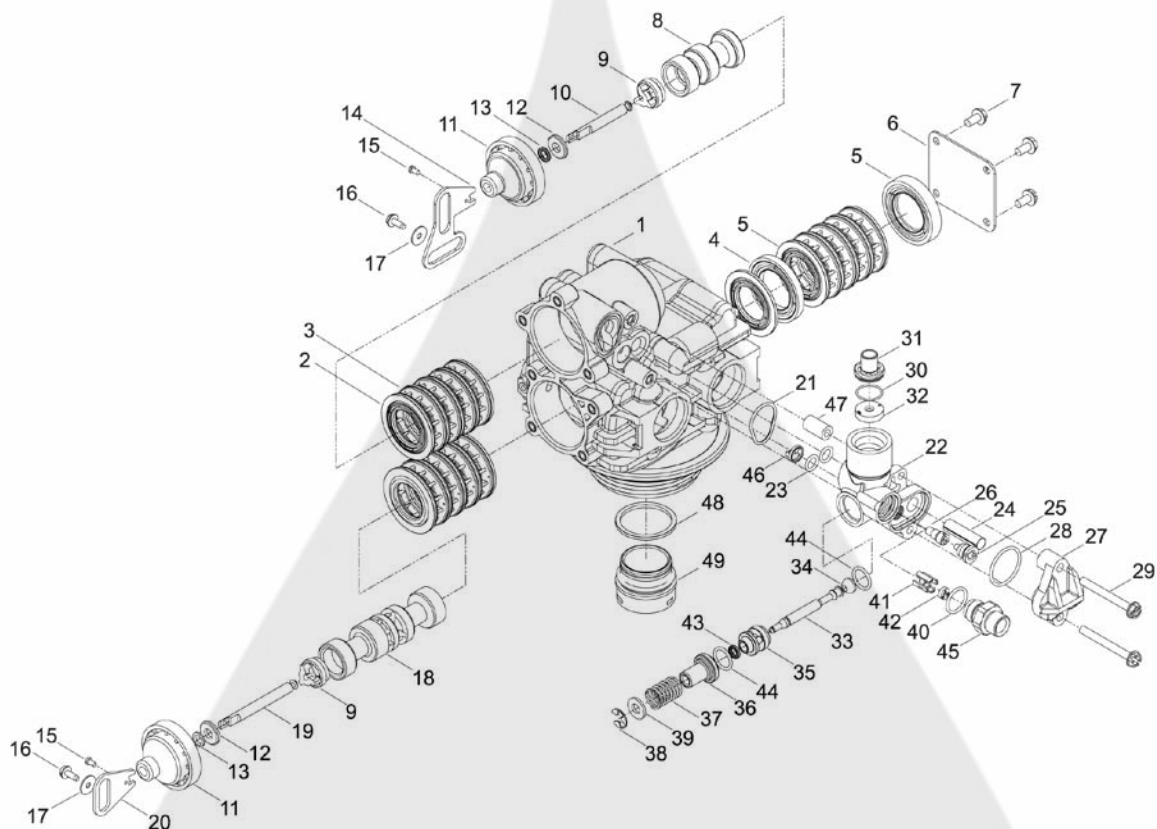
Item No.	Qty Req'd	Part No.	Description
1	1	13881	Bracket, Hinge Timer
2	2	11384	Screw, Phil, 6-32 X 1/4
3	1	42732	Bracket, Timer, 9000SXT
4	2	13296	Screw, Hex Wsh, 6-20 X 1/2
5	1	14265	Clip, Spring
6	1	42733	Stand-Off, Timer, 9000SXT
7A	1	19889	Housing, Circuit Board
7B	1	42196	Circuit Board, SXT
7C	1	42635	Cover, Front, SXT, Square
7D	1	42637	Label, Display, SXT

TMI - 9100SXT Power Head Assembly



Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	2	14932	Nut, Tinnerman, U Type, 8-32	17	2	10340	Washer, Lock #4, Zinc
2	1	11838	Power Cord, 6' Fleck	18		10218	Switch, Micro
		40084-12	Power Cord, 12' U.S., Round, 120V	19	1	10339	Nut, Hex, 4-40 Zinc Plated
			Sys 5, 6, 7 & 2900/3150/3900 #4	20	1	15331	Screw, Hex Wsh Mach, 10-24 x 3/4 410 S.S.
		14678	Power Cord, U.S., 220/60	21	2	15133	Gear Assy, Drive, 3/4" Stroke
		19674	Transformer, 24V, 9.6VA Residential Valves	22	1	13547	Strain Relief, Flat Cord Heyco #30-1
		41475	Transformer, 24V, 9.6VA, European	23	1	15810	Ring, Retaining
3	1	15202	Harness, 9000/9500, Drive	24	1	17331	Cam, 9000, Triple
		14822	Harness, 2900	25	1	15368	Tube, Cable Guide, 2-Tank
4	1	15134	Gear Assy, Drive, 1/2" Stroke 9000/9500			17337	Tube, Cable Guide, 9500
5	1	15135	Gear, Drive, 9000	26	2	15372	Washer, Thrust, 3/8
6	1	14896	Wheel, Geneva	27	1	15216	Meter Cable Assy, 15.25"
7	2	40422	Nut, Wire, Tan			15425	Meter Cable, 13.25"
8	2	19367	Screw, Designer Cover, Thumb 8-32			17744	Meter Cable Assy, 20.75" 1 1/2" Std
			Blank UV Stable Material			19121-01	Meter Cable Assy, SE, Paddle 6600/6700
9	1	15175	Label, Shaft Position			19121-05	Meter Cable Assy, ET, 28" 2750/3150 Systemax 4-6
10	2	14917	Ring, Retaining			19791-01	Meter Cable Assy, Turbine/SE
11	1	15199	Plate, Ground, 9000/9500	28	2	15692	Washer, Plain, 3/8"
12	1	14430	Screw, Hex Wsh St, 6 x 1/4 Type "B"	29	1	16433	Switch, Miniature
13	2	19160	Screw, Phil Pan, Thread 6-32 x 3/8 Type 23 Zinc	30	1	10302	Insulator, Limit Switch
14	1	61633-00	Motor, 24V, 50/60 Hz, 1 RPM	31	2	19160	Screw, Slot Rd Hd Mach, 5-20 x 3/8
		61633-01	Motor, 120V, 50/60 Hz 1 RPM	N/S	1	19291-020	Cover, Designer, 1 Pc Black
		18739	Motor, 220V, 50/60 Hz 1 RPM	N/S	1	60232-112	Cover, Designer, 1 Pc Black w/Left Window
15	1	15131	Backplate, 9000				
		17784-05	Panel, Control, 9000/9500 ET				
16	2	15172	Screw, Flt Hd Mach, 4-40 x 1 3/8 Steel Zinc Plate				

N/S - Not Shown

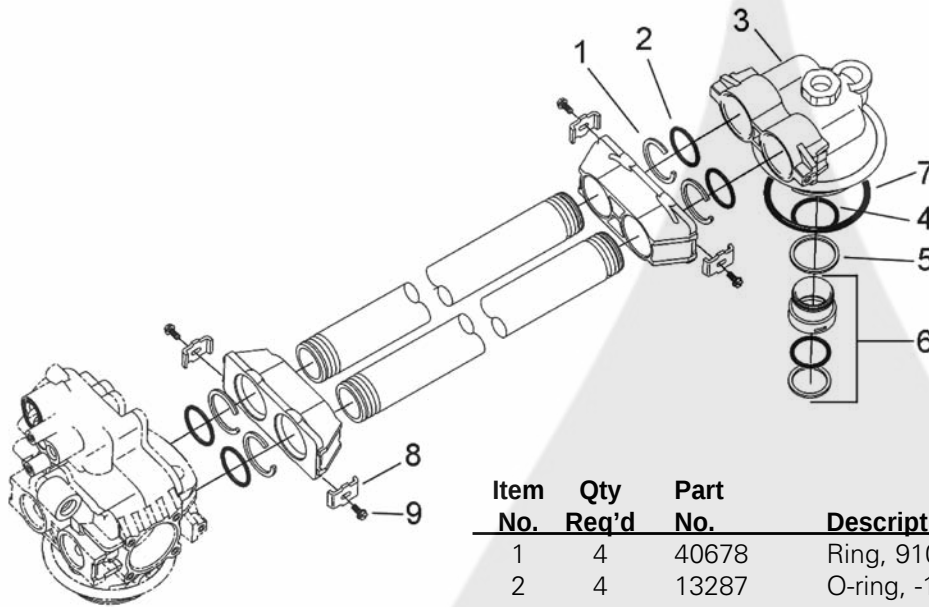


Item No.	Qty Req'd	Part No.	Description
1	1	40688	Valve Body Assy, 9100
2	16	13242	Seal, 5600
3	12	14241	Spacer, 5600
4	1	16595	Spacer, 9000
5	1	14928	Plug, End Stub, 9000
6	1	14906	Plate, End, 9000
7	4	15137	Screw, Hex Wsh Mach, 10-24 x 3/8
8	1	14914	Piston, 9000, Upper
9	2	14309	Retainer, Piston Rod
10	1	14919	Rod, Piston, Upper
11	2	13243	Plug, End, 5600
12	2	13008	Retainer, End Plug Seal
13	2	10209	Quad Ring, -010
14	1	14921	Link, Piston Rod
15	2	11335	Screw, Slot Phil Hd, 4-40 x 3/16
16	2	17020	Screw, Slot Ind Hex, 6-20 x 3/8
17	2	13363	Washer, Plain, .145 ID SS
18	1	14905	Piston, 9000
19	1	14920	Rod, Piston, Lower, 9000
20	1	15019	Link, Piston Rod, 9000/9500
21	1	41500	O-ring, Drain, 9100
22	1	15215	Body, Injector, 9000
23	2	13301	O-ring, -011, Injector
24	1	10227	Screen, Injector
25	1	10913-1	Nozzle, Injector, #1, White
26	1	10914-1	Throat, Injector, #1, White
27	1	13166	Cap, Injector, 5600

Item No.	Qty Req'd	Part No.	Description
28	1	13303	O-ring, -021
29	2	13387	Screw, Hex Hd Wash, 10-24 x 1-3/4
30	1	15348	O-ring, -563
31	1	13173	Retainer, DLFC Button
32	1	12085	Washer, Flow, 1.2 GPM
33	1	14925	Brine Valve Stem, 9000
34	1	12626	Seat, Brine Valve
35	1	13167	Spacer, Brine Valve
36	1	13165	Cap, Brine Valve
37	1	11973	Spring, Brine Valve
38	1	11981-01	Ring, Retaining
39	1	16098	Washer, Nylon Brine
40	1	12977	O-ring, -015
41	1	13245	Retainer, BLFC
42	1	12095	Washer, Flow, .50 GPM
43	1	12550	Quad Ring, -009
44	2	13302	O-ring, -014
45	1	13244	Adapter, BLFC
46	1	13497	Disperser, Air, 5600
47	1	13361	Spacer, 4650/9000/WCC
48	1	40538	Retainer, 32mm, O-ring Dist, 7000
49	1	61419	Kit, 1.05" Distributor, Adapter
N/S	1	13333	Label, Injector, Blank
N/S	1	10759	Label, .5 GPM, 1.5 LBS Salt/Min

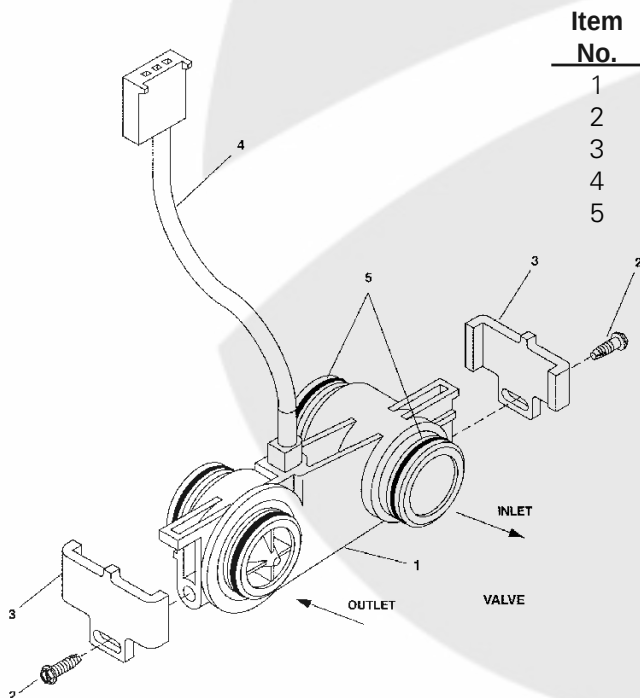
N/S - Not Shown

TMI - 9100SXT Tank Adapter Assembly

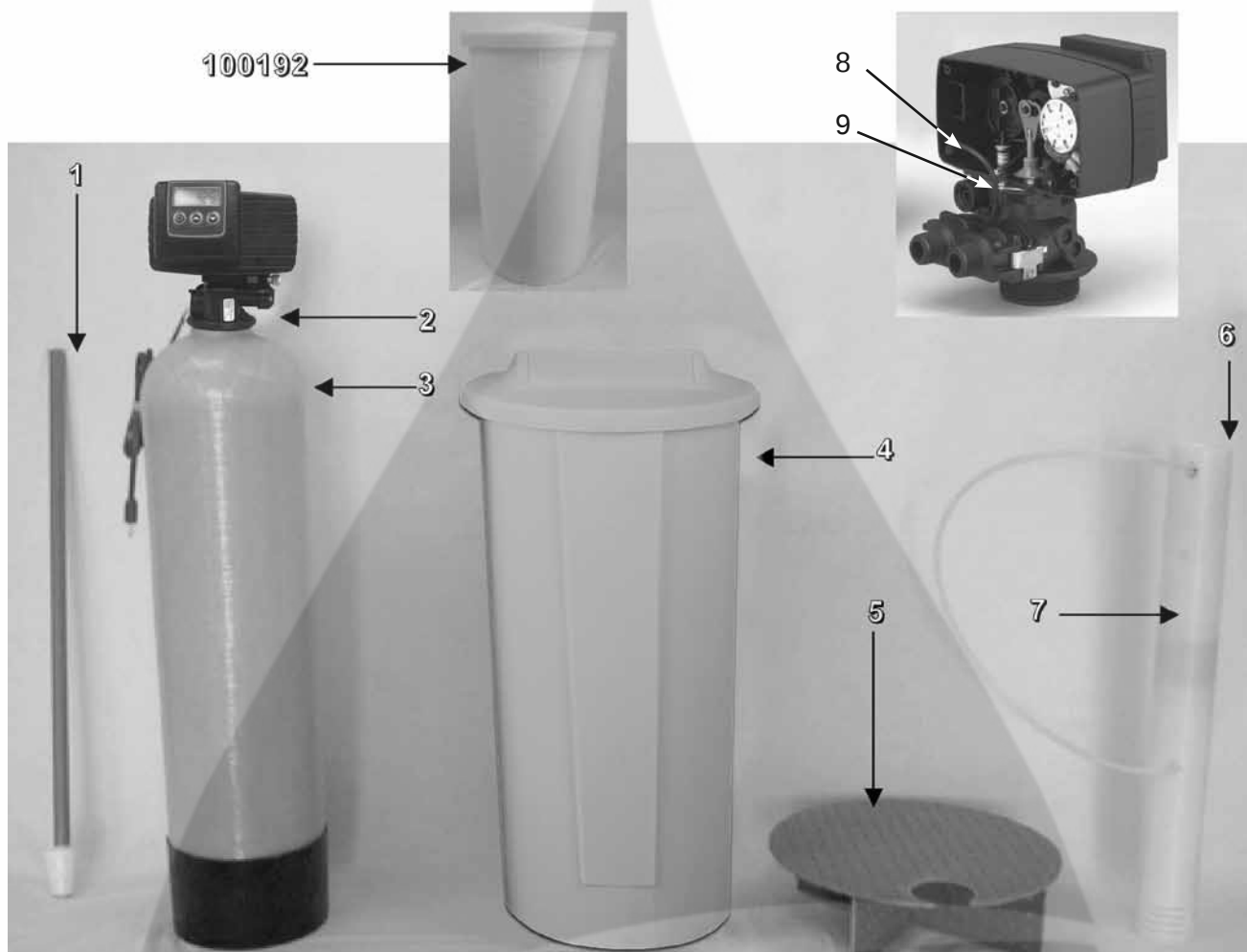


Item No.	Qty Req'd	Part No.	Description
1	4	40678	Ring, 9100, Yoke Retainer
2	4	13287	O-ring, -123
3	1	14865	Adapter Assy, 2nd Tank, 9100
4	1	19054	O-ring, -124
5	1	40538	Retainer, 32mm, O-ring Dist, 7000
6	1	61419	Kit, 1.05" Distributor, Adapter
7	1	18303	O-ring, -336
8	4	13255	Clip, Mounting
9	4	14202-01	Screw, Hex Wsh Mach, 8-32 x 5/16

TMI - 3/4" Electronic Turbine Meter



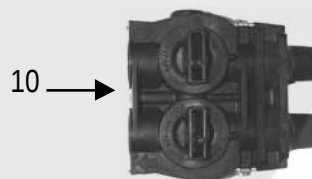
Item No.	Qty Req'd	Part No.	Description
1	1	19797	Meter Body Assembly
2	2	13314	Screw, Hex Washer, 8-18 x 5/8"
3	2	19569	Clip, Flow Meter
4	1	19791-01	Electrical Harness
5	4	13305	O-Ring - 119



Part No.	Model Description	Distributor (1)	Valve (2)	Tank (3)	Brine Tank (4)	Grid (5)	Safety Float (7)	Resin #21501
2102	EFT20SXT	19495	56019-61	19354	100283	NA	13624	0.75 CF
2103	EFT30SXT	19495	56019-87	110354	100283	NA	13624	1.00 CF
2104	EFT40SXT	19478	56019-88	110474	100283	NA	13624	1.25 CF
2105	EFT60SXT	19477	56019-63	112524	100192	19710	13624	2.00 CF
2106	EFT90SXT	60098	56019-64	114651	100192	95009-21	13624	3.00 CF

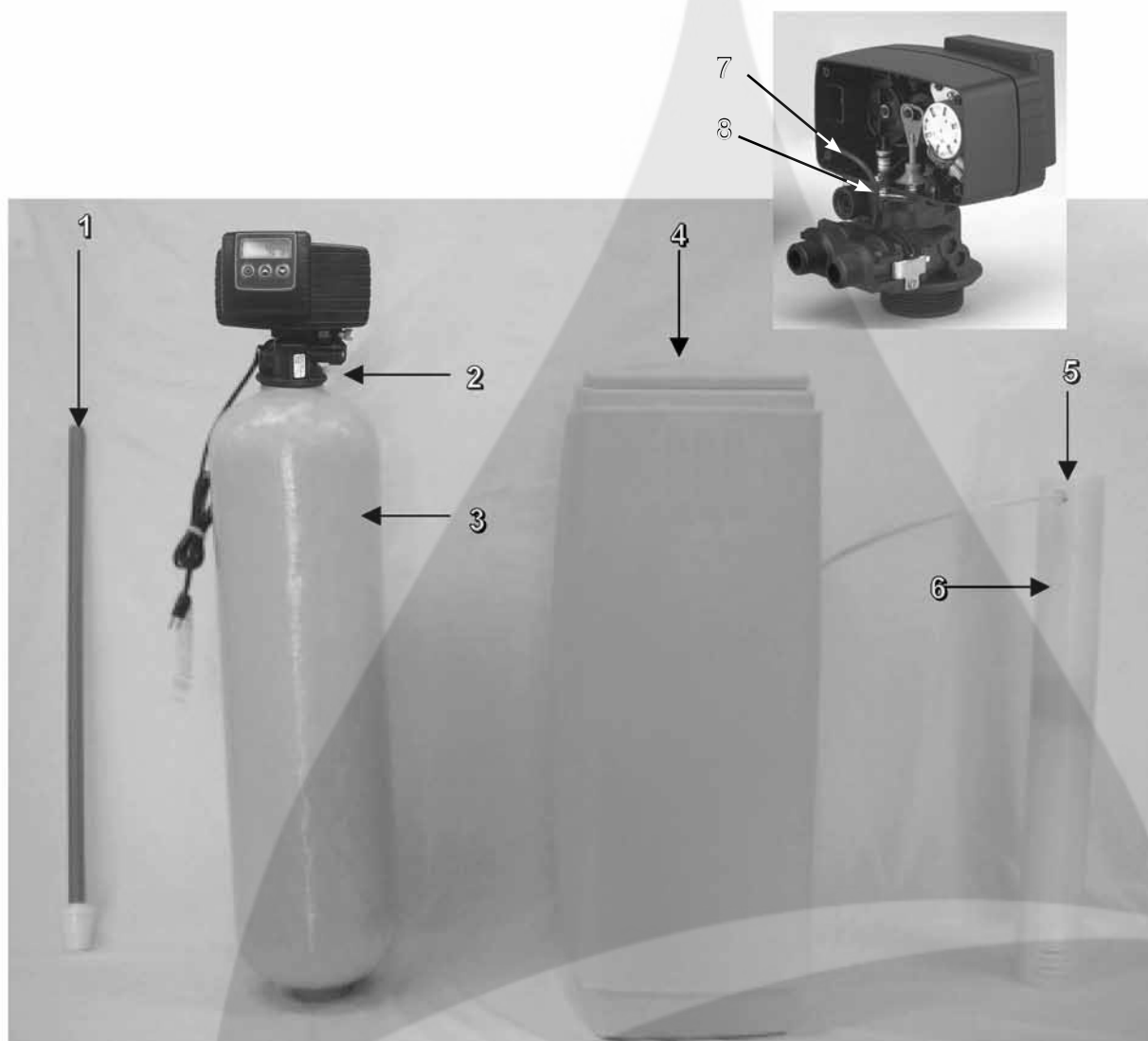
Common Components

Item No.	Part No.	Description
6	48004	Brine Well Cap
8	19791-01	Meter Cable
9	60026	Meter
10	60049	Bypass



Unit 2106 includes a CPVC tank adapter - Part No. 81041
Distributor 60098 includes hub and laterals

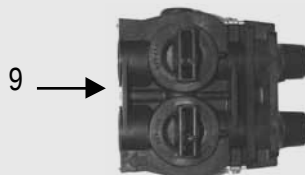
See 5600SXT Valve
parts breakdown on
pages 303-304.



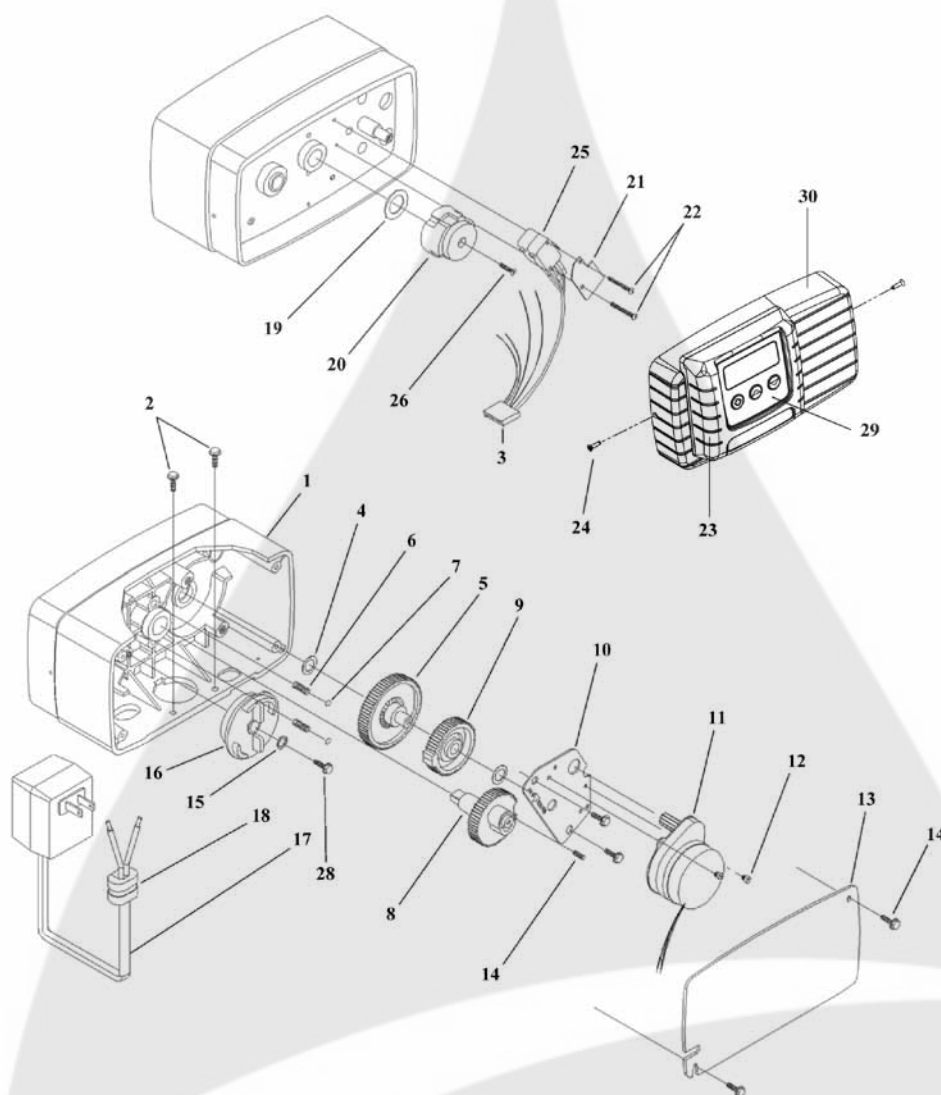
Part No.	Model Description	Valve (2)	Tank (3)	Resin #21501
2100	EFC20SXT	56019-61	19354	0.75 CF
2101	EFC30SXT	56019-87	110354	1.00 CF

Common Components

Item No.	Part No.	Description
1	19495	Distributor
4	100203	Cabinet
5	48004	Brine Well Cap
6	13624	Safety Float
7	19791-01	Meter Cable
8	60026	Meter
9	60049	Bypass

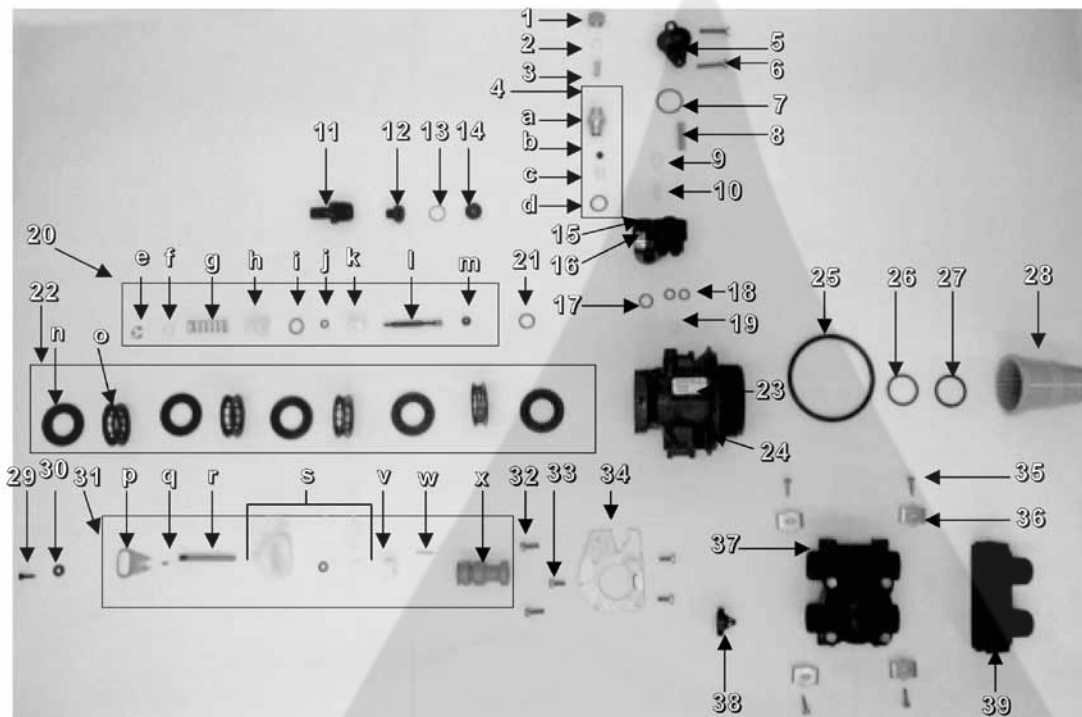


See 5600SXT Valve
parts breakdown on
pages 303-304.

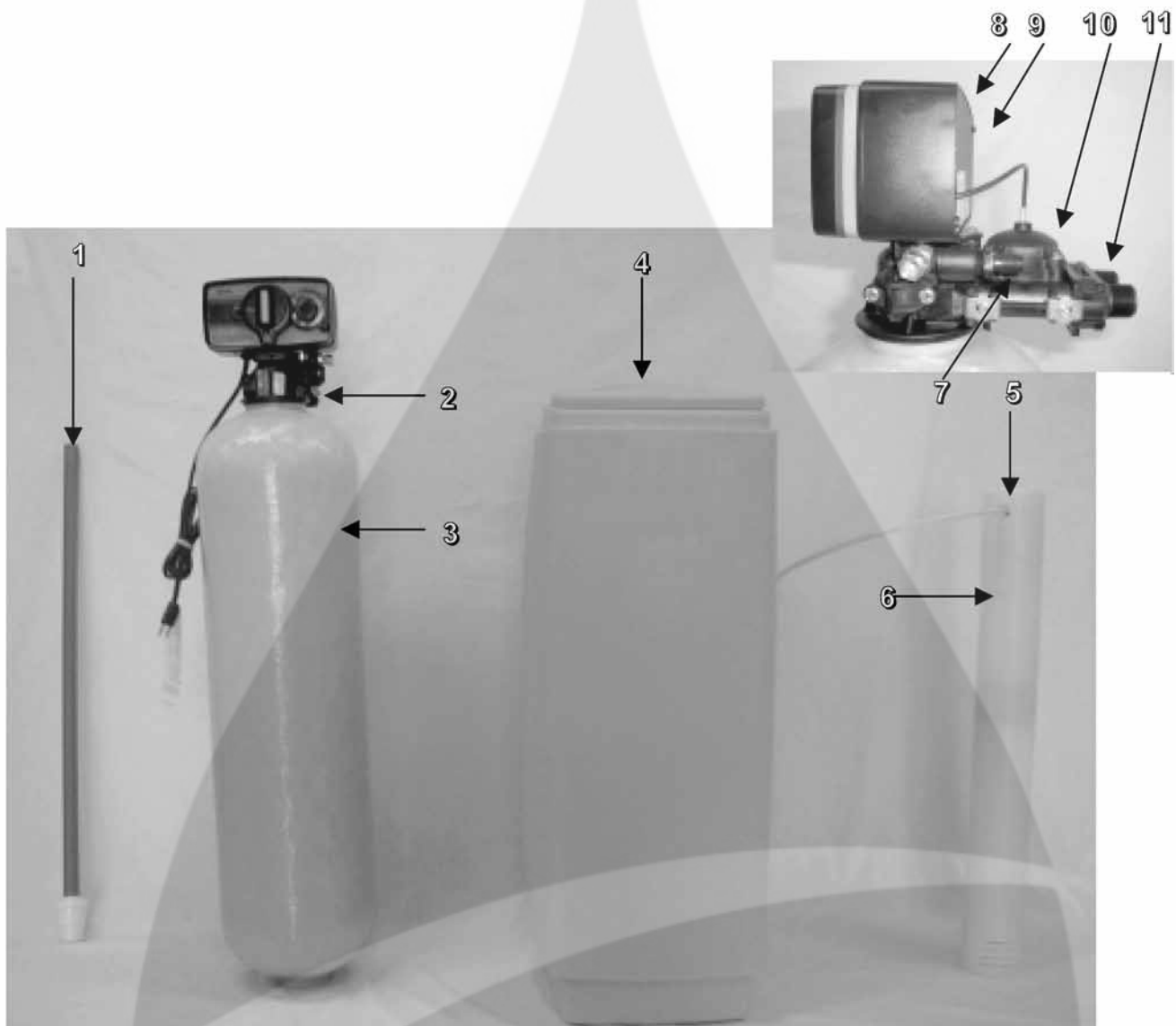


Item No.	Qty Req'd	Part No.	Description
1	1	26001-02	drive housing, black
2	2	12473	screw, drive mount
3	1	19474	wire harness, power
4	1	13299	spring washer
5	1	13017	idler gear
6	2	19080	spring, detent
7	2	13300	ball, detent
8	1	25005-10	main drive gear and shaft (downflow brining, black)
9	1	23045	drive gear
10	1	13175	motor mounting plate
11	1	16944	drive motor, 2RPM 24V 50/60 Hz
12	3	11384	screw, motor
13	1	13229	back plate
14	4	13296	screw, component
15	1	12037	washer
16	1	18722	cam, brine valve

Item No.	Qty Req'd	Part No.	Description
17	1	19674	transformer, 24V 9.6VA (US 120V)
18	1	13547	strain relief
19	1	19079	washer, friction
20	1	17438	cycle cam (downflow brining, black, single backwash)
21	1	10302	insulator
22	2	17876	screw, microswitch
23	1	42635-01	front cover
24	2	13898	screw, front panel
25	2	10218	microswitch
26	1	15151	screw, cycle cam
28	1	040214	screw
29	1	42637	label, display, 5600SXT
30	1	19472-02	housing, circuit board
-	1	42766-02	circuit board, SXT
NS	4	12681	wire nut, beige



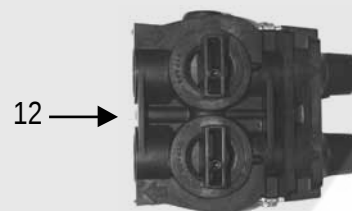
Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	10329	3/8" Brass Nut	k	1	13167	Brine Valve Spacer
2	1	10330	Delrin Sleeve	l	1	13172	Brine Valve Stem
3	1	10332	Brass Insert	m	1	12626	Brine Valve Seat
4	1	19402	Control .25 Refill	21	1	13302	O-Ring
a	1	13244	BLFC Adapter	22	1	13976	Seal & Spacer Assembly
b	1	12094	0.25 GPM Flow Washer	n	5	13242	Main Seals
c	1	13245	BLFC Button Retainer	o	4	14241	Spacers
d	1	12977	O-Ring	23	1	13333	Injector Label
5	1	13166	Injector Cover	24	1	19700-10	Valve Body
6	2	13315	Screws	25	1	12281	O-Ring
7	1	13303	O-Ring	26	1	13304	O-Ring
8	1	10227	Injector Screen	27	1	13030	Distributor Tube
9	1	10913-1	White Injector Nozzle	28	1	18280	Cone
10	1	10914-1	White Injector Throat	29	1	13296	Screw
11	1	13308	Black Hose Barb	30	1	13363	Plain Washer
12	1	13173	DLFC Button Retainer	31	1	13975	Piston Assembly
13	1	15348	O-Ring	p	1	13003	Piston Rod Link
14	1	12086	1.50 GPM Flow Washer	q	1	13306	Roll Pin
	1	12087	2.00 GPM Flow Washer	r	1	13002	Piston Rod
15	1	13163	Injector Body	s	1	13446	End Plug Assembly
16	1	12128	BLFC Label, 0.25 GPM	v	1	12953	Piston Rod Retainer
17	1	12638	O-Ring	w	1	10696	Piston Pin
18	2	13301	O-Ring	x	1	13247	Piston
19	1	13497	Air Disperser	32	2	12473	Screws
20	1	13977	Brine Valve Assembly	33	3	12112	Screws
e	1	11981-01	Retaining Ring	34	1	13546	End Plug Retainer
f	1	16098	Brine Washer, Nylon	35	4	13314	Screws
g	1	11973	BV Spring	36	4	13255	Mounting Clip
h	1	13165	Brine Valve Cap	37	1	60086	Meter
i	1	13302	O-Ring	38	1	14613	Flow Straightener
j	1	12550	Quad Ring	39	1	18706-02	3/4" Plastic Yoke



Part No.	Model Description	Valve (2)	Tank (3)	Resin #21501
2095	EFC20MI	5600-02	19354	0.75 CF
2096	EFC30MI	5600-03	110354	1.00 CF

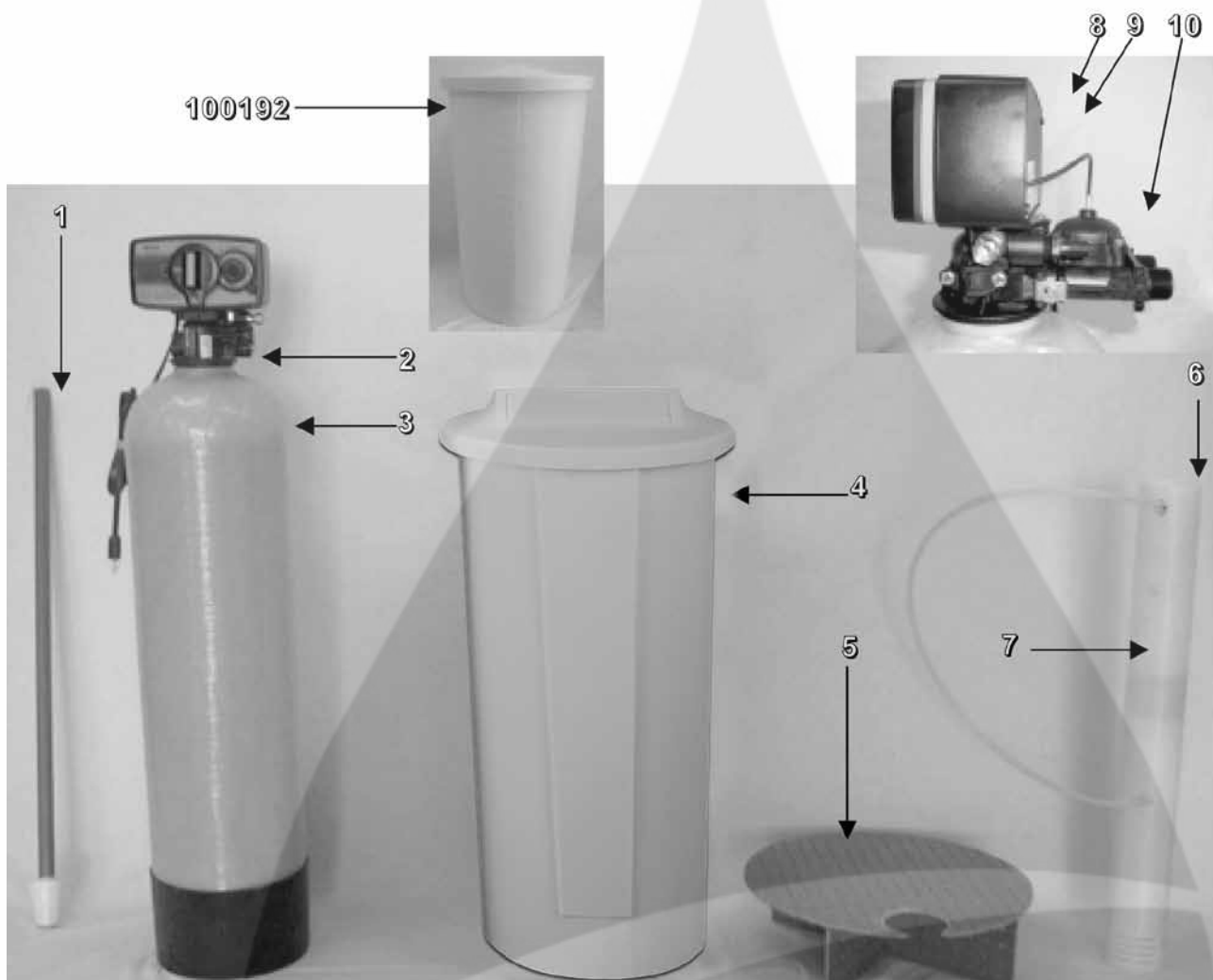
Common Components

Item No.	Part No.	Description
1	19495	Distributor
4	100203	Cabinet
5	48004	Brine Well Cap
6	13624	Safety Float
7	13308	Hose Barb
8	13229	Back Cover
9	13296	Screws
10	60086	Meter
11	18706-02	Yoke
12	60049	Bypass



See 5600 Meter Initiated Valve parts breakdown on page 307-309.

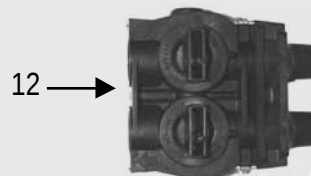
Econoflo MI Twin Tank Water Softener



Part No.	Model Description	Distributor (1)	Valve (2)	Tank (3)	Brine Tank (4)	Grid (5)	Safety Float (7)	Resin #21501
2090	EFT20MI	19495	5600-02	19354	100283	NA	13624	0.75 CF
2091	EFT30MI	19495	5600-02	110354	100283	NA	13624	1.00 CF
2092	EFT40MI	19478	5600-01	110474	100283	NA	13624	1.25 CF
2093	EFT60MI	19477	5600-04	112524	100192	19710	13624	2.00 CF
2094	EFT90MI	60098	5600-05	114651	100192	95009-21	13624	3.00 CF

Common Components

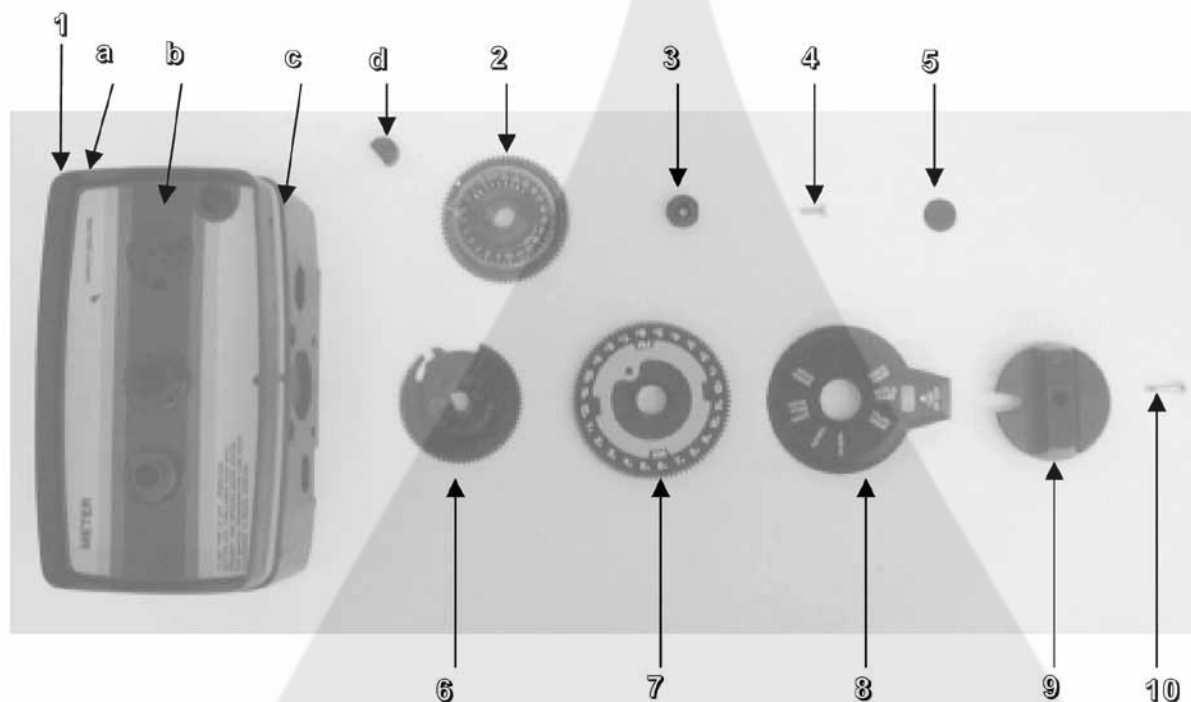
Item No.	Part No.	Description
6	48004	Brine Well Cap
8	13229	Back Cover
9	13296	Screws
10	60086	Meter
12	60049	Bypass



Unit 2094 includes a CPVC tank adapter - Part No. 81041
Distributor 60098 includes hub and laterals

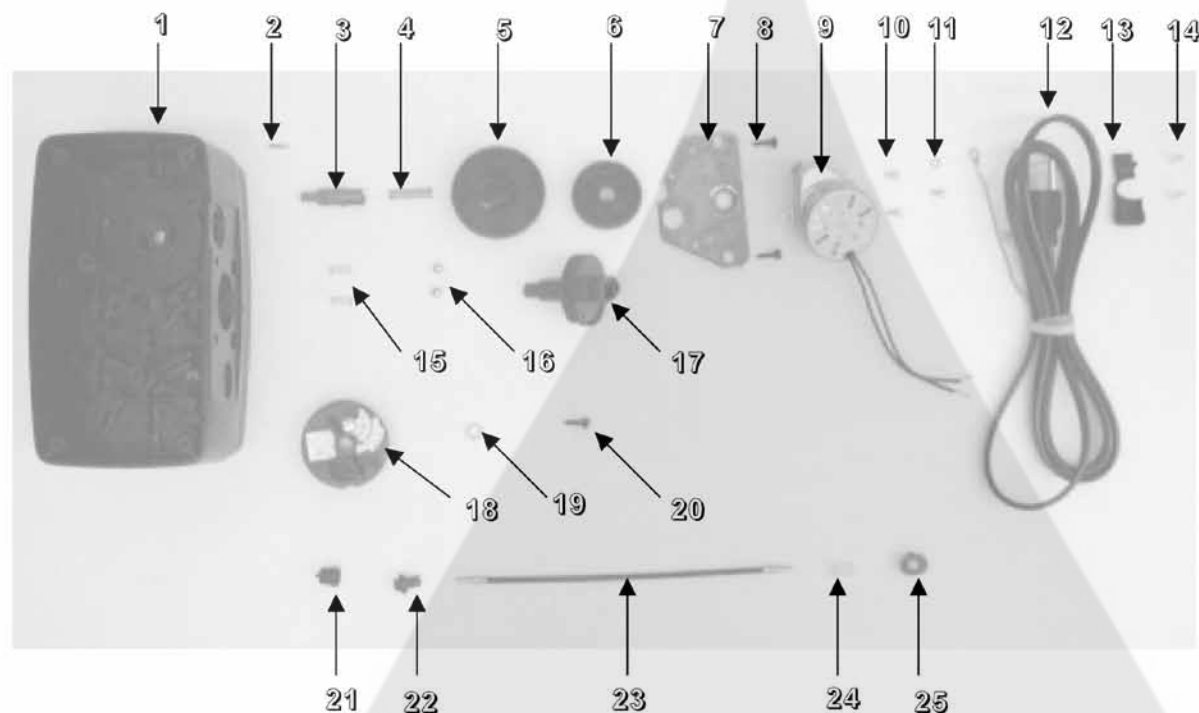
See 5600 Meter Initiated Valve parts breakdown on page 307-309.

5600 Power Head - FRONT



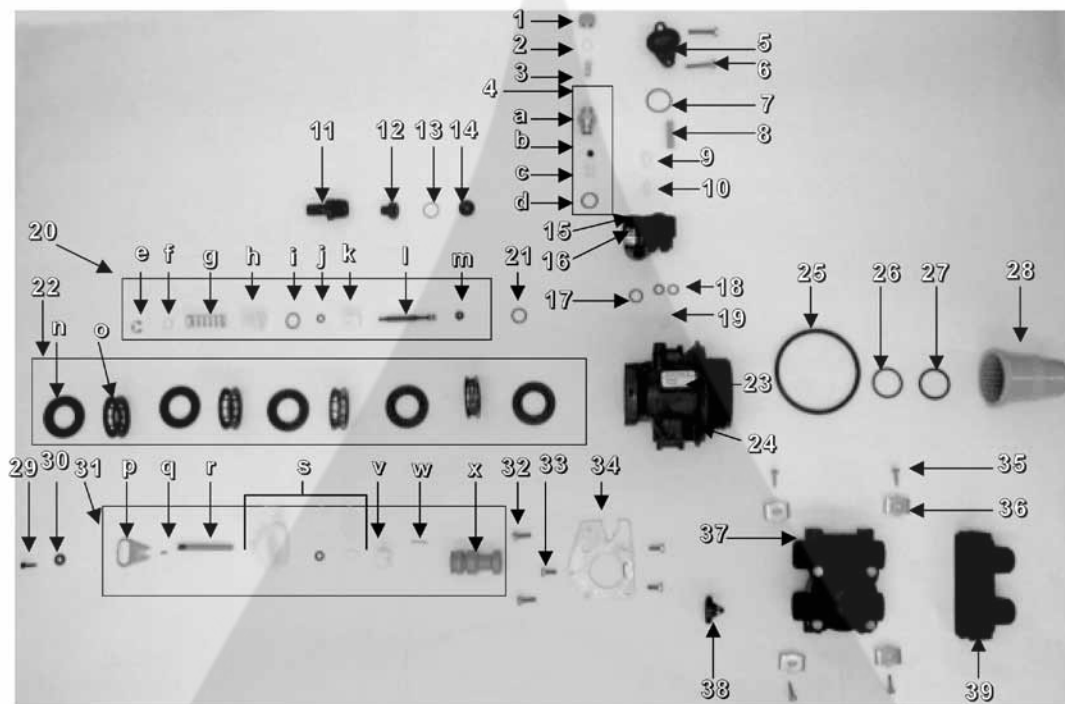
Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	19499	Timer Housing Labels	3	1	13806	Program Wheel Retainer
a	1	13162-000	Drive Housing/Receptacle	4	1	13748	Screw
b	1	13955	Beige Front Label	5	1	13953	Program Wheel Cover Label
c	1	13957	Beige Stripe Tape	6	1	13802	Cycle Actuator Gear
d	1	14252	Outboard Bearing Cap	7	1	13973	24 Hour Gear Assembly
2	1	14039	Program Wheel Assembly				
	1	13803	Program Drive Wheel Gear		1	13009	24 Hour Gear
	1	13885	Program Wheel Cover	8	1	14176	Valve Position Dial
	1	15956	Program Wheel Adj Disc	9	1	14177	Control Knob
	1	13954	No. of People Label	10	1	15151	Screw
	2	13898	Screws	11	1	14175	Beige Control Knob Label

5600 Power Head - BACK



Item No.	Qty Req'd	Part No.	Description
1	1	13162-000	Drive Housing/Receptacle
2	1	18655	Roll pin
3	1	13018	Idler Pinion
4	1	13312	Idler Shaft Pin
5	1	13017	Idler Gear
6	1	13164	Drive Gear
7	1	13175	Motor Mounting Plate
8	2	13296	Mounting Screws
9	1	18743-1	Drive Motor, 120V
10	3	11384	Screws
11	1	29702	Lock Washer
12	1	11842	Power Cord
13	1	13547	Strain Relief
14	2	11673	Connectors
15	2	19080	Springs
16	2	13300	1/4" Ball
17	1	13170	Main Gear & Shaft

Item No.	Qty Req'd	Part No.	Description
18	1	13980	5600 Cam Assembly
	1	13168	Brine Valve Cam
	1	11081	Hex Nut
	1	13307	Salt Label
	1	13710	Warning Label
	1	13169	Cam Segment
	1	11980	Screw
19	1	12037	Plain Washer
20	1	13296	Screw
21	1	13830	Program Wheel Drive Pinion
22-25	1		5600 Meter Cable Assembly
22	1	13831	Drive Pinion Clutch
23	1	14043	Meter Cable
24	1	14276	Meter Clutch Spring
25	1	14253	Clutch Spring Retainer
NS	1	13229	Back Cover
NS	2	13296	Screws



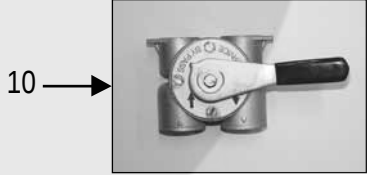
Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	10329	3/8" Brass Nut	k	1	13167	Brine Valve Spacer
2	1	10330	Delrin Sleeve	l	1	13172	Brine Valve Stem
3	1	10332	Brass Insert	m	1	12626	Brine Valve Seat
4	1	19402	Control .25 Refill	21	1	13302	O-Ring
a	1	13244	BLFC Adapter	22	1	13976	Seal & Spacer Assembly
b	1	12094	0.25 GPM Flow Washer	n	5	13242	Main Seals
c	1	13245	BLFC Button Retainer	o	4	14241	Spacers
d	1	12977	O-Ring	23	1	13333	Injector Label
5	1	13166	Injector Cover	24	1	19700-10	Valve Body
6	2	13315	Screws	25	1	12281	O-Ring
7	1	13303	O-Ring	26	1	13304	O-Ring
8	1	10227	Injector Screen	27	1	13030	Distributor Tube
9	1	10913-1	White Injector Nozzle	28	1	18280	Cone
10	1	10914-1	White Injector Throat	29	1	13296	Screw
11	1	13308	Black Hose Barb	30	1	13363	Plain Washer
12	1	13173	DLFC Button Retainer	31	1	13975	Piston Assembly
13	1	15348	O-Ring	p	1	13003	Piston Rod Link
14	1	12086	1.50 GPM Flow Washer	q	1	13306	Roll Pin
	1	12087	2.00 GPM Flow Washer	r	1	13002	Piston Rod
15	1	13163	Injector Body	s	1	13446	End Plug Assembly
16	1	12128	BLFC Label, 0.25 GPM	v	1	12953	Piston Rod Retainer
17	1	12638	O-Ring	w	1	10696	Piston Pin
18	2	13301	O-Ring	x	1	13247	Piston
19	1	13497	Air Disperser	32	2	12473	Screws
20	1	13977	Brine Valve Assembly	33	3	12112	Screws
e	1	11981-01	Retaining Ring	34	1	13546	End Plug Retainer
f	1	16098	Brine Washer, Nylon	35	4	13314	Screws
g	1	11973	BV Spring	36	4	13255	Mounting Clip
h	1	13165	Brine Valve Cap	37	1	60086	Meter
i	1	13302	O-Ring	38	1	14613	Flow Straightener
j	1	12550	Quad Ring	39	1	18706-02	3/4" Plastic Yoke



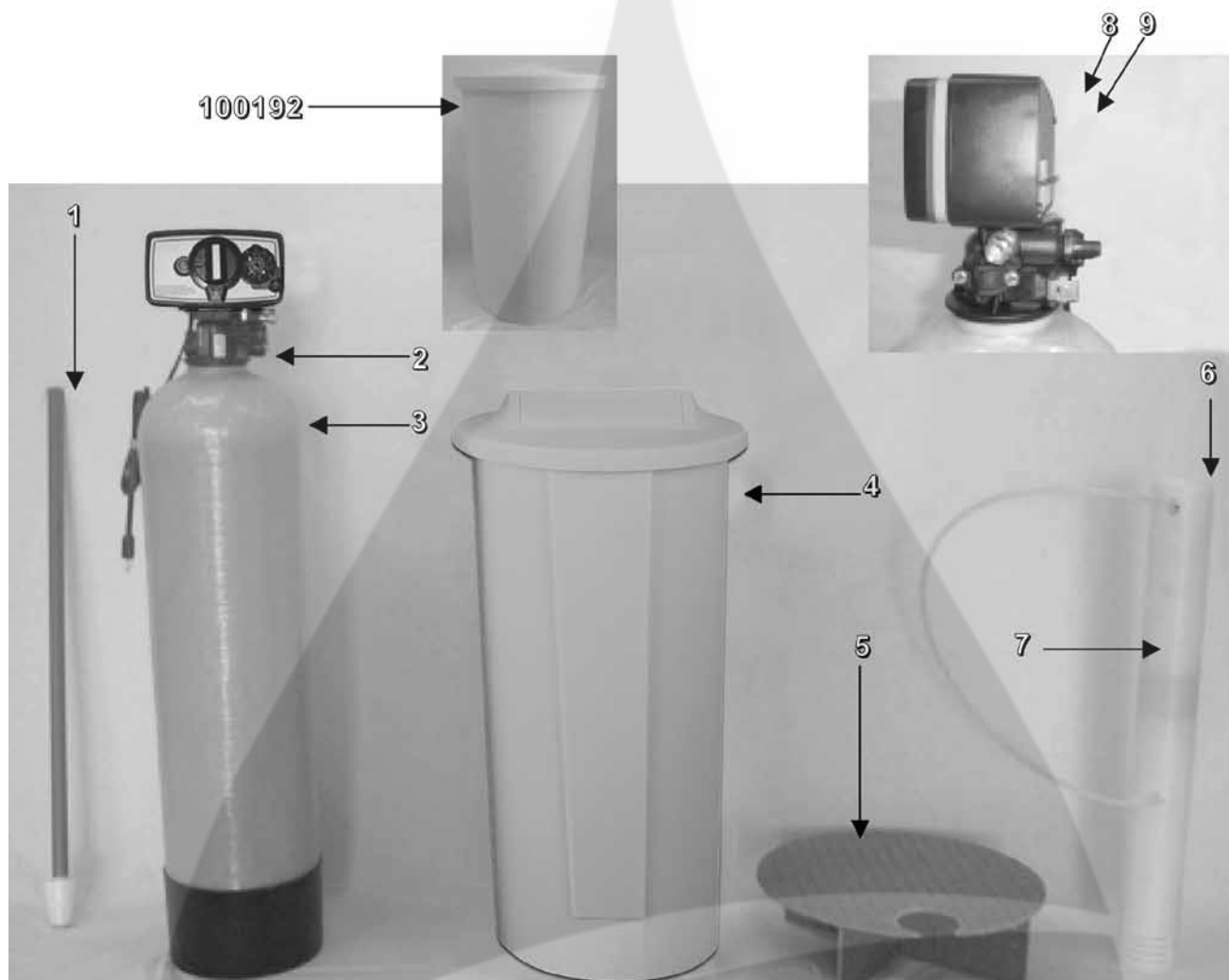
Part No.	Model Description	Valve (2)	Tank (3)	Resin #21501
5369	EFC20CC	Call	19354	0.75 CF
5370	EFC30CC	Call	110354	1.00 CF

Common Components

Item No.	Part No.	Description
1	19495	Distributor
4	100203	Cabinet
5	48004	Brine Well Cap
6	13624	Safety Float
7	13308	Hose Barb
8	13229	Back Cover
9	13296	Screw
10	60040SS	Bypass



See 5600 Calendar Clock Valve parts breakdown on pages 312-314.



Part No.	Model Description	Distributor (1)	Valve (2)	Tank (3)	Brine Tank (4)	Grid (5)	Safety Float (7)	Resin #21501
5351	EFT20CC	19495	Call	19354	100283	NA	13623	0.75 CF
5352	EFT30CC	19495	Call	110354	100283	NA	13623	1.00 CF
5354	EFT40CC	19478	Call	110474	100283	NA	13623	1.25 CF
5355	EFT60CC	19477	Call	112524	100192	19710	13623	2.00 CF
5356	EFT90CC	60098	Call	114651	100192	95009-21	13626	3.00 CF

Common Components

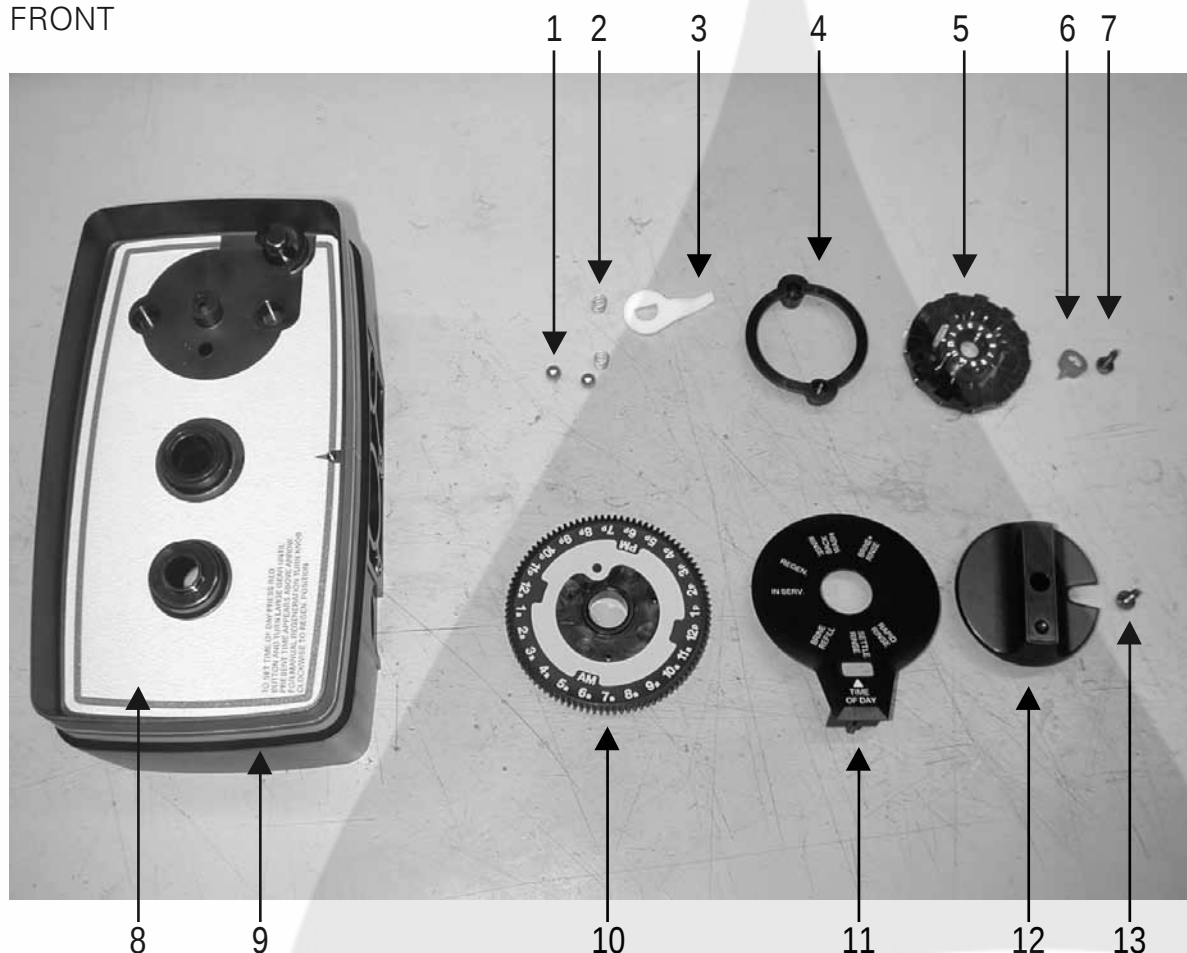
Item No.	Part No.	Description
6	48004	Brine Well Cap
8	13229	Back Cover
9	13296	Screw
10	60040SS	Bypass

10 →



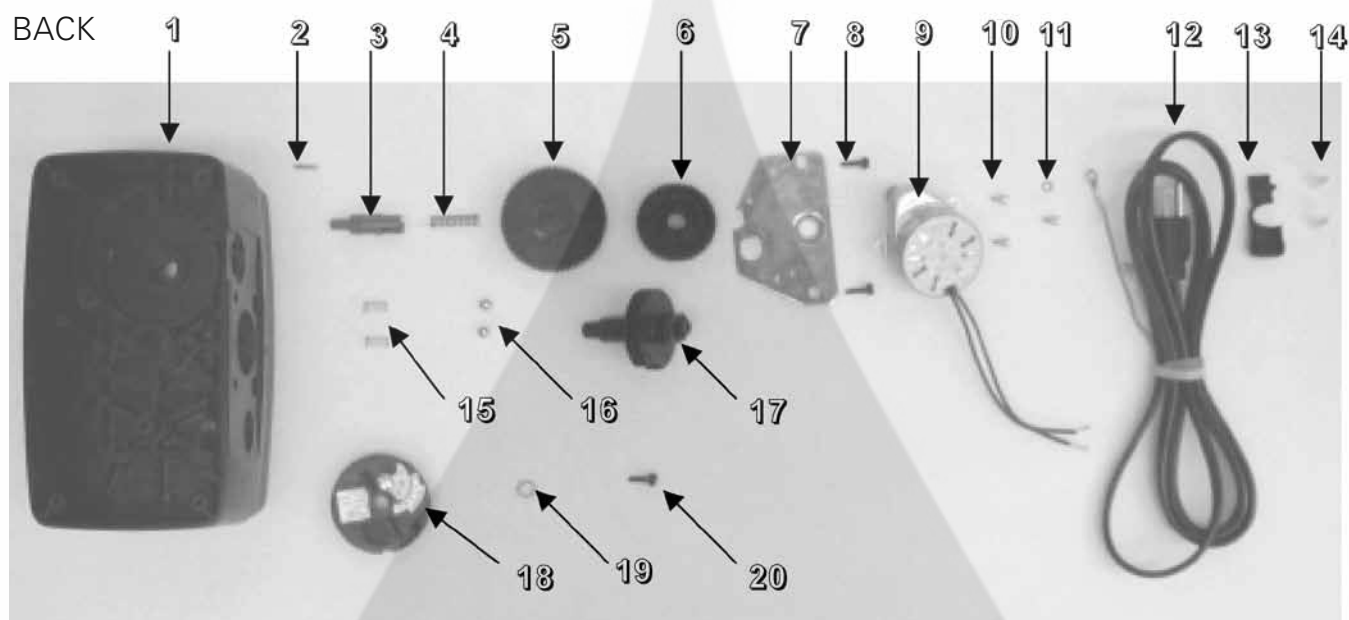
See 5600 Calendar Clock Valve parts breakdown on pages 312-314

FRONT



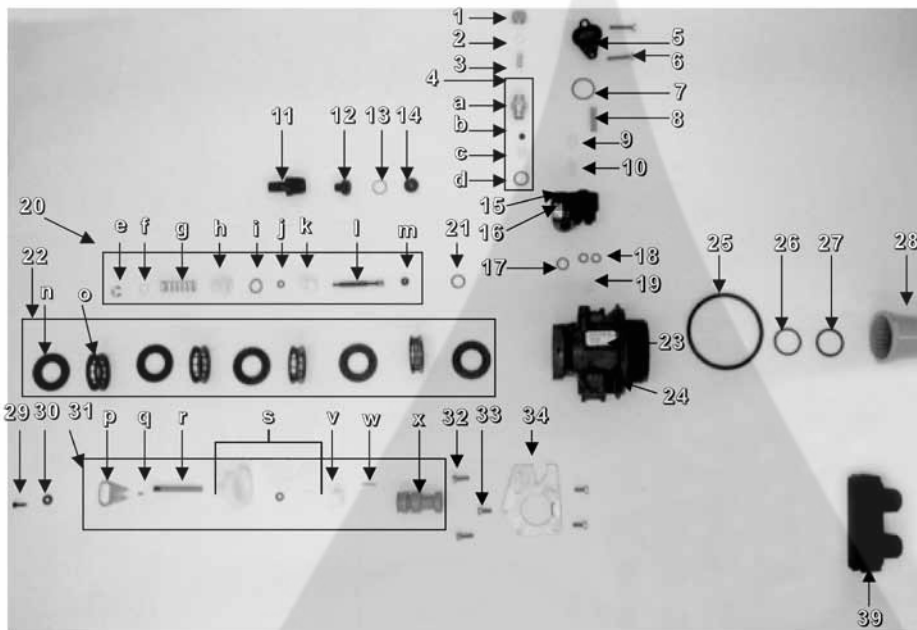
5600 Power Head Front

Item No.	Qty Req'd	Part No.	Description
1	2	13300	1/4" Ball
2	2	13311	Skipper Wheel Spring
3	1	13011	Cycle Arm
4	1	13864	Skipper Wheel Ring
5	1	14381	Skipper Wheel
6	1	13014	Red Pointer
7	1	13296	Mounting Screw
8	1	13309	Face Label, Brown
9	1	14448-000	Drive Housing, 5600 CC
10	1	13973	24 Hour Gear Assembly
	1	13009	24 Hour Gear
	1	13956	Label
11	1	14176	Dial
12	1	14177	5600 Black Knob
13	1	15151	Screw
14	1	14175	Beige Label (not shown)

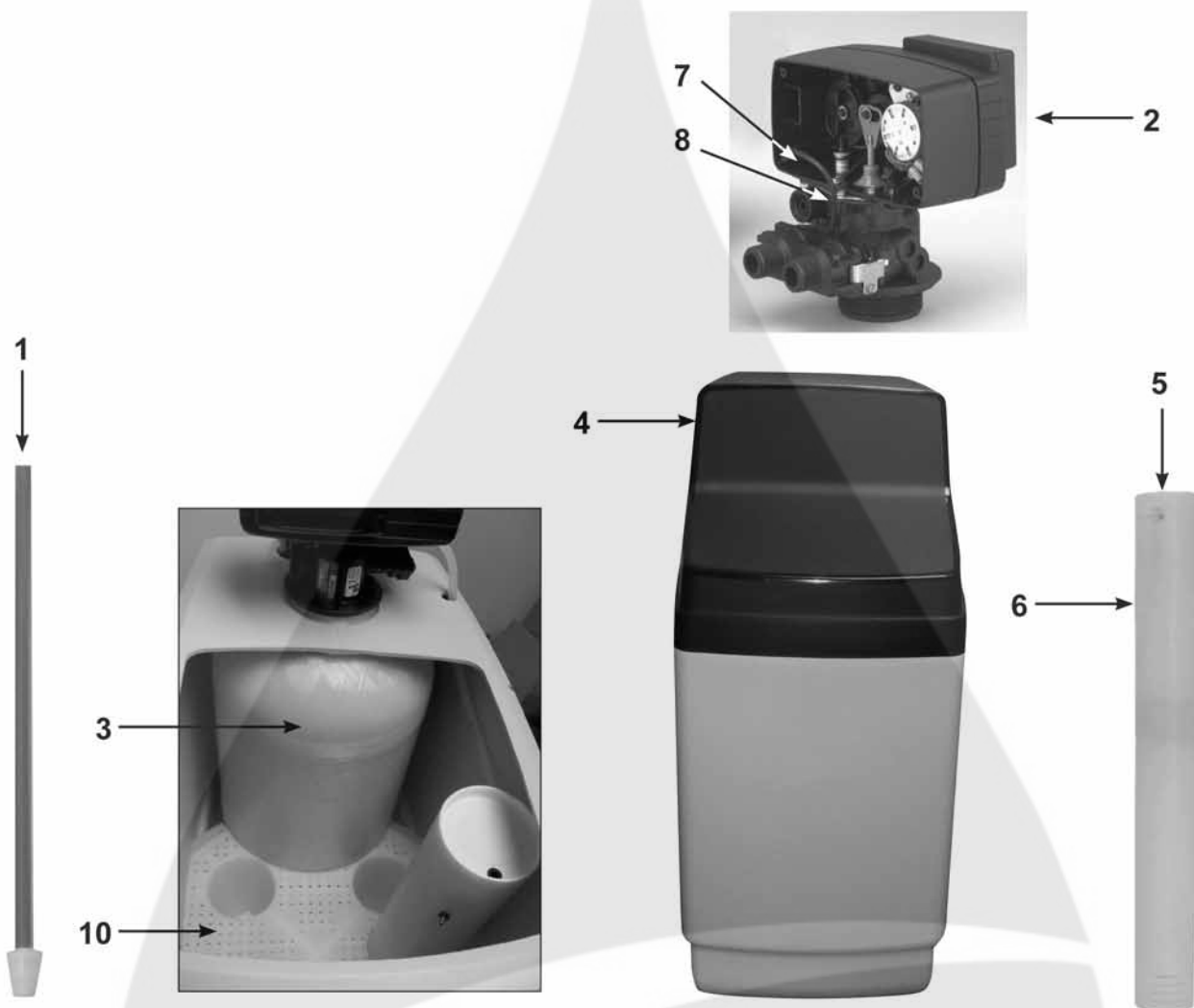


5600 Power Head Back

Item No.	Qty	Part No.	Description	Item No.	Qty	Part No.	Description
1	1	13162-000	Drive Housing/Receptacle	15	2	14457	Springs
2	1	18655	Roll pin	16	2	13300	1/4" Ball
3	1	13018	Idler Pinion	17	1	13170	Main Gear & Shaft
4	1	13312	Idler Shaft Pin	18	1	13980	5600 Cam Assembly
5	1	13017	Idler Gear		1	13168	Brine Valve Cam
6	1	13164	Drive Gear		1	11081	Hex Nut
7	1	13175	Motor Mounting Plate		1	13307	Salt Label
8	2	13296	Mounting Screws		1	13710	Warning Label
9	1	18743-1	Drive Motor, 120V		1	13169	Cam Segment
10	3	11384	Screws		1	11980	Screw
11	1	29702	Lock Washer	19	1	12037	Plain Washer
12	1	11842	Power Cord	20	1	13296	Screw
13	1	13547	Strain Relief	NS	1	13229	Back Cover
14	2	11673	Connectors	NS	2	13296	Screws



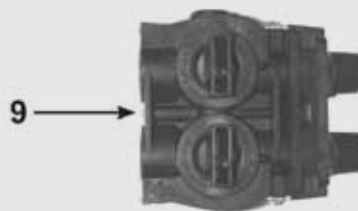
Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	10329	3/8" Brass Nut	e	1	11981-01	Retaining Ring
2	1	10330	Delrin Sleeve	f	1	16098	Brine Washer, Nylon
3	1	10332	Brass Insert	g	1	11973	BV Spring
4	1	19402	Control .25 Refill	h	1	13165	Brine Valve Cap
	1	19403	Control .50 Refill	i	1	13302	O-Ring
a	1	13244	BLFC Adapter	j	1	12550	Quad Ring
b	1	12094	0.25 GPM Flow Washer	k	1	13167	Brine Valve Spacer
	1	12095	0.50 GPM Flow Washer	l	1	13172	Brine Valve Stem
c	1	13245	BLFC Button Retainer	m	1	12626	Brine Valve Seat
d	1	12977	O-Ring	21	1	13302	O-Ring
5	1	13166	Injector Cover	22	1	13976	Seal & Spacer Assembly
6	2	13315	Screws	n	5	13242	Main Seals
7	1	13303	O-Ring	o	4	14241	Spacers
8	1	10227	Injector Screen	23	1	13333	Injector Label
9	1	10913-1	White Injector Nozzle	24	1	19700-10	Valve Body
	1	10913-3	Yellow Injector Nozzle	25	1	12281	O-Ring
10	1	10914-1	White Injector Throat	26	1	13304	O-Ring
	1	10914-3	Yellow Injector Throat	27	1	13030	Distributor Tube
11	1	13308	Black Hose Barb	28	1	18280	Cone
12	1	13173	DLFC Button Retainer	29	1	13296	Screw
13	1	15348	O-Ring	30	1	13363	Plain Washer
14	1	12086	1.50 GPM Flow Washer	31	1	13975	Piston Assembly
	1	12087	2.00 GPM Flow Washer	p	1	13003	Piston Rod Link
	1	12089	3.00 GPM Flow Washer	q	1	13306	Roll Pin
	1	12091	4.00 GPM Flow Washer	r	1	13002	Piston Rod
15	1	13163	Injector Body	s	1	13446	End Plug Assembly
16	1	12128	BLFC Label, 0.25 GPM	v	1	12953	Piston Rod Retainer
	1	10759	0.5 GPM Label	w	1	10696	Piston Pin
17	1	12638	O-Ring	x	1	13247	Piston
18	2	13301	O-Ring	32	2	12473	Screws
19	1	13497	Air Disperser	33	3	12112	Screws
20	1	13977	Brine Valve Assembly	34	1	13546	End Plug Retainer
				39	1	18706-02	3/4" Plastic Yoke



Part No.	Model Description	Valve (2)	Tank (3)	Resin (0.46 CF)
7111	EFCMINI-17SXT	56019-89	81099	21502
7112	EFCMINI-22SXT	56019-89	81099	21512

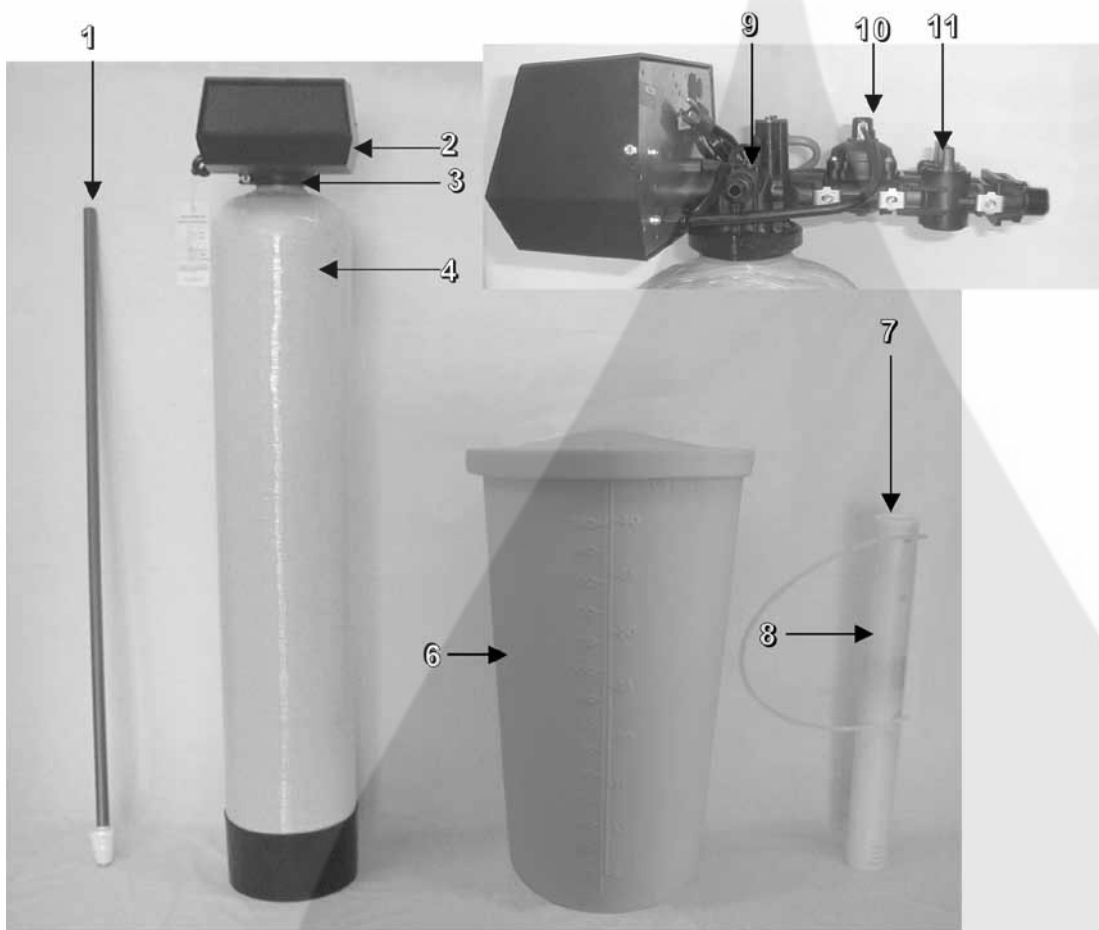
Common Components

Item No.	Part No.	Description
1	9483	Distributor
4	33051	Cabinet
5	48004	Brine Well Cap
6	3623-12	Safety Float
7	19791-01	Meter Cable
8	60026	Meter
9	60049	Bypass
10	33052	Brine Grid



See 5600SXT Valve
parts breakdown on
pages 303-304.

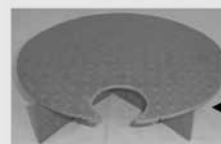
Iron Guard and Iron Guard Plus Filter



Part No. CDN	Part No. USA	Model Description	Distributor (1)	Valve (3)	Tank (4)	Lid (5)	Brine Tank (6)	Grid (12)	Media Bed
2060	2060-4	FE30MI	19807	2510-92	110474	NA	100192	19709	95405
2059	2059-4	FE45MI	19806	2510-100	112524	NA	100192	95009-21	95407
2058	2058-4	FE60MI	19806	2510-99	114506	NA	100192	19706	Call
2061	2061-4	STFE30MI	19806	2510-92	110544	NA	100192	19709	Call

Common Components

Item No.	Part No.	Description
2	19291 - 020	Cover
7	48004	Brine Well Cap
8	13624	Safety Float
9	13308	Hose, Barb
10	60088 - 180	Meter, 180 Degree
11	60049	Bypass

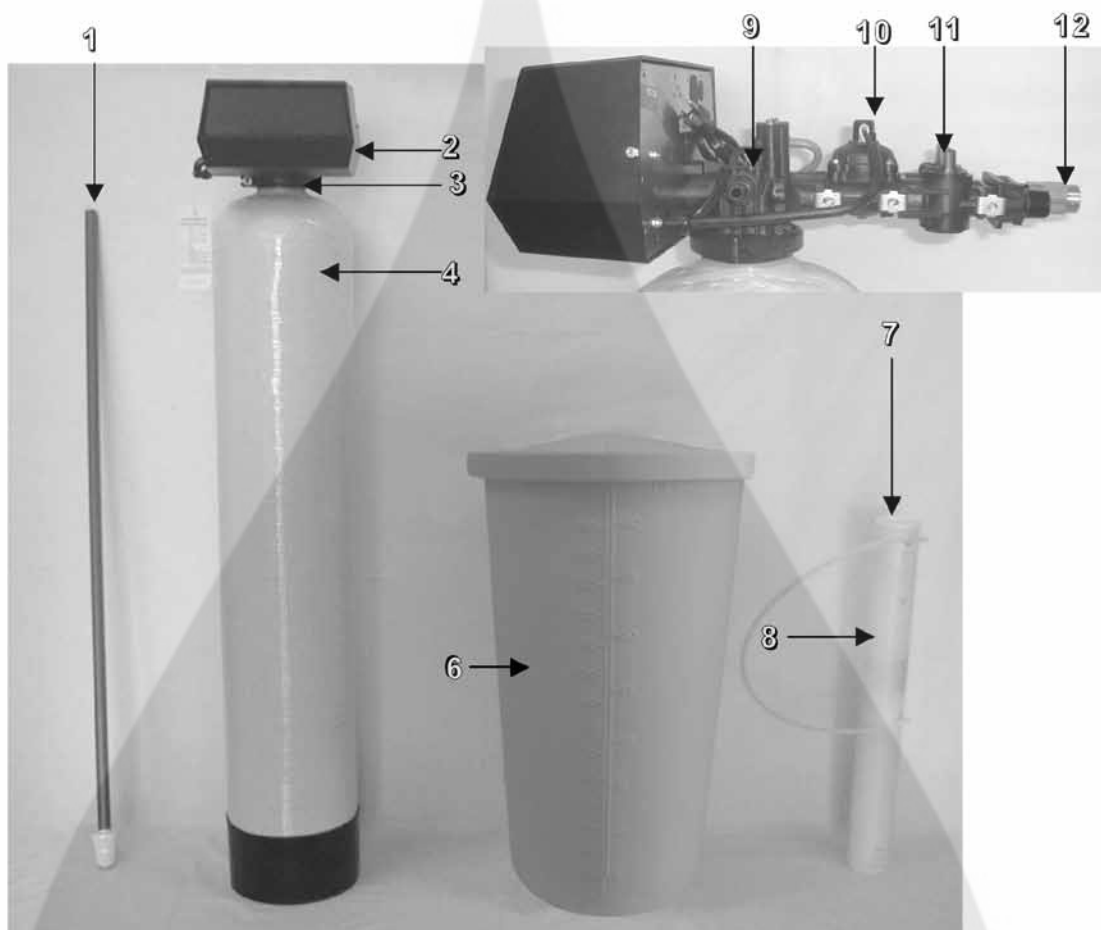


12

Units 2058 include a CPVC tank adapter – Part No. 81041

Note: All USA units come standard with #60040SS - Stainless Steel Bypass.

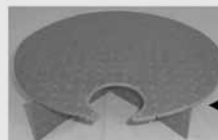
See 2510 Meter Initiated Valve parts breakdown on pages 336-339.



Item No.	Model Description	Distributor (1)	Valve (3)	Tank (4)	Lid (5)	Brine Tank (6)	Grid (13)	Housing (12)	Flow Washer (NS)	Resin (See below)	Gravel (22001)
2048	STF20-860	19477	2510-90	112521	NA	100192	95009-21	15177	12090	2.0 CF	0.12 CF
2049	STF30-860	60098	2510-91	114651	NA	100192	19706	15177	12092	3.0 CF	0.15 CF

Common Components

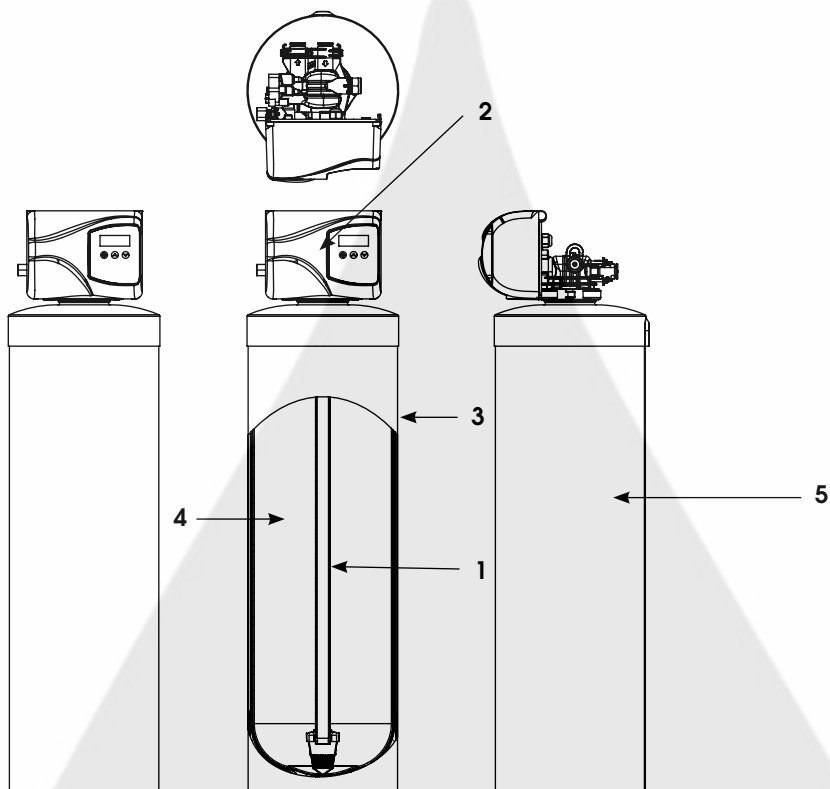
Item No.	Part No.	Description
2	19291 - 020	Cover
7	48004	Brine Well Cap
8	13624	Safety Float
9	13308	Hose, Barb
10	60088 - 180	Meter, 180 Degree
11	60049	Bypass



13

Units 2048 & 2049 use Resin #21491 and 21501
Units 2049 include a CPVC tank adapter – Part No. 81041

See 2510 Meter Initiated Valve parts breakdown on pages 336-339.



Activated Carbon Filters (ACF)

Part Number	Model	Distributor (1)	Valve (2)	Tank (3)	Media Bed (4)	Tank Jacket (5)
4628	DACF75SXT	19478	6200211	18474	95401	100502
4629	DACF10SXT	19478	6200212	110474	95402	100507
4630	DACF15SXT	19477	6200213	112524	95403	
4631	DACF20SXT	19477	6200214	114501	95404	

Multimedia Filters (MMF)

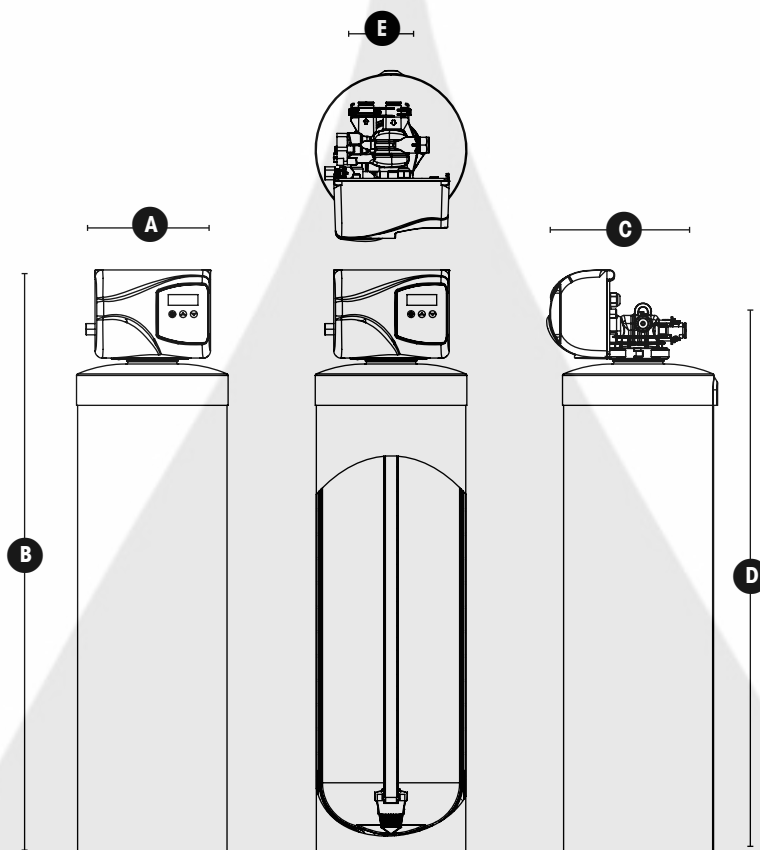
Part Number	Model	Distributor (1)	Valve (2)	Tank (3)	Media Bed (4)	Tank Jacket (5)
4632	DMMF75SXT	19478	6200215	18474	95418	100502
4633	DMMF10SXT	19478	6200216	194804	95419	100505
4634	DMMF15SXT	19477	6200217	110544	95420	100508
4635	DMMF20SXT	19477	6200218	112524	95433	

Neutralizer Filter (NF)

Part Number	Model	Distributor (1)	Valve (2)	Tank (3)	Media Bed (4)	Tank Jacket (5)
4640	DNF75SXT	19478	6200223	18474	93500	100502
4641	DNF10SXT	19478	6200224	110474	93504	100507
4642	DNF15SXT	19477	6200225	112524	93505	
4643	DNF20SXT	19477	6200226	114501	93506	
4644	DNF15SXT-DH	19477	6200225	81150	93505	
4645	DNF20SXT-DH	19477	6200226	81151	93506	

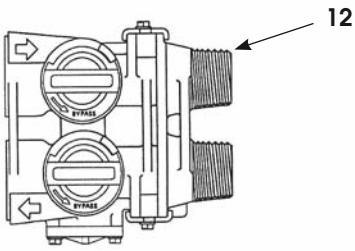
Common Components

60049 Bypass



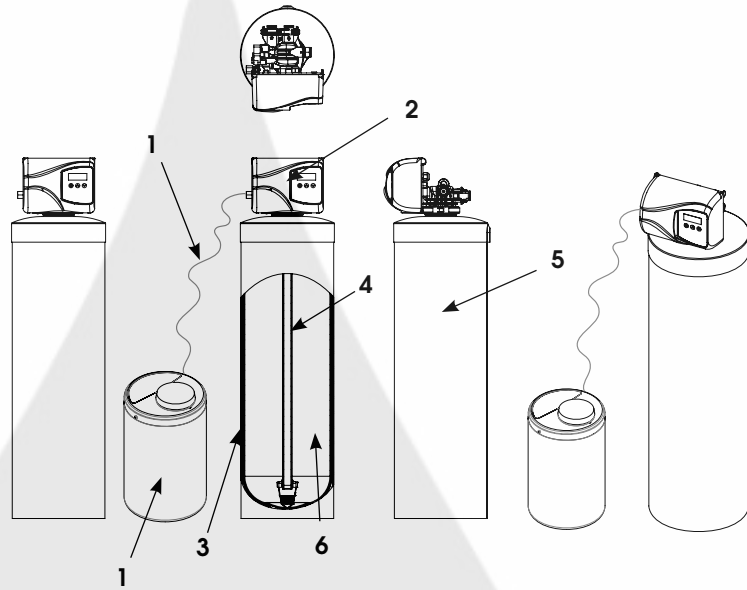
Dimensions (inches)						
	DACF75SXT/ DMMF75SXT/ DNF75SXT	DACF10SXT	DACF15SXT/ DMMF20SXT/ DNF20SXT	DACF20SXT	DMMF10SXT/ DNF10SXT	DMMF15SXT/ DNF15SXT
A	8	10	12	14	9	10
B	54	54	59	57	55	61
C	19	19	19	19	19	19
D	49	49	54	52	50	56
E	2	2	2	2	2	2

6200 Manganese Greensand Filter



Common Components

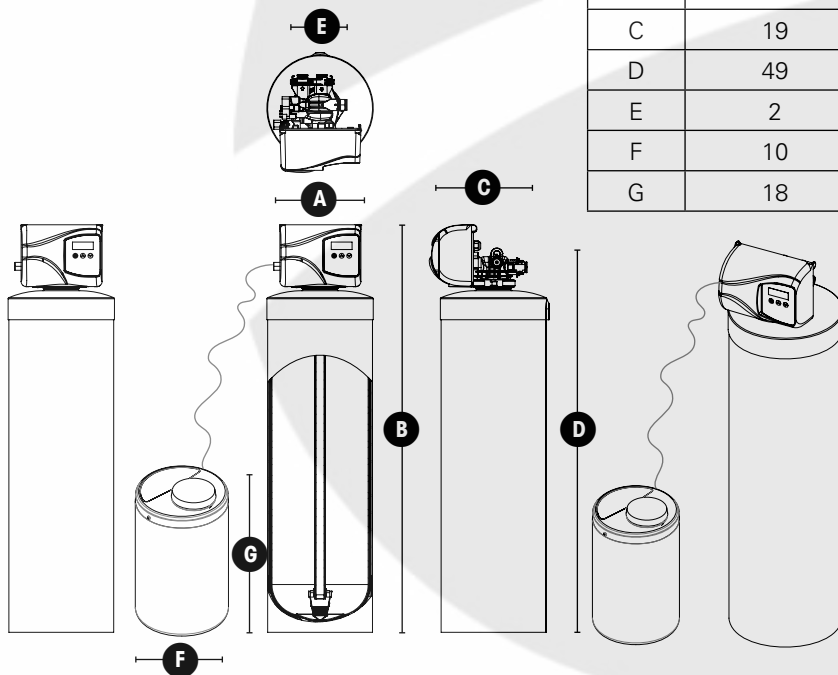
Item No.	Part No.	Description
N/A	95020	Pro-Pot Perm
10	60626	Meter
11	60049	Bypass

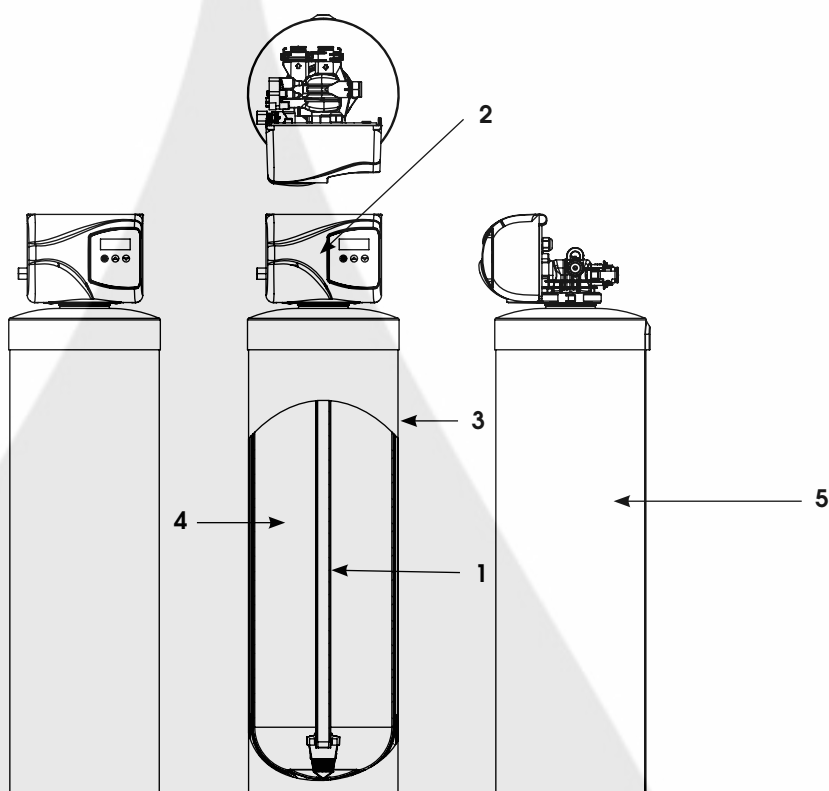


Item #	Model #	Feeder (1)	Valve (2)	Tank (3)	Distributor (4)	Jacket (5)	Media (6)	Tubing (7)
4636	DISF75SXT	33030	6200219	18474	19478	100502	95411	115208
4637	DISF10SXT	33017	6200220	110474	19478	100507	95412	115208
4638	DISF15SXT	33031	6200221	112524	19477		95413	115208
4639	DISF20SXT	33017 (2)	6200222	114501	19478		95414	115208

Dimensions (inches)

Model	DISF75SXT	DISF10SXT	DISF15SXT	DISF20SXT
Item #	4636	4637	4638	4639
A	8	10	12	14
B	54	55	61	59
C	19	19	19	19
D	49	50	56	54
E	2	2	2	2
F	10	10	10	10
G	18	18	18	18





Part Number	Model	Distributor (1)	Valve (2)	Tank (3)	Media Bed (4)	Tank Jacket (5)	Tee
4646	DIF75SXT	19478	6200227	18474	95431	100502	0500356
4647	DIF10SXT	19478	6200228	194804	95550	100505	0500356
4648	DIF15SXT	19477	6200229	110544	95551	100508	0500356
4649	DIF20SXT	19477	6200230	112524	95427		0500356
4650	DIF15SXT-DH	19477	6200229	81150	95551		0500356
4451	DIF20SXT-DH	19477	6200230	81152	95427		0500356
4652	DIF75MSXT	19478	6200227	18474	95432	100502	0500356
4653	DIF10MSXT	19478	6200228	194804	95553	100505	0500356
4654	DIF15MSXT	19477	6200229	110544	95554	100508	0500356
4655	DIF20MSXT	19477	6200230	112524	95428		0500356
4656	DIF15MSXT-DH	19477	6200229	81150	95554		0500356
4657	DIF20MSXT-DH	19477	6200230	81152	95428		0500356

Common Components

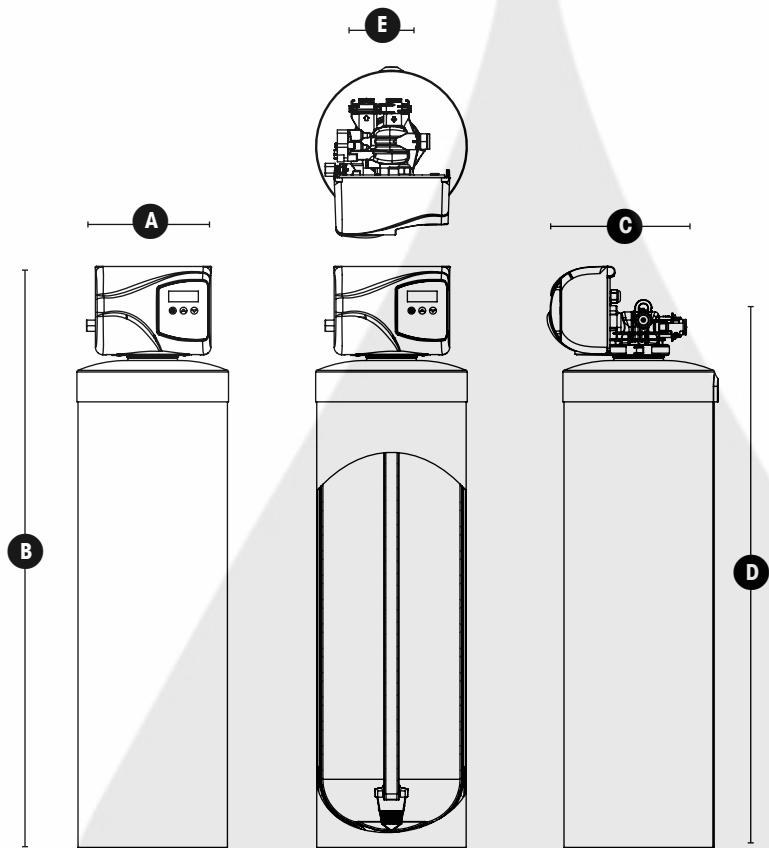
60049 - Bypass

0550119 - Bushing

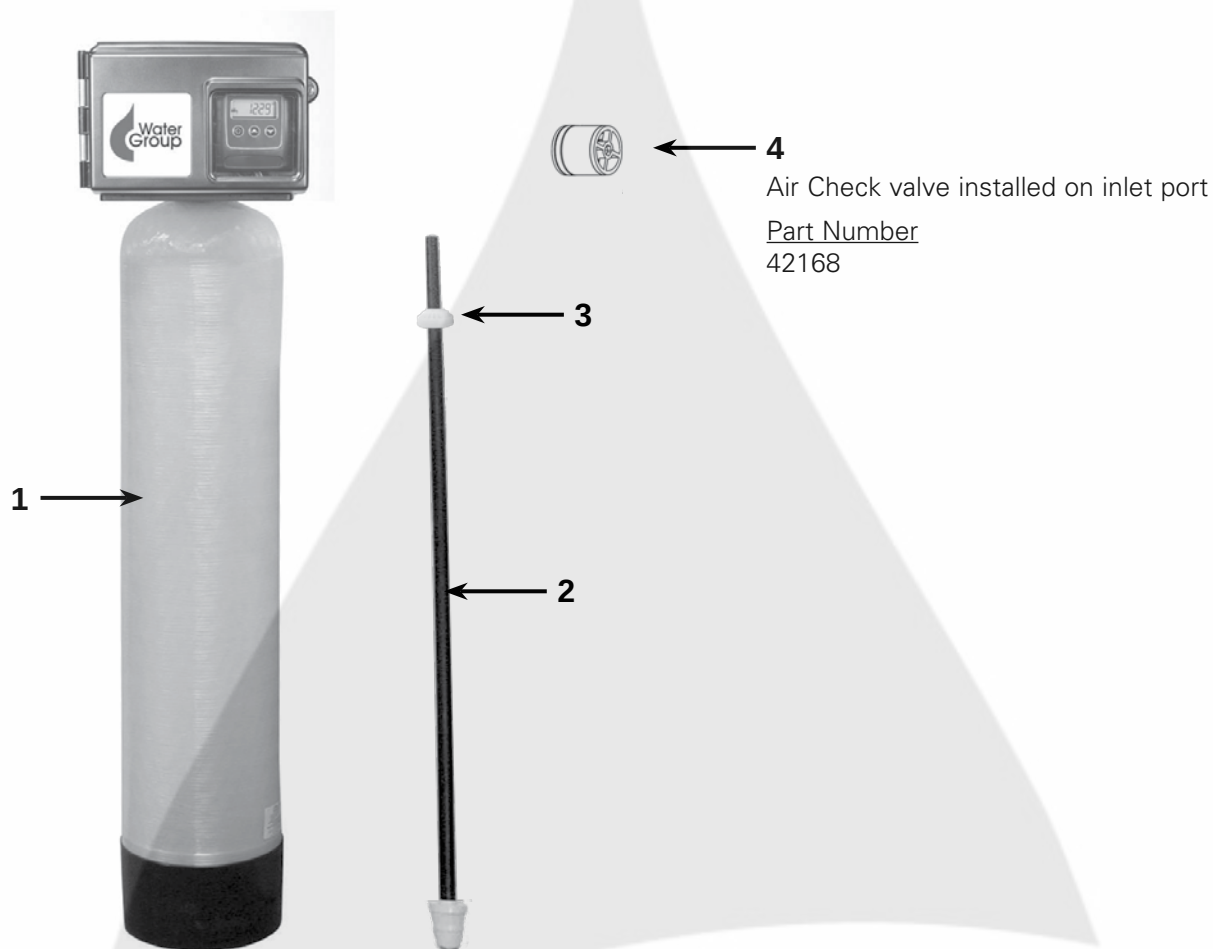
50701 - Air Vent

33350 - Hydrocharger Assembly

6200 Chemical Free Iron Filter



Dimensions (inches)						
	DIF75SXT DIF75MSXT	DIF10SXT DIF10MSXT	DIF15SXT DIF15MSXT	DIF20SXT DIF20MSXT	DIF15SXT-DH DIF15MSXT-DH	DIF20SXT-DH DIF20MSXT-DH
A	8	10	12	14	12	14
B	54	54	59	57	55	61
C	19	19	19	19	19	19
D	49	49	54	52	50	56
E	2	2	2	2	2	2



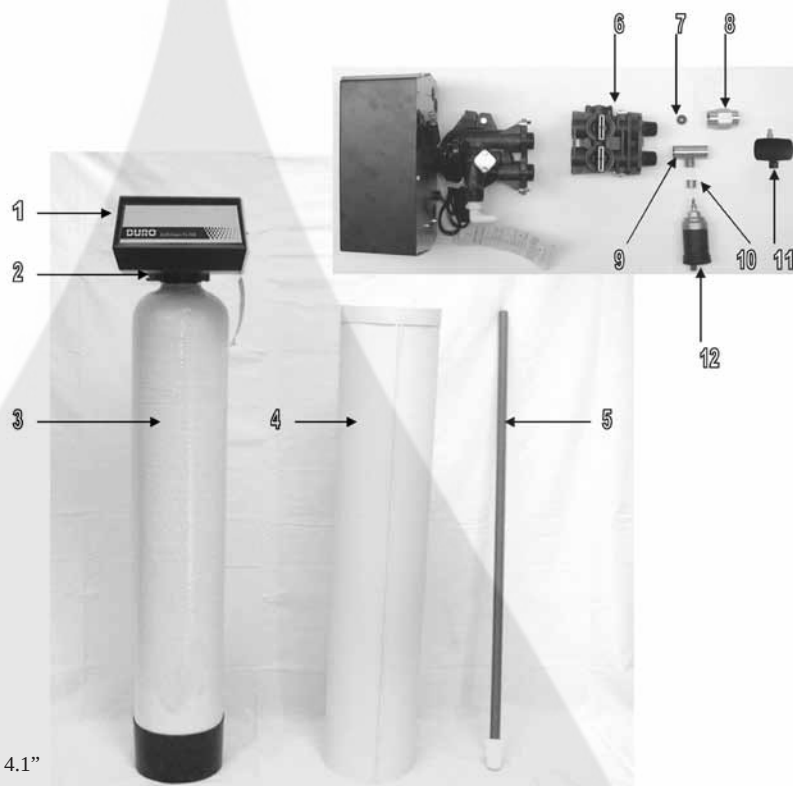
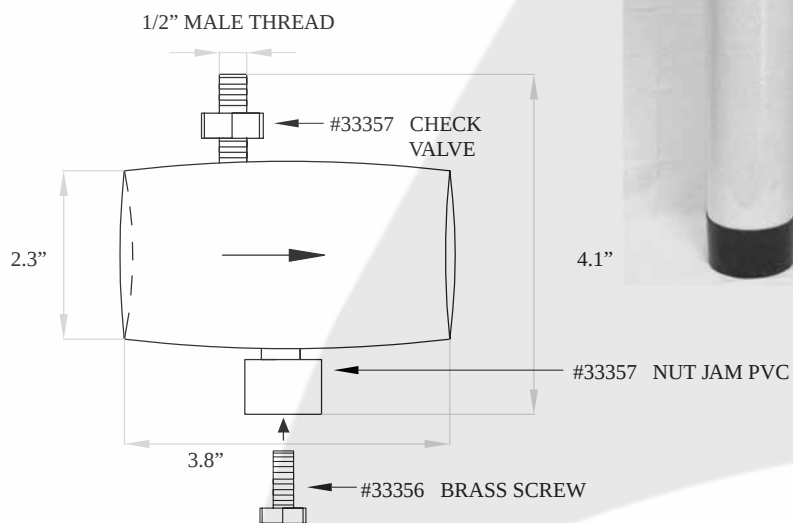
Part No.	Model Description	Tank (1)	Distributor (2)	Media Bed	Flow Washer	Deflector Kit (3)	Check Valve (4)
4150	FAIO-0.75	18474	19478	95431	12090	42188	42168
4151	FAIO-1.0	194804	19478	95550	12091	42188	42168
4152	FAIO-1.5	110544	19477	95551	12092	42188	42168
4153	FAIO-2.0	112524	19477	95427	12408	42188	42168
4154	FAIO-0.75M	18474	19478	95432	12090	42188	42168
4155	FAIO-1.0M	194804	19478	95553	12091	42188	42168
4156	FAIO-1.5M	110544	19477	95554	12092	42188	42168
4157	FAIO-2.0M	112524	19477	95428	12408	42188	42168

Duroclean IF Chemical Free Iron Filter



Hydrocharger Assembly

Item #33354



Item No.	Model Description	Valve (2)	Tank (3)	Jacket (4)	Distributor (5)	Flow Washer (7)	Housing (8)	Tee (9)	Media Bed
3230	DIF75	2510 - 25	18474	100502	19478	12091	15177	0550356	95431
3240	DIF75M	2510 - 25	18474	100502	19478	12091	15177	0550356	95432
3231	DIF10	2510 - 26	194804	100505	19478	NA	NA	0550356	95550
3241	DIF10M	2510 - 26	194804	100505	19478	NA	NA	0550356	95553
3232	DIF15	2510 - 27	110544	100508	19477	NA	NA	0550356	95551
3242	DIF15M	2510 - 27	110544	100508	19477	NA	NA	0550356	95554
3233	DIF20	2510 - 28	112524	NA	19477	NA	NA	0550366	95427
3243	DIF20M	2510 - 28	112524	NA	19477	NA	NA	0550366	95428

Common Components

Cover	(1)	19291 - 020
Bypass	(6)	60049
Bushing	(10)	0550119
PVC Hydrocharger Assy	(11)	33354
Shutoff Vent	(12)	50701

See 2510 Calendar Clock Valve parts breakdown on pages 333-335.



Item No.	Model Description	Clack Feeder (2)	Valve (4)	Tank (5)	Jacket (7)	Bypass (NS)	Distributor (8)	Media Bed
3260	DISF75	33030	2510 - 29	18474	100502	60049	19478	95411
3261	DISF10	33017	2510 - 30	110474	100507	60049	19478	95412
3262	DISF15	33017	2510 - 31	112524	NA	60049	19477	95413
3263	DISF20	33017 (2)	2510 - 32	114501	NA	60049	19477	95414

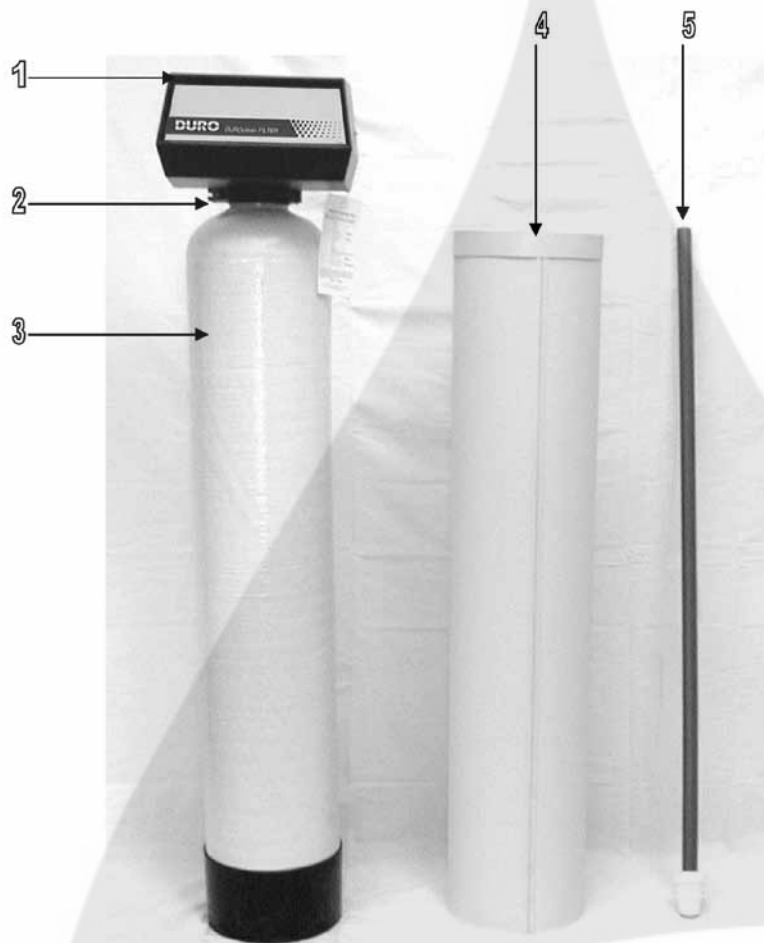
Common Components

Pro-Pot Perm	(1)	95020 (sold separate from unit)
Cover	(3)	19291 - 020
Tubing	(6)	115208

Unit 3263 also includes a CPVC tank adapter - Part No. 81041

Unit 3263 also gets a 3/8" plastic union tee - Part No. 48033

See 2510 Meter Initiated Valve parts breakdown on pages 336-339.



Item No.	Model Description	Cover (1)	Valve (2)	Tank (3)	Jacket (4)	Distributor (5)	Bypass (NS)	Media Bed
3290	DACF75	19291 - 020	2510 - 41	18474	100502	19478	60049	95401
3291	DACF10	19291 - 020	2510 - 42	110474	100507	19478	60049	95402
3292	DACF15	19291 - 020	2510 - 43	112524	NA	19477	60049	95403
3293	DACF20	19291 - 020	2510 - 44	114501	NA	19477	60049	95404
3280	DMMF75	19291 - 020	2510 - 37	18474	100502	19478	60049	95418
3281	DMMF10	19291 - 020	2510 - 38	194804	100505	19478	60049	95419
3282	DMMF15	19291 - 020	2510 - 39	110544	100508	19477	60049	95420
3283	DMMF20	19291 - 020	2510 - 40	112524	NA	19477	60049	95433
3270	DNF75	19291 - 020	2510 - 33	18474	100502	19478	60049	93500
3271	DNF10	19291 - 020	2510 - 34	194804	100505	19478	60049	93504
3272	DNF15	19291 - 020	2510 - 35	110544	100508	19477	60049	93505
3273	DNF20	19291 - 020	2510 - 36	112524	NA	19477	60049	93506

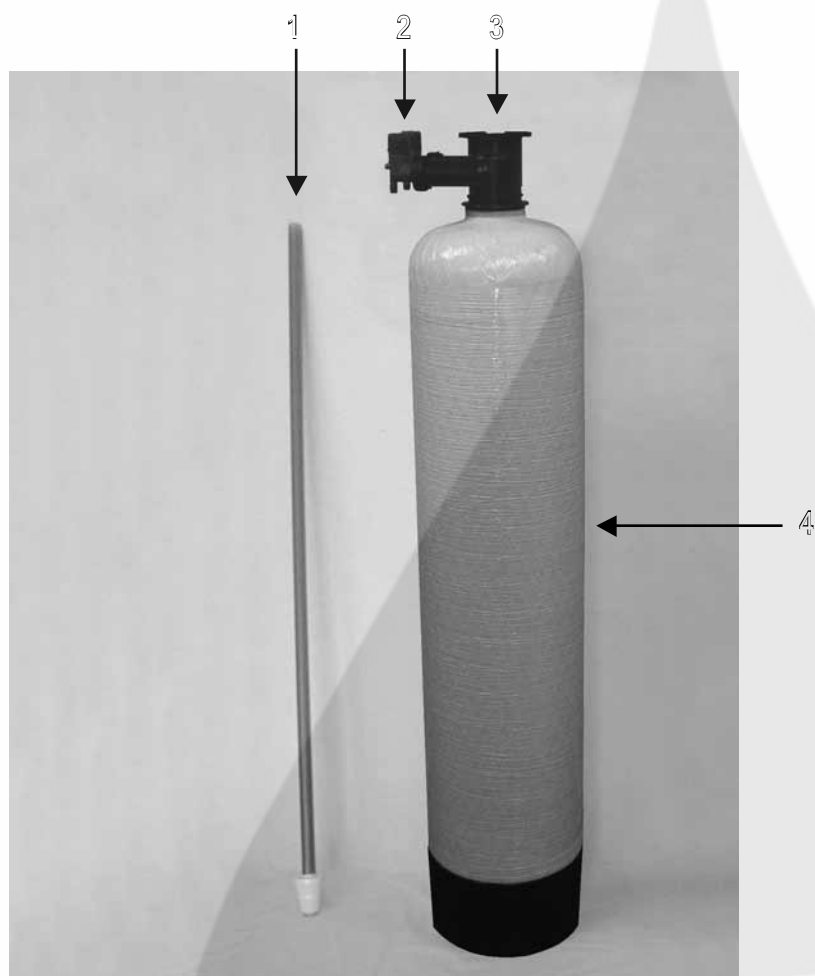
Unit 3293 includes a CPVC tank adapter - Part No. 81041

Units 3270, 3271, and 3272 include a Drain Line Housing - Part # 15177

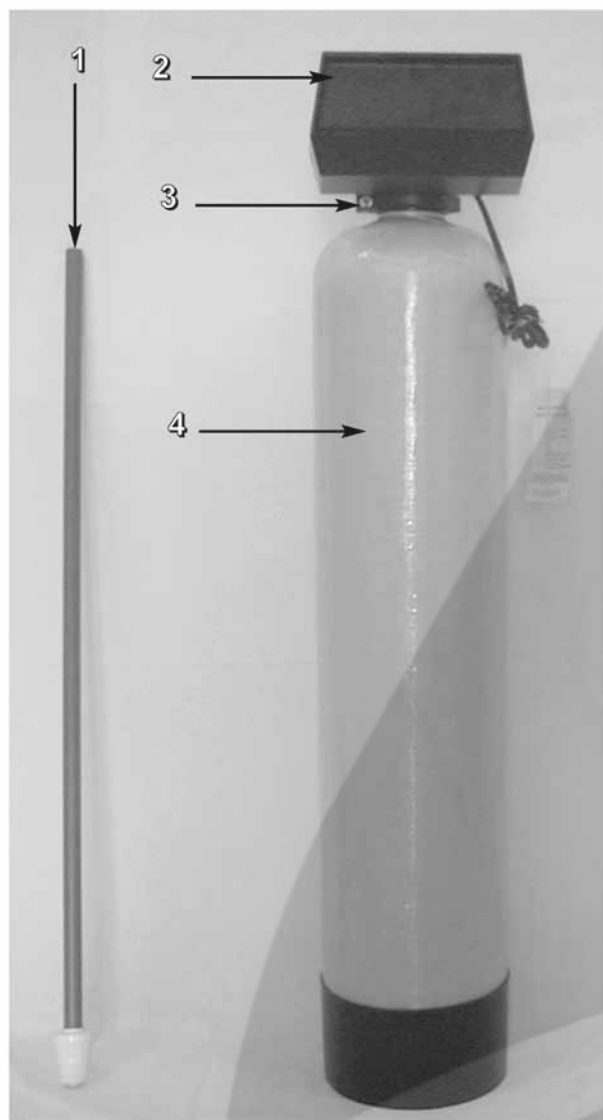
Unit 3273 includes a Drain Line Housing - Part # 019480.

All four units include one of the following washers 12091, 12092, 12408, and 16529.

See 2510 Calendar Clock Valve parts breakdown on pages 333-335.



Part No.	Model Description	Distributor (1)	Fitting (2)	Head (3)	Tank (4)	Media
9063	UNF10	19478	Call	33068	110474	Call
9064	UNF20	19477	Call	33068	112524	Call



Part No. CDN	Part No. USA	Model Description	Distributor (1)	Valve (3)	Tank (4)	Media
2005 or 2012	2005-4 or 2012-4	ACN-10C (Type I or II)	19478	2510-85	110474	Call for Types and Quantities
2010 or 2013	2010-4 or 2013-4	ACN-15C (Type I or II)	19477	2510-86	112524	
2011 or 2014	2011-4 or 2014-4	ACN-20C (Type I or II)	19477	2510-87	114501	
2015 or 2022	2015-4 or 2022-4	MMN-10C (Type I or II)	19478	2510-85	110474	
2020 or 2023	2020-4 or 2023-4	MMN-15C (Type I or II)	19477	2510-86	112524	
2021 or 2024	2021-4 or 2024-4	MMN-20C (Type I or II)	19477	2510-87	114501	

Common Components

Item No.	Part No.	Description
2	19291-020	Cover

Units 2011 & 2021 include a CPVC tank adapter - Part No. 81041

Note: All USA units come standard with #60040SS - Stainless Steel Bypass.

See 2510 Calendar Clock Valve
parts breakdown on
pages 333-335.



Part No.	Part No.	Model	Distributor	Valve	Tank	Lid	Brine	Grid	Housing	Flow		Gravel
CDN	USA	Description	(1)	(3)	(4)	(5)	Tank (6)	(13)	(12)	Washer	*Resin	#22001
2030	2030-4	OCR15-850	19477	2510-88	110541	100255	100362	NA	15177	12091	1.25 CF	0.08 CF
2035	2035-4	OCR20-850	19477	2510-90	112521	NA	100192	95009-21	15177	12408	2.00 CF	0.12 CF
2040	2040-4	OCR30-850	60098	2510-91	114651	NA	100192	19706	019480	16529	3.00 CF	0.15 CF
2045	2045-4	OCR15-860	19477	2510-88	110541	100255	100362	NA	15177	12091	1.25 CF	0.08 CF
2050	2050-4	OCR20-860	19477	2510-90	112521	NA	100192	95009-21	15177	12408	2.00 CF	0.12 CF
2066	2066-4	OCR30-860	60098	2510-91	114651	NA	100192	19706	019480	16529	3.00 CF	0.15 CF

Common Components

Item No.	Part No.	Description
2	19291-020	Cover
7	48004	Brine Well Cap
8	13623	Safety Float
	13526	Safety Float (Item #2040 & 2055)
9	13308	Hose Barb
10	60088-180	Meter, 180 Degree
11	60049	Bypass

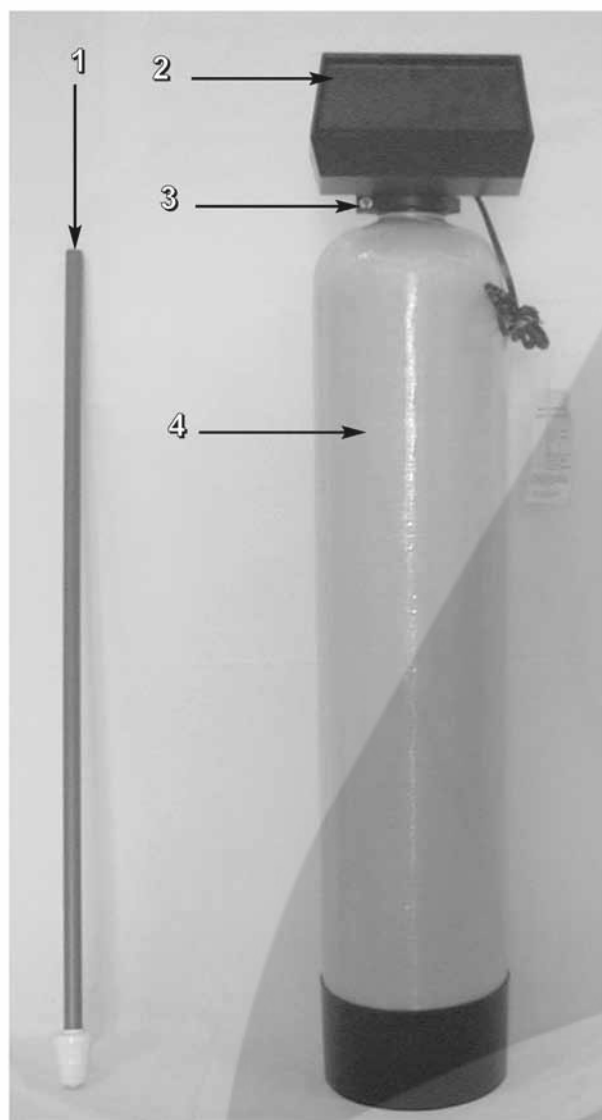
*2030, 2035 & 2040 use Resin #21494

*2045, 2050 & 2055 use Resin #21491

Note: All USA units come standard with #60040SS - Stainless Steel Bypass.

See 2510 Meter Initiated Valve parts breakdown on pages 336-339.

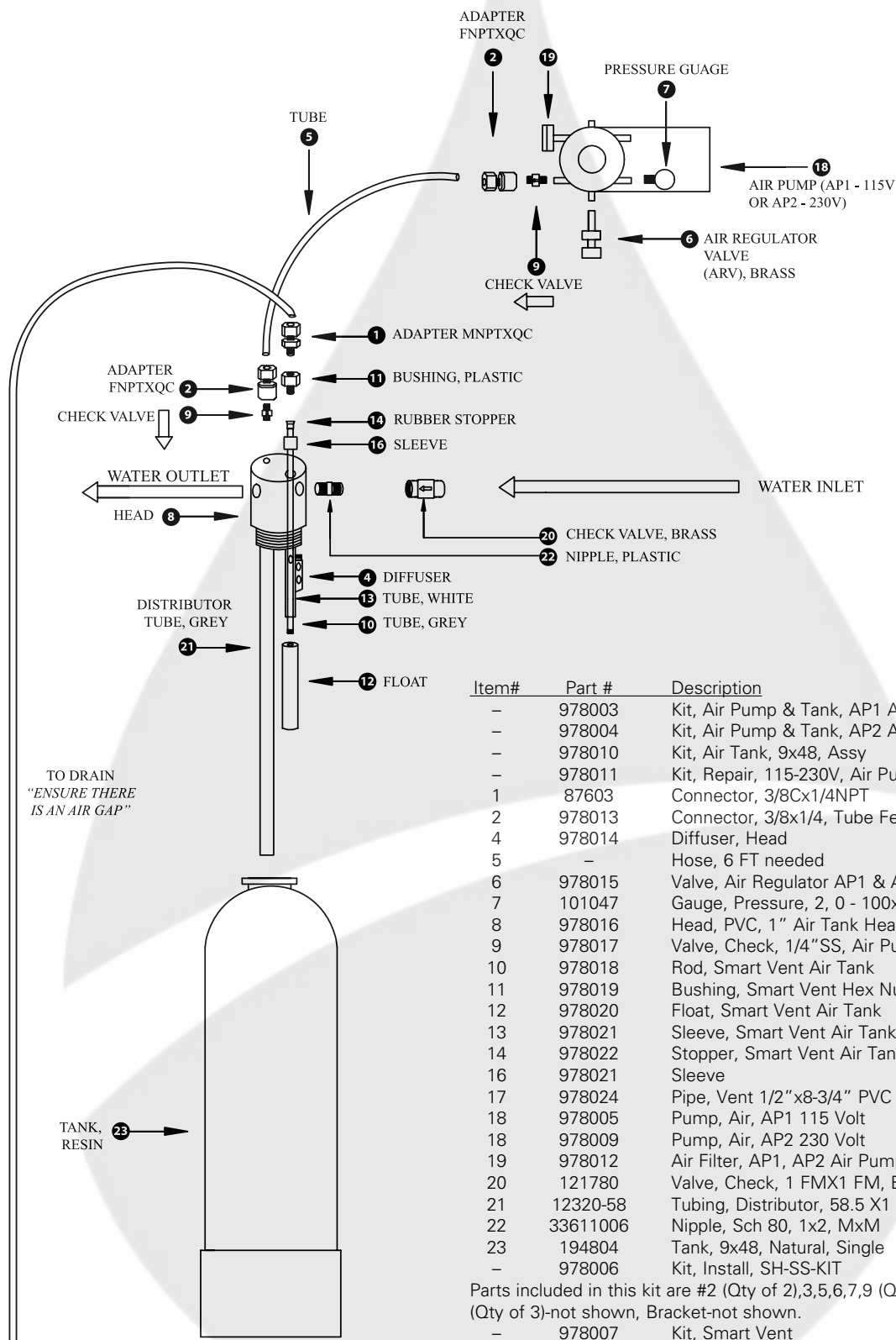
Units 2040 & 2055 include a CPVC tank adapter - Part No. 81041



Part No.	Model Description	Distributor (1)	Cover (2)	Valve (3)	Tank (4)	Media
3995	CLF20	19477	19291-020	2510-87	114506	95629
3996	CLF35	60098	19291-020	2500-101	116656	95630

Units include a CPVC tank adapter - Part No. 81041

See 2510 Calendar Clock Valve parts breakdown on pages 333-335.

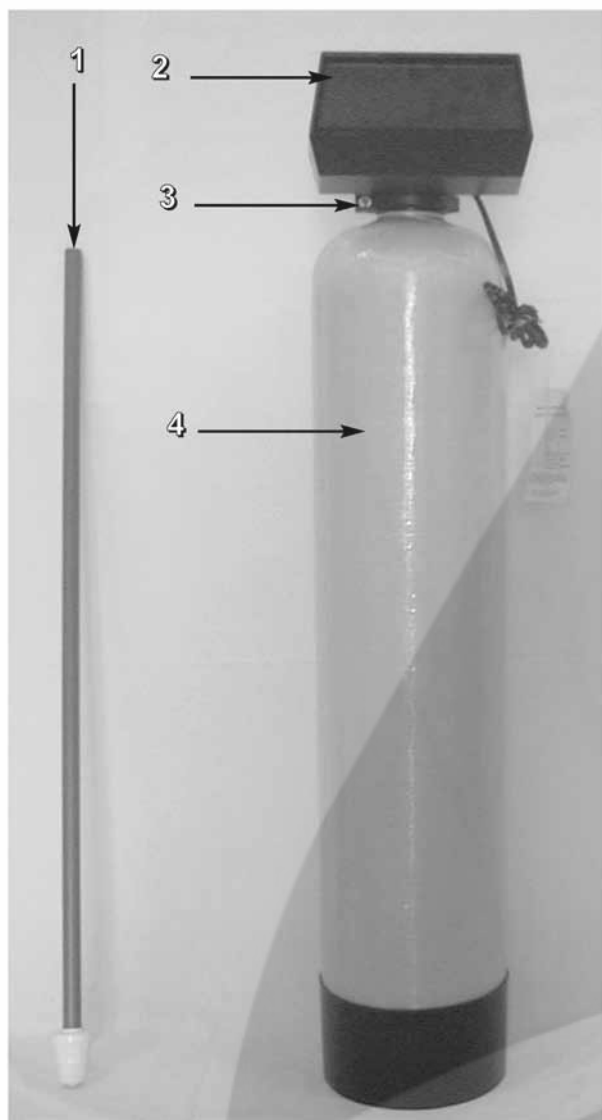


Item#	Part #	Description
-	978003	Kit, Air Pump & Tank, AP1 Assy, 115V
-	978004	Kit, Air Pump & Tank, AP2 Assy, 230V
-	978010	Kit, Air Tank, 9x48, Assy
-	978011	Kit, Repair, 115-230V, Air Pump
1	87603	Connector, 3/8Cx1/4NPT
2	978013	Connector, 3/8x1/4, Tube Female, Plastic
4	978014	Diffuser, Head
5	-	Hose, 6 FT needed
6	978015	Valve, Air Regulator AP1 & AP2 Air Pump
7	101047	Gauge, Pressure, 2, 0 - 100x1/4 PT
8	978016	Head, PVC, 1" Air Tank Head
9	978017	Valve, Check, 1/4"SS, Air Pump/Tank
10	978018	Rod, Smart Vent Air Tank
11	978019	Bushing, Smart Vent Hex Nut PVC Head, Air Tank
12	978020	Float, Smart Vent Air Tank
13	978021	Sleeve, Smart Vent Air Tank
14	978022	Stopper, Smart Vent Air Tank
16	978021	Sleeve
17	978024	Pipe, Vent 1/2"x8-3/4" PVC Head, 4 Hole, Short
18	978005	Pump, Air, AP1 115 Volt
18	978009	Pump, Air, AP2 230 Volt
19	978012	Air Filter, AP1, AP2 Air Pump
20	121780	Valve, Check, 1 FMX1 FM, Brass
21	12320-58	Tubing, Distributor, 58.5 X1
22	33611006	Nipple, Sch 80, 1x2, MxM
23	194804	Tank, 9x48, Natural, Single
-	978006	Kit, Install, SH-SS-KIT

Parts included in this kit are #2 (Qty of 2),3,5,6,7,9 (Qty of 2), Pump Feet (Qty of 3)-not shown, Bracket-not shown.

- 978007 Kit, Smart Vent

Parts included in this kit are #2 (Qty of 2),4,8,10,11,12,13,14,16.



Part No.	Distributor (1)	Valve (3)	Tank (4)	Media
4110	13687	2510-102	18474	95632
4111	13687	2510-103	194804	95633
4112	13688	2510-104	110544	95644
4113	13688	2510-105	112524	95645

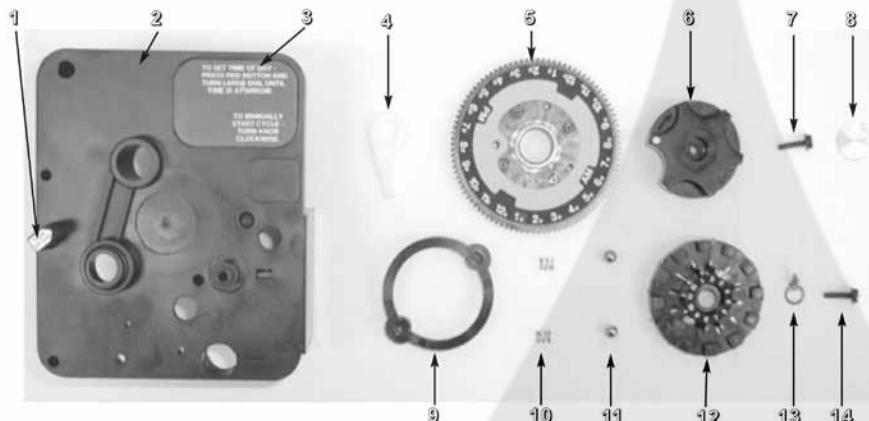
Common Components

Item No.	Part No.	Description
2	19291-020	Cover

Note: All USA units come standard with #60040SS - Stainless Steel Bypass.

See 2510 Calendar Clock Valve parts breakdown on pages 333-335.

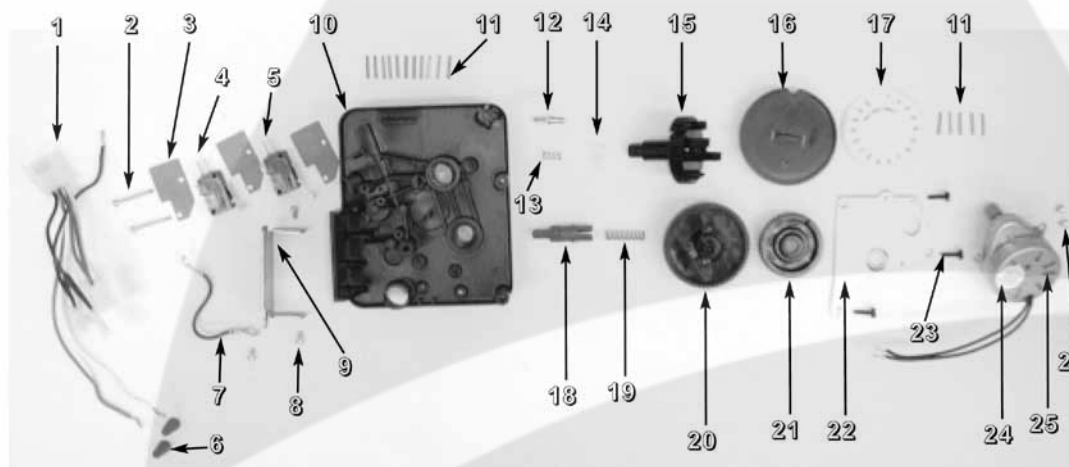
FRONT



3200 CC Timer Assembly - FRONT

Item No.	Qty	Part No.	Description
1	1	14007	Time Of Day Label
2	1	13870	Timer Housing
3	1	14045	Instruction Timer Label
4	1	13011	Cycle Arm
5	1	13973	24 Hour Gear Assembly
	1	13009	24 Hour Gear
	1	13956	24 Hour Label
6	1	13886	Timer Knob
7	1	13296	Mounting Screw
8	1	11999	Button Timer Label
9	1	13864	Skipper Wheel Ring
10	2	13311	Skipper Wheel Spring
11	2	13300	1/4" Ball
12	1	14381	Skipper Wheel Assembly
13	1	13014	Red Regeneration Pointer
14	1	13296	Mounting Screw

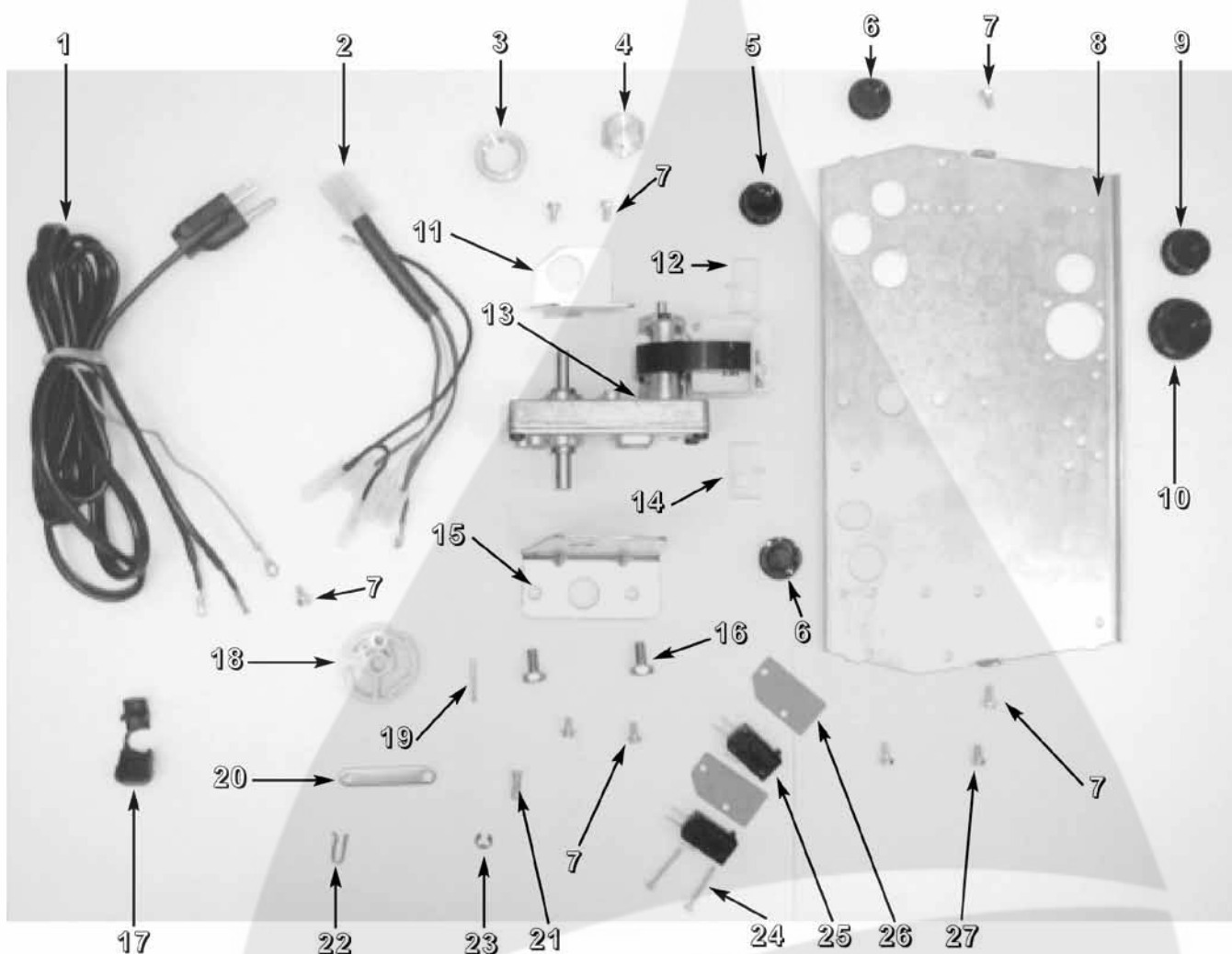
BACK



3200 CC Timer Assembly - BACK

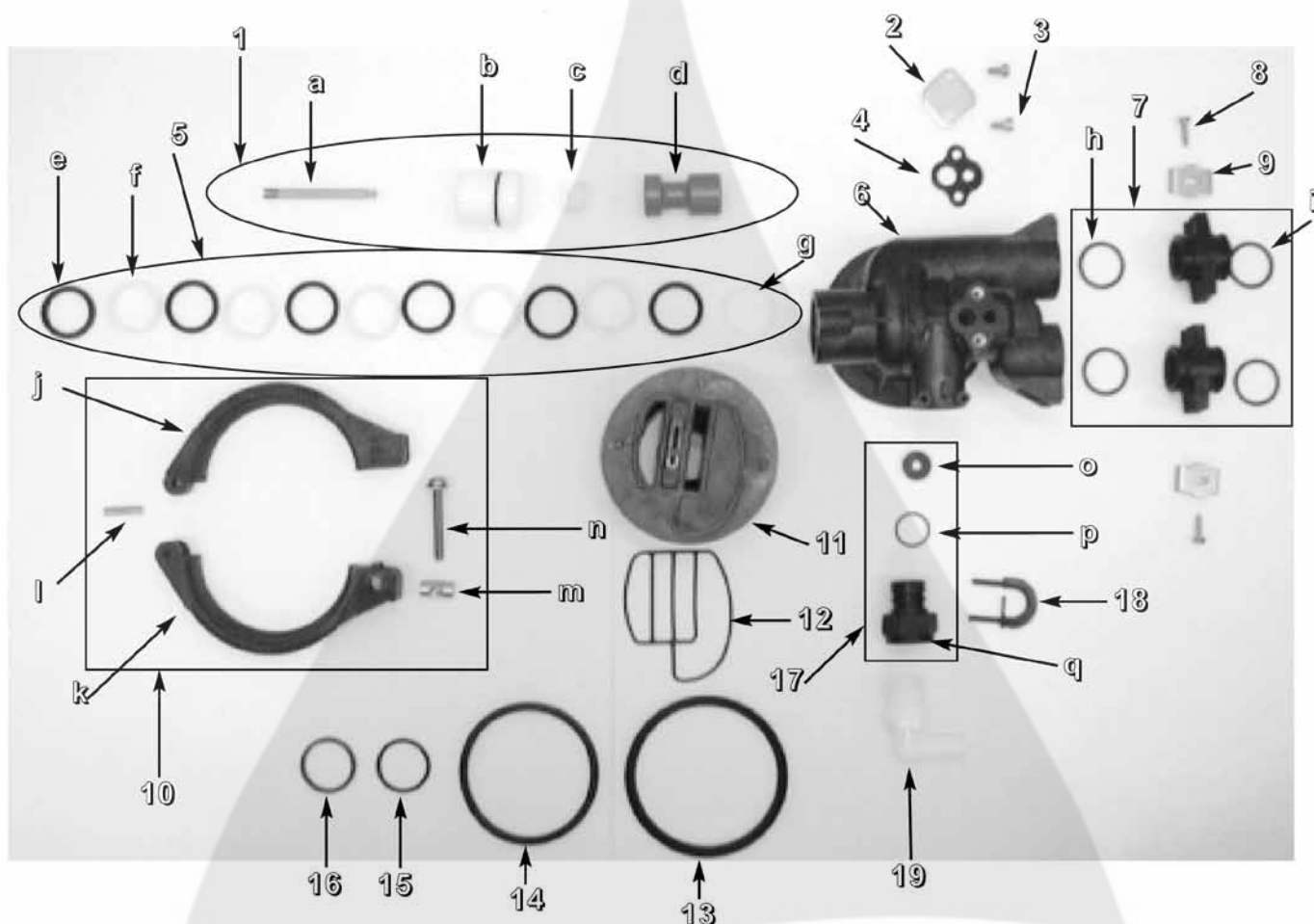
Item No.	Qty	Part No.	Description
1	1	13902	Wire Harness
2	2	11413	Screw
3	3	14087	Insulator
4	1	15320	Micro Switch (White Lever)
5	1	10896	Micro Switch (1/2 Moon Lever)
6	2	18612	Blue Wire Nut
7	1	15354-01	Green Ground Wire
8	3	11384	Screw
9	1	13881	Hinge Bracket
10	1	13870	Timer Housing
11	16	15493	Spring Pin
12	1	14265	Spring Clip
13	1	14457	Spring
14	1	15066	1/4" Delrin Ball
15	1	13911	Main Drive Gear
16	1	13880	Program Wheel
17	1	13901	Program Wheel Label
18	1	13018	Idler Pinion
19	1	13312	Idler Shaft Spring
20	1	13017	Idler Gear
21	1	13164	Drive Gear
22	1	13887	Motor Mounting Plate
23	3	13296	Screws
24	1	14102	Motor Label
25	1	18743	Drive Motor, 120 V
26	2	13278	Screws

2510 Calendar Clock Power Head Assembly



Item No.	Qty Req'd	Part No.	Description
1	1	11838	Power Cord
2	1	11667	Wire Harness
3	1	10269	Jam Nut
4	1	10712	Brine Valve Fitting
5	1	16493	Plug
6	2	13741	Plug
7	7	10872	Screws
8	1	40264	Back Plate
9	1	15806	Plug
10	1	17421	Plug
11	1	11826	Motor Bracket
12	1	28414 - 2	K
13	1	10769	Drive Motor
14	1	28414 - 1	M

Item No.	Qty Req'd	Part No.	Description
15	1	10774	Drive Side Bracket
16	2	10231	Screws
17	1	13547	Strain Relief
18	1	12102	Cam
19	1	10338	Roll Pin
20	1	10621	Link
21	1	13366	Drive Bearing
22	1	10909	Connecting Rod Pin
23	1	10250	Retaining Ring
24	2	14923	Screws
25	2	10218	Micro Switch
26	2	10302	Insulator
27	2	10300	Screws

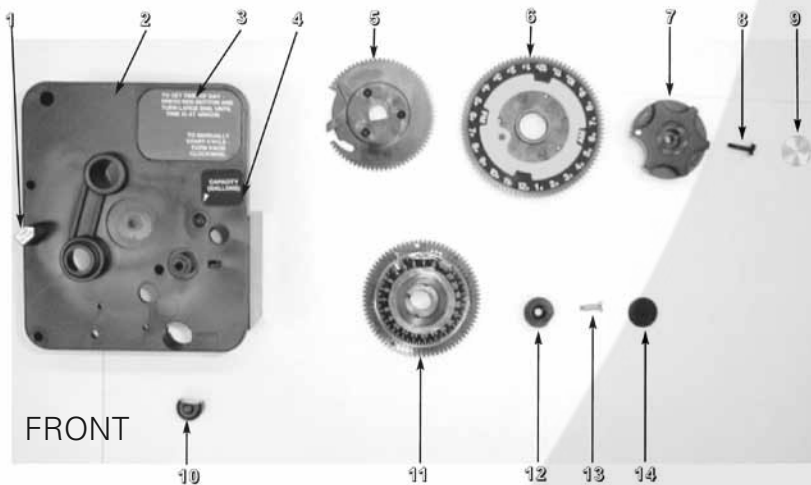


Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	13811	Piston Assembly	l	1	040000	Hinge Pin
a	1	14452	Piston Rod	m	1	19998	Pivot Clamp
b	1	10598	End Plug Assembly	n	1	40057	Clamp Screw
c	1	14309	Piston Rod Retainer	11	1	19322	Adapter Base
d	1	15168	Piston	12	1	19936	Base Adapter Seal
2	1	11893	Flat Injector Cap	13	1	19197	Slip Ring
3	2	15137	Screws	14	1	18303	O - Ring
4	1	11475	Body Gasket	15	1	13304	O - Ring
5	1	13812	Seal & Spacer Kit	16	1	13030	Dist. Tube Retainer
e	6	10545	Piston Seal	17	1	13615	Cont. Backwash 3.5 Assy
f	5	11451	Spacer		1	9007040	Cont. Backwash 4.0 Assy
g	1	10757	End Spacer		1	13616A	Cont. Backwash 5.0 Assy
6	1	19328	2510 Valve Body		1	13617	Cont. Backwash 7.0 Assy
7	2	13248	Adapter Coupling Set	o	1	12090	3.50 GPM Washer
h	4	13305	O - Ring		1	12091	4.00 GPM Washer
i	2	19228	Adapter Coupling		1	12092	5.00 GPM Washer
8	2	13314	Screws		1	12408	7.00 GPM Washer
9	2	13255	Mounting Clip	p	1	11183	O - Ring
10	1	60503-1	2510 Clamp Ring Assy.	q	1	11385 - 01	Housing
j	1	19900	Male Clamp	18	1	18312	Retainer Clip
k	1	19899	Female Clamp	19	1	12338	90 Degree Hose Barb

2510 Meter Initiated Valve - 3210 Timer Assembly

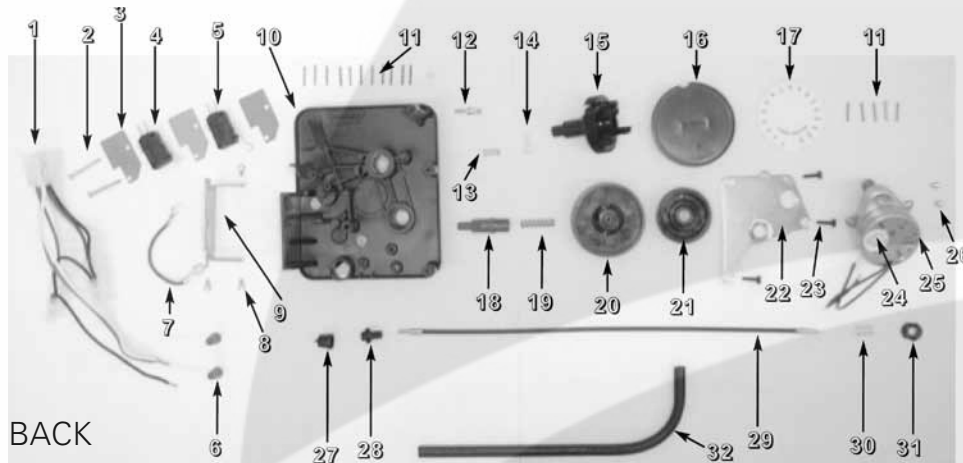


3210 MI Timer Assembly - FRONT

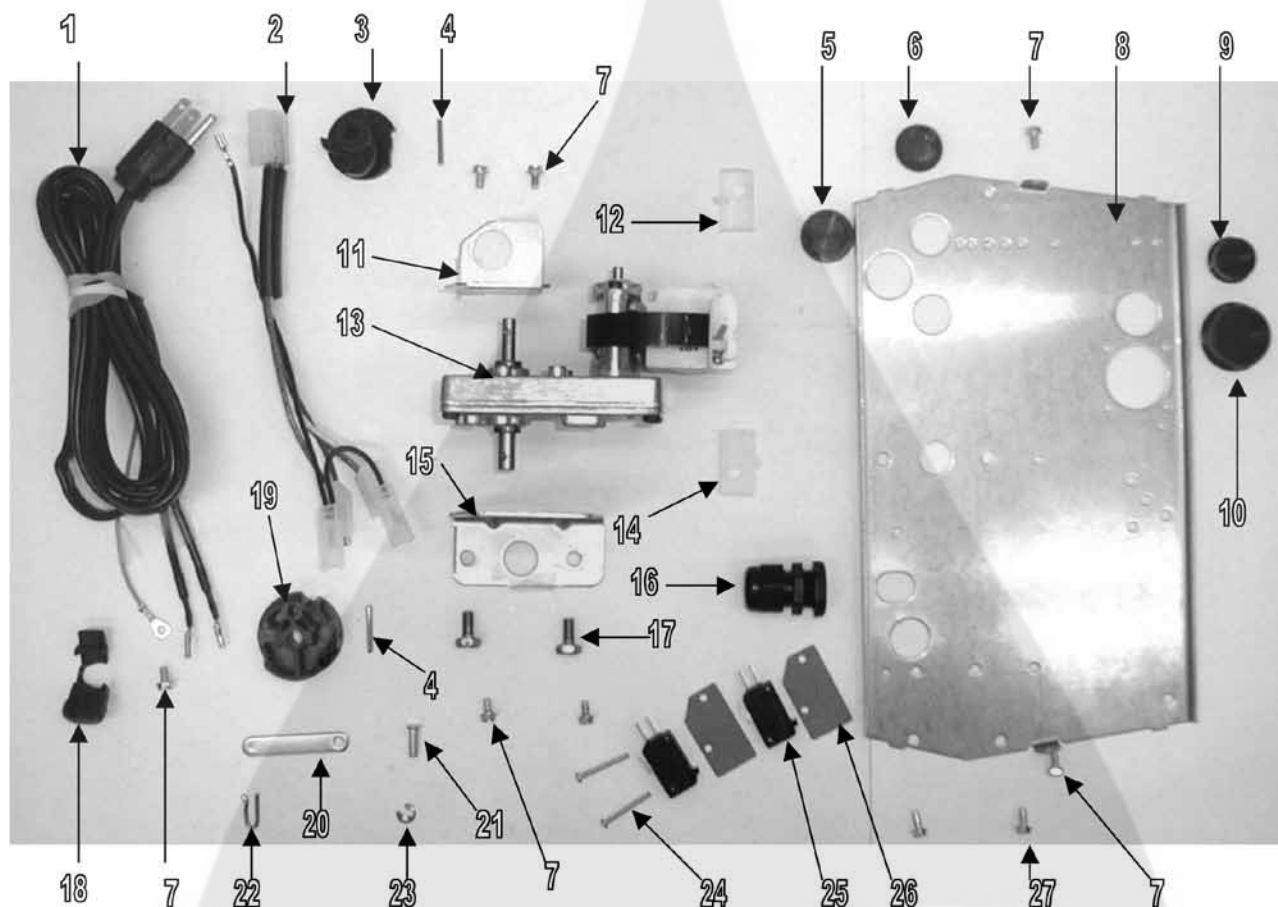


Item No.	Qty Req'd	Part No.	Description
1	1	14007	Time Of Day Label
2	1	13870	Timer Housing
3	1	14045	Instruction Timer Label
4	1	14198	Indicator Label
5	1	13802	Cycle Actuator Gear
6	1	13973	24 Hour Gear Assembly
	1	13009	24 Hour Gear
	1	13956	24 Hour Label
7	1	13886	Timer Knob
8	1	13296	Mounting Screw
9	1	11999	Button Timer Label
10	1	14252	Outboard Bearing Cap
11	1	14039	Program Wheel Assembly
	1	13803	Program Drive Wheel Gear
	1	13885	Program Wheel Cover
	1	15956	Program Wheel Adj Disc
	1	15967	Gallons Label
	2	13898	Screws
12	1	13806	Program Wheel Retainer
13	1	13748	Screw
14	1	13953	Program Wheel Label

3210MI Timer Assembly - BACK

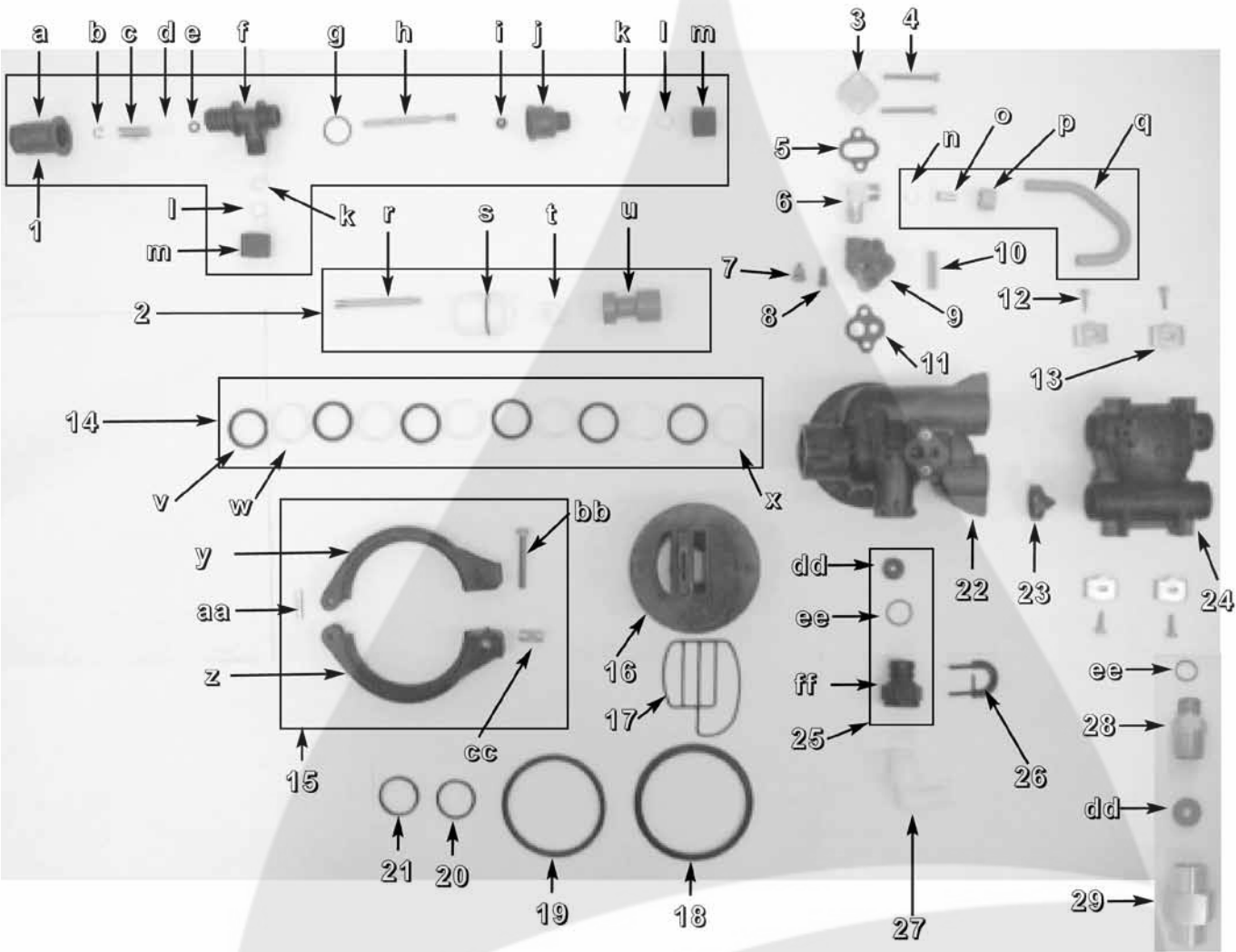


Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	13902	Wire Harness	17	1	13901	Program Wheel Label
2	2	11413	Screw	18	1	13018	Idler Pinion
3	3	14087	Insulator	19	1	13312	Idler Shaft Spring
4	1	15320	Micro Switch (White Lever)	20	1	13017	Idler Gear
5	1	10896	Micro Switch (1/2 Moon Lever)	21	1	13164	Drive Gear
6	2	18612	Blue Wire Nut	22	1	13887	Motor Mounting Plate
7	1	15354-01	Green Ground Wire	23	3	13296	Screws
8	3	11384	Screw	24	1	18743	Drive Motor, 120 V
9	1	13881	Hinge Bracket	25	1	14102	Motor Label
10	1	13870	Timer Housing	26	2	13278	Screws
11	16	15493	Spring Pin	27	1	13830	Program Wheel Drive Pinion
12	1	14265	Spring Clip	28	1	13831	Drive Pinion Clutch
13	1	14457	Spring	29	1	14730	Meter Cable
14	1	15066	1/4" Delrin Ball	30	1	14276	Meter Clutch Spring
15	1	13911	Main Drive Gear	31	1	14253	Clutch Spring Retainer
16	1	13880	Program Wheel	32	1	15307	Meter Cable Guide



Item #	Qty. Req'd	Part #	Description	Item #	Qty. Req'd	Part #	Description
1	1	11838	Power Cord	15	1	10774	Drive Side Bracket
2	1	11667	Wire Harness	16	2	17967	Liquid Tight Fitting
3	1	12777	Brine Valve Cam	17	1	10231	Screws
4	2	10338	Roll Pin	18	1	13547	Strain Relief
5	1	16493	Plug	19	1	12576	Drive Cam
6	2	13741	Plug	20	1	10621	Link
7	7	10872	Screws	21	1	13366	Drive Bearing
8	1	40264	Back Plate	22	1	10909	Connecting Rod Pin
9	1	15806	Plug	23	1	10250	Retaining Ring
10	1	17421	Plug	24	2	14923	Screws
11	1	11826	Motor Bracket	25	2	10218	Micro Switch (No Lever)
12	1	28414 - 2	K	26	2	10302	Insulator
13	1	10769	Drive Motor, 110 V	27	2	10300	Screws
14	1	28414 - 1	M				

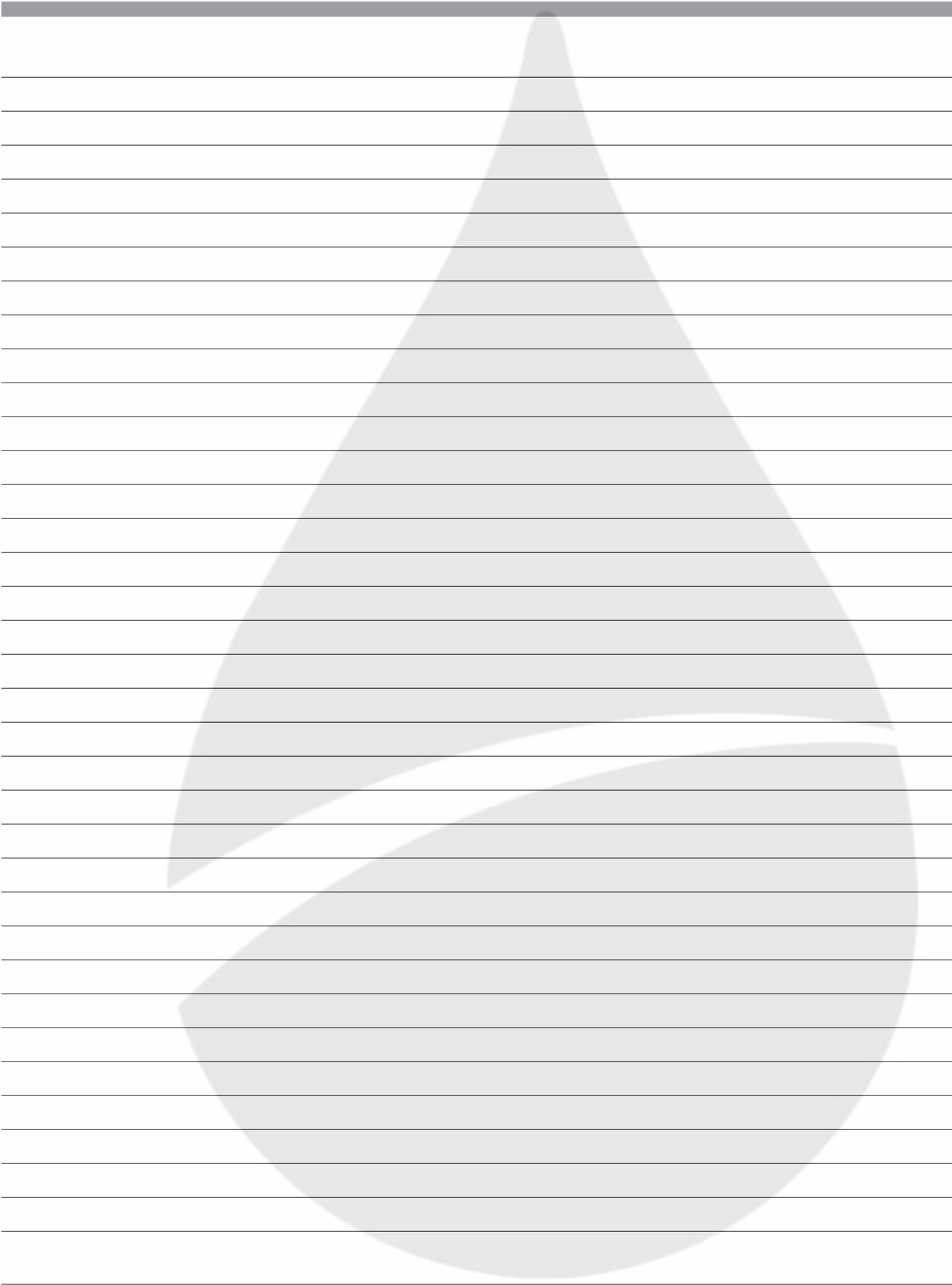
2510 Meter Initiated Control Valve Assembly



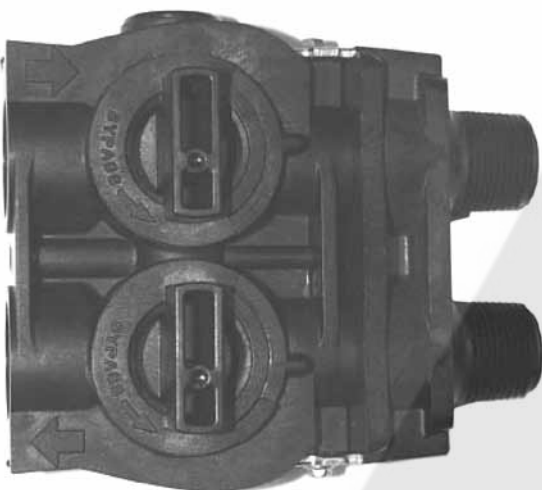


2510 Meter Initiated Control Valve Assembly

Item No.	Qty Req'd	Part No.	Description	Item No.	Qty Req'd	Part No.	Description
1	1	60029	Brine Valve, 1600 , Brass, No Refill	15	1	60503-1	2510 Clamp Ring Assy
		60011-50	Brine Valve, 1650, Noryl, 0.5 gpm Refill	y	1	19900	Male Clamp
		60011-00	Brine Valve, 1650 Noryl, No Refill	z	1	19899	Female Clamp
a	1	17906	Stem Guide	aa	1	040000	Hinge Pin
b	1	10250	Retaining Ring	bb	1	40057	Clamp Screw
c	1	10249	Brine Valve Spring	cc	1	19998	Clamp Pivot
d	1	17908	Stem Sleeve	16	1	19322	Adapter Base
e	1	12550	Quad Ring	17	1	19936	Base Adapter Seal
f	1	17905	Brine Valve Body	18	1	19197	Slip Ring
g	1	16924	O - Ring	19	1	18303	O - Ring
h	1	12552	Brine Valve Stem	20	1	13304	O - Ring
i	1	12626	Brine Valve Seat	21	1	13030	Dist. Tube Retainer
j	1	17907	Flow Control Fitting	22	1	19328	2510 Valve Body
k	2	19624	GFN Nut Sleeve	23	1	—	Flow Straightener
l	2	19623	GFN Nut Gripper	24	1	60088-180	180 Degree Meter
m	2	19321	Nut	25	1	13615	Cont. Backwash 3.5 Assy
n	1	10330	3/8" Delrin Sleeve		1	13616A	Cont. Backwash 5.0 Assy
o	1	10332	3/8" Insert		1	13617	Cont. Backwash 7.0 Assy
p	1	10329	3/8" Fitting Nut		1	60760-101	Control DLF 10 GPM (Shown Separately)
q	1	40027	Brine Valve Tube	dd	1	12090	3.50 GPM Washer
2	1	13811	Piston Assembly		1	12092	5.00 GPM Washer
r	1	14452	Piston Rod		1	12408	7.00 GPM Washer
s	1	10598	End Plug Assembly		1	16529	10.00 GPM Washer
t	1	14309	Piston Rod Retainer	ee	1	11183	O - Ring
u	1	15168	Piston	ff	1	11385 - 01	Flow Control Housing
3	1	11893	Flat Injector Cap	26	1	18312	Retainer Clip
4	2	10692	Screws	27	1	12338	90 Degree Hose Barb
5	1	10229	Injector Cover Gasket	28	1	11912	Drain Line Fitting
6	1	10328	90 Degree Tube Fitting	29	1	019480	Drain Line Housing
7	1	12973 - 2	PVC Nozzle				
8	1	12974 - 2	PVC Throat				
9	1	17776	Injector Body			60010-25	Brine Line Flow Control (B.L.F.C.) 0.25 gpm
10	1	10227	Injector Screen			60010-50	Brine Line Flow Control (B.L.F.C.) 0.50 gpm
11	1	11475	Body Gasket			60010-100	Brine Line Flow Control (B.L.F.C.) 1.0 gpm
12	4	13314	Screws			60011-00	Brine Valve (less B.L.F.C.)
13	4	13255	Mounting Clip				
14	1	13812	Seal & Spacer Kit				
v	6	10545	Piston Seal				
w	5	11451	Spacers				
x	1	10757	End Spacer				



Plastic Bypass



Item No.	Qty Req'd	Part No.	Description
1	2	13314	Screw
2	2	13255	Mounting Clip
3	1	18706-02	3/4" Plastic Yoke
	1	18706	1" Plastic Yoke (optional)

Complete Bypass Numbers

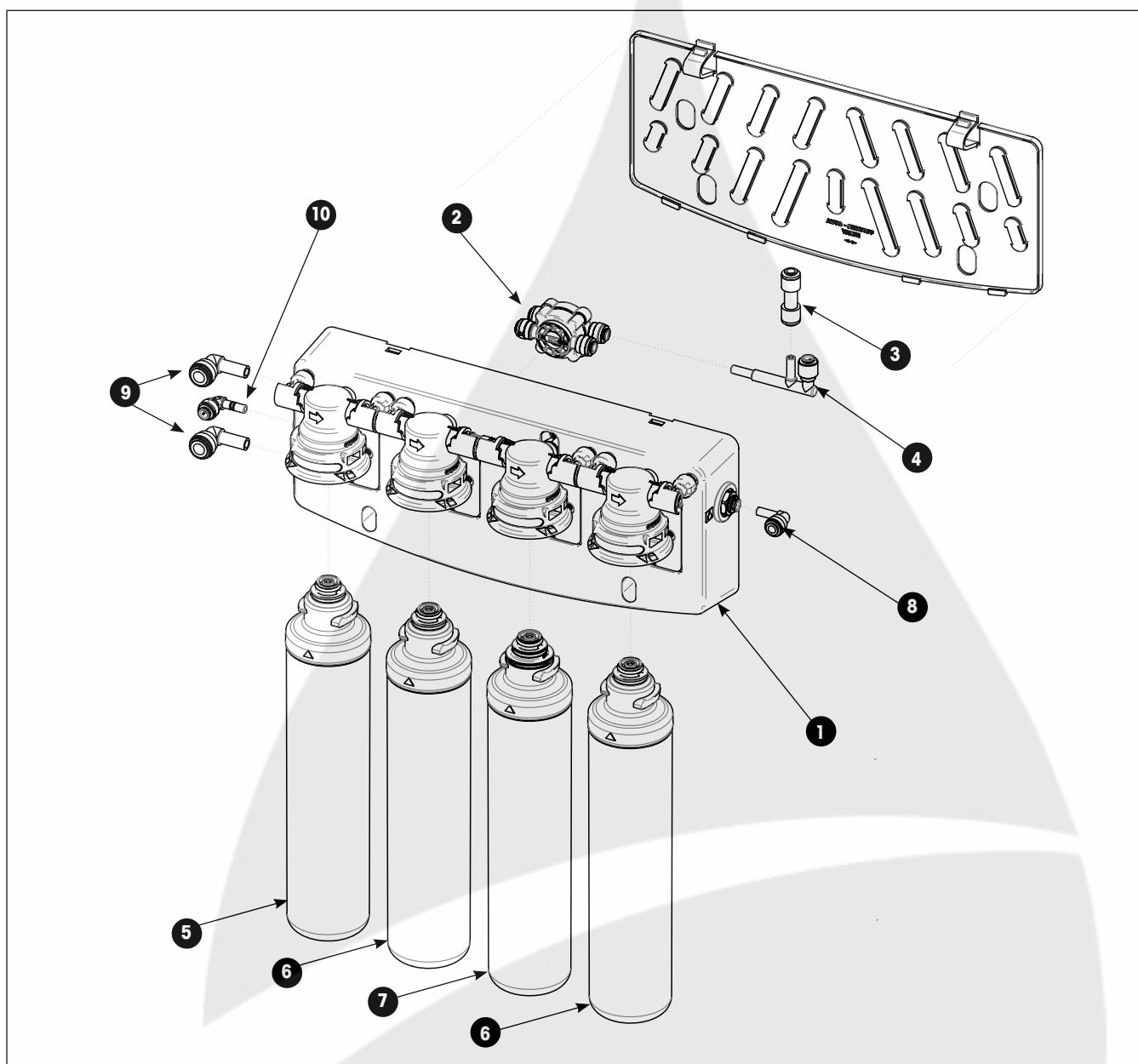
60049 - Bypass, plastic, c/w 3/4" plastic yoke
 60049-1 - Bypass, plastic, c/w 1" plastic yoke

Stainless Steel Bypass



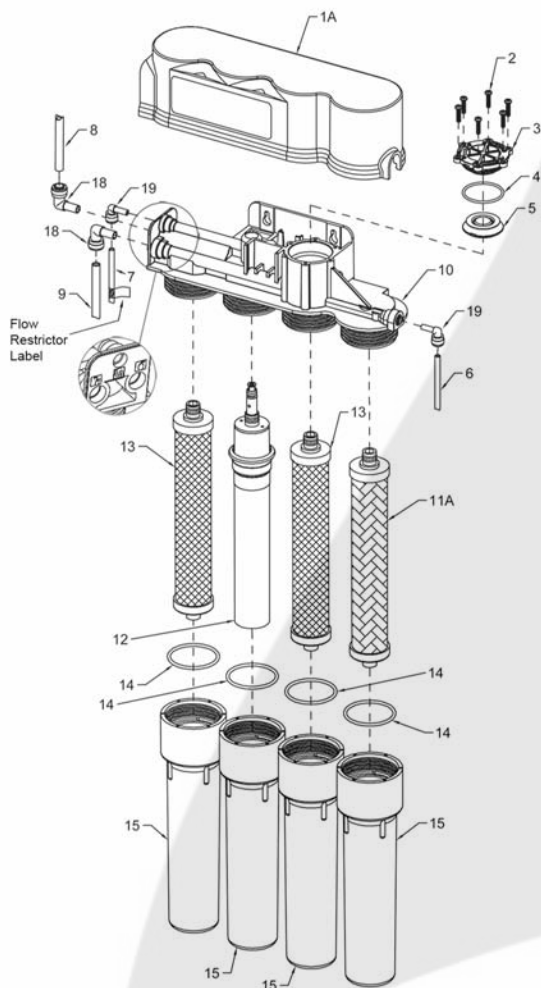
Complete Bypass Numbers

CDN Item #	US Item #	Description
60040	60040SS	Bypass, 3/4" stainless steel
60041-1	60041SS	Bypass, 1" stainless steel



#	Item #	Description	Qty.
1	134040R	Manifold, Quick Change RO, 4 Stage	1
2	92223	Valve, Auto Shut-off	1
3	41407553	Fitting, Check Valve, QCRO	1
4	41407552	Fitting, T-Connector, QCRO	1
5	41407001	Cartridge, Quick Change Sediment Filter - Stage 1	1
6	41407002	Cartridge, Quick Change Carbon Block - Stage 2 & 4	2
7	41407003	Cartridge, Quick Change 50GPD TFC Membrane - Stage 3	1
8	33501064	Elbow, 1/4" Stem	1
9	33501071	Elbow, 3/8" Stem	2
10	92800	Fitting, Drain Flow Control	1

#12402 Model Series Manifolds



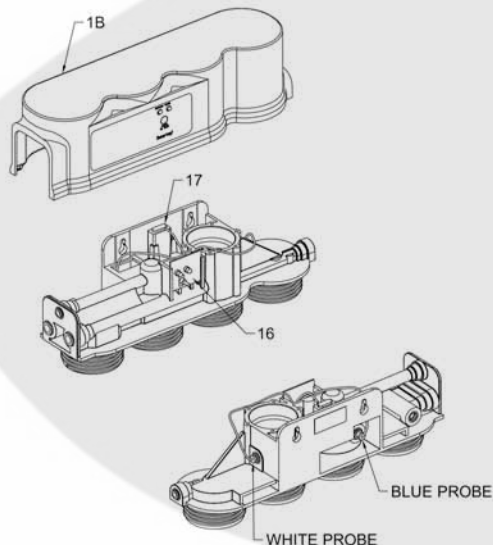
Item No.	Part No.	Description
1A	20500125	Cover, 4-vessel Manifold †
1B	20500127	Cover, 4-vessel Push Button Manifold †
2	32701038	Screw, inlet Valve Cover
3	20500126	Cover, Inlet Valve
4	34201024	"O" Ring, Inlet Valve Cover
5	40600010	Shut Off Assembly
6	115200	Tubing, 1/4", White *
7		Flow Restrictor, 1240 Series, Red
	40600034	9 GPD
	40600040	25 GPD
	40600041	50 GPD
	40600042	75 GPD
8	87600	Tubing, 3/8", Blue *
9	115207	Tubing, 3/8", White *
10	12402	RO, 4V Manifold, Assembled **
11A	41400008	Cartridge, Sediment, 5 micron
12		Filter, Membrane Thin Film Composite
	33001071	9 GPD, Yellow Casing Red Tape
	33001068	25 GPD, Yellow Casing Black Tape
	33001033	50 GPD, Yellow Casing White Tape
	33001056	75 GPD, Yellow Casing Blue Tape
13	41400009	Cartridge, Carbon AES, 10 micron
14	34201026	"O" Ring, Filter Housing
15	20500129	Housing, Filter
16	40200132	Circuit Board
17	701085	Battery 9 volt
18	33501071	Elbow, Stem, 3/8" *
19	33501064	Elbow, Stem, 1/4" *

*Note: These parts are included with installation kit (42903005).

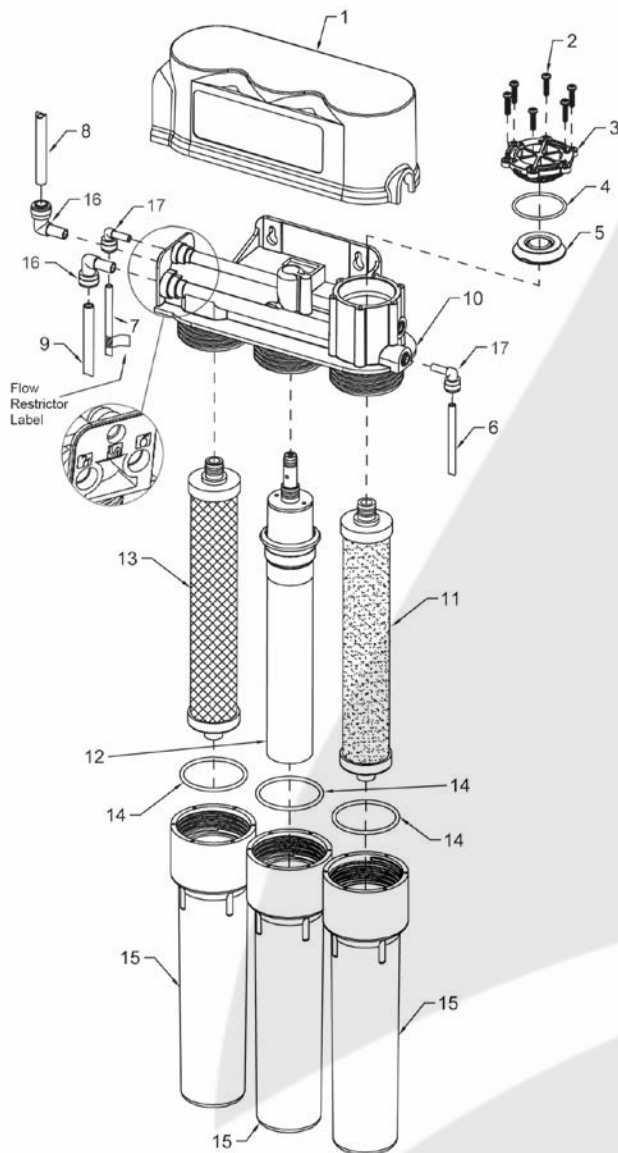
** Includes Items: 2, 3, 4, 5.

†To obtain the correct replacement decal/label, contact your dealer.

#12403 Push Button Smartap® Monitor Module Cover and Monitor Connections



#12401 Model Series Manifolds



Item No.	Part No.	Description
1	20500124	Cover, 3-vessel Manifold †
2	32701038	Screw, Inlet Valve Cover
3	20500126	Cover, Inlet Valve
4	34201024	"O" Ring, Inlet Valve Cover
5	40600010	Shut Off Assembly
6	115200	Tubing, 1/4", White *
7		Flow Restrictor, 12401 Series, Red
	40600040	25 GPD
	40600041	50 GPD
8	87600	Tubing, 3/8", Blue *
9	115207	Tubing, 3/8", White *
10	12401	RO, 3V Manifold, Assembled **
11	41400076	Cartridge, Dual, Sediment/Carbon Filter
12		Filter, Membrane Thin Film Composite
	33001068	25 GPD, Yellow Casing Black Tape
	33001033	50 GPD, Yellow Casing White Tape
13	41400009	Cartridge, Carbon AES, 10 micron
14	34201026	"O" Ring, Filter Housing
15	20500129	Housing, Filter
16	33501071	Elbow, Stem, 3/8" *
17	33501064	Elbow, Stem, 1/4" *

*Note: These parts are included with installation kit (42903005).

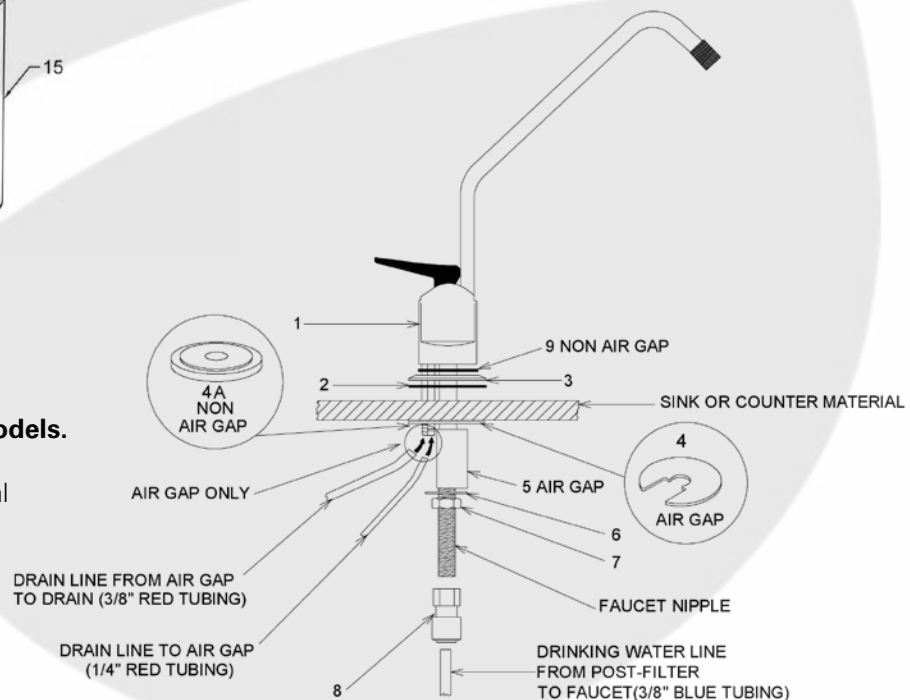
**Includes Items: 2, 3, 4, 5.

†To obtain the correct replacement decal/label, contact your dealer.

Additional Component for all models.

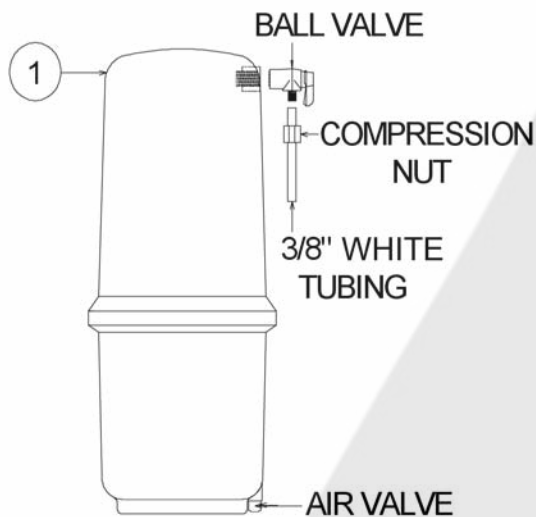
#92192 - Faucet, air-gap, metal

#87511 - Faucet, non-air-gap, metal

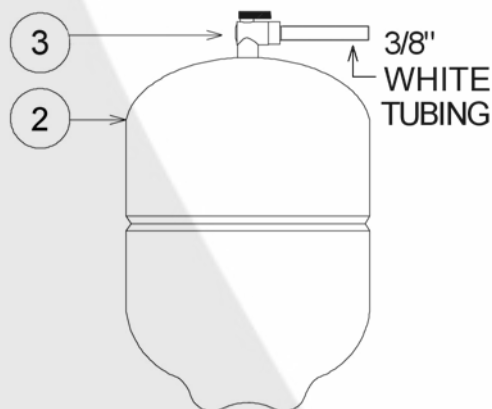


Additional Components - All Models

#92313 - Polypropylene Storage Tank

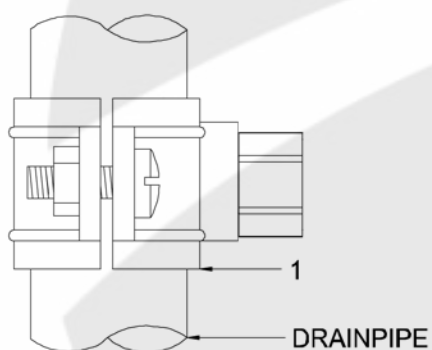


#92342 - Metal Storage Tank

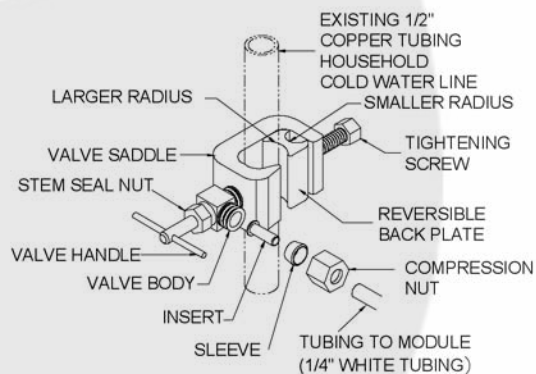


Item No.	Part No.	Description
1	92313	Storage Tank Assembly, Polymer
2	92342	Storage Tank Assembly, Metal
3	33503601	Ball Valve, 3/8"

Drain Assembly

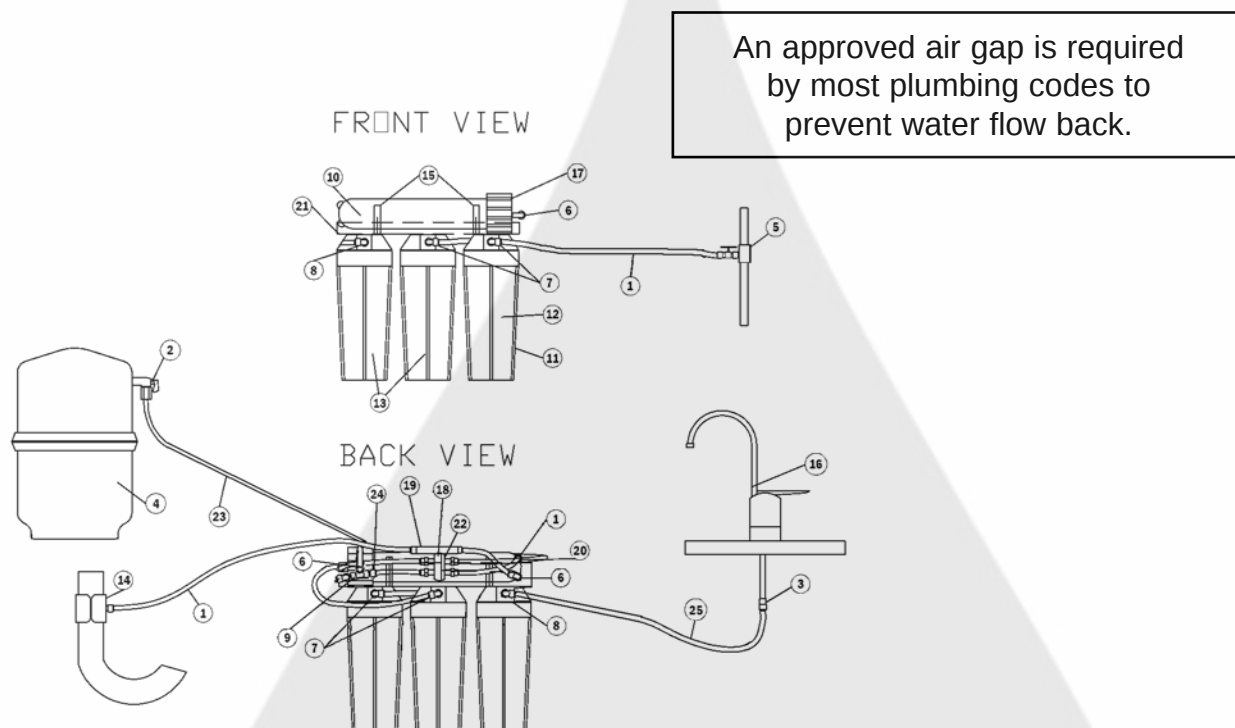


92276 Saddle Tapping Valve Assembly



Item No.	Part No.	Description
1	92160	Drain Saddle, Air Gap, 3/8" Connection
1A	92159	Drain Saddle, Non-Air Gap, 1/4" Connection

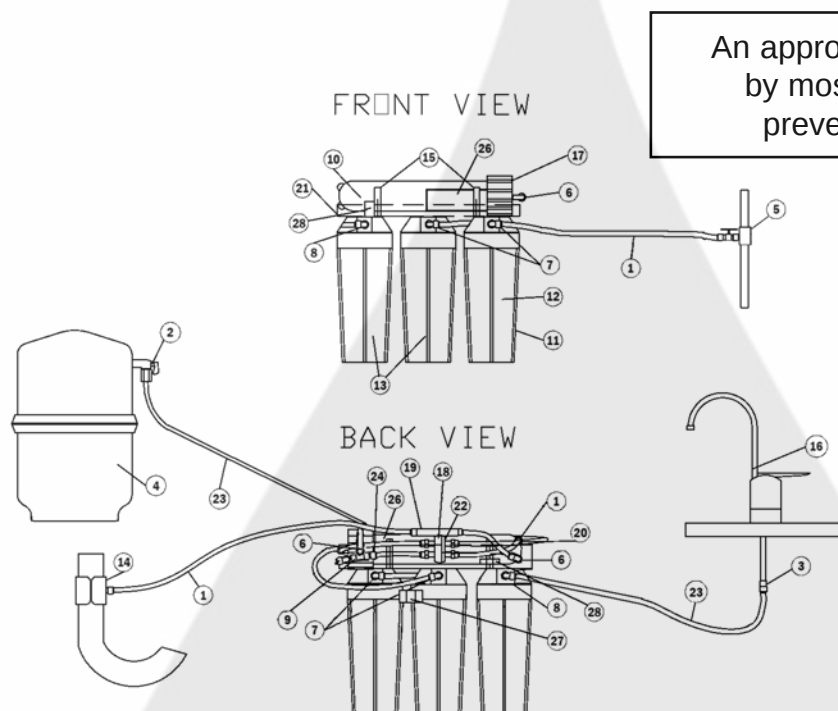
Model E (50 & 75) TFC-3SF



Some parts listed may not be included with this model

<u>Item No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part No.</u>
1	Tubing, 1/4" OD, poly, natural	115200	13	Cartridge, carbon	26081
2	Valve, 3/8", Shut Off	80704	14	Saddle, drain, set, RO, 3/8"	92160
3	Adapter, faucet, 3/8", QC	92407	15	Clip, pipe, 2", set	92162
4	Tank, storage, RO, 3800, white, c/w shut off	92313	16	Faucet, standard	87511
5	Feed water adapter c/w ball valve	92469	17	Vessel, membrane	92211
6	Elbow, male, 1/4" x 1/8" npt	92406	18	Valve, shut-off, auto	92223
7	Elbow, male, 1/4" x 1/4" npt	92405	19	Control, flow	
	Elbow, male, 3/8", tube, QC	92404		300 ml, RO 50 GPD	92263
9	Tee, 3/8" x 1/4" npt	92403		400 ml, RO 75 GPD	92328
10	Membrane, RO		20	Valve, check, product water	92612
	50 GPD, TFC	92035	21	Bracket, RO, 3 housing	92279
	75 GPD, TFC	92022	22	Bracket, Shut Off, Auto	92224
11	Housing, cartridge, white/black	92026	23	Tubing, 3/8" OD, poly, natural	115207
12	Cartridge, pre-filter, 5 micron	26091	24	Reducer 1/4" x 3/8" Stem x QC	92468
			25	Tubing, 3/8" OD, poly, blue	87600

Model EBP75TFC-3SF



Some parts listed may not be included with this model

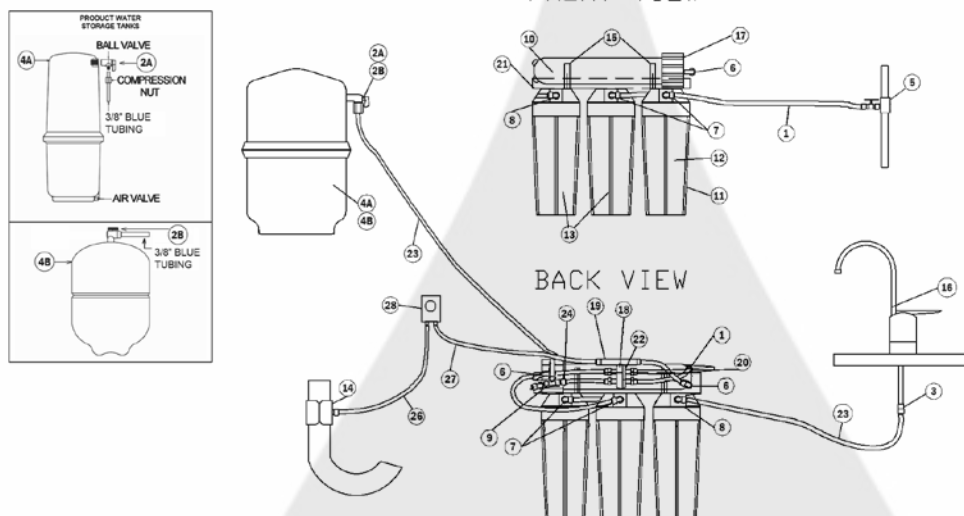
Item No.	Description	Part No.	Item No.	Description	Part No.
1	Tubing, 1/4" OD, poly, natural	115200	15	Clip, pipe, 2", set	92162
2	Valve, 3/8", Shut Off	80704	16	Faucet, standard	87511
3	Adapter, faucet, 3/8", QC	92407	17	Vessel, membrane	92211
4	Tank, storage, RO, 3800, white, c/w shut off	92313	18	Valve, shut-off, auto	92223
5	Feed water adapter c/w ball valve	92469	19	Control, flow	
6	Elbow, male, 1/4" x 1/8" npt	92406		300 ml, RO 50 GPD	92263
7	Elbow, male, 1/4" x 1/4" npt	92405		400 ml, RO 75 GPD	92328
8	Elbow, male, 3/8", tube, QC	92404	20	Valve, check, product water	92612
9	Tee, 3/8" x 1/4" npt	92403	21	Bracket, RO, 3 housing	92279
10	Membrane, RO		22	Bracket, Shut Off, Auto	92224
	50 GPD, TFC	92035	23	Tubing, 3/8" OD, poly, natural	115207
	75 GPD, TFC	92022	24	Reducer 1/4" x 3/8" Stem x QC	92468
11	Housing, cartridge, white/black	92026	25	Tubing, 3/8" OD, poly, blue	87600
12	Cartridge, pre-filter, 5 micron	26091	26	Booster Pump	92325
13	Cartridge, carbon	26081	27	Low Pressure Switch	92343
14	Saddle, drain, set, RO, 3/8"	92160	28	High Pressure Switch	92342



<u>Drawing #</u>	<u>Description</u>	<u>Item No.</u>
1	Cap, Assy, Upper	92348
2	Cap, Assy, Lower	92349
3	Gasket, Thiner, Assy	92350
4	Transformer, 24VAC (not shown)	92344

Model E(50 & 75) TFC-3NSF

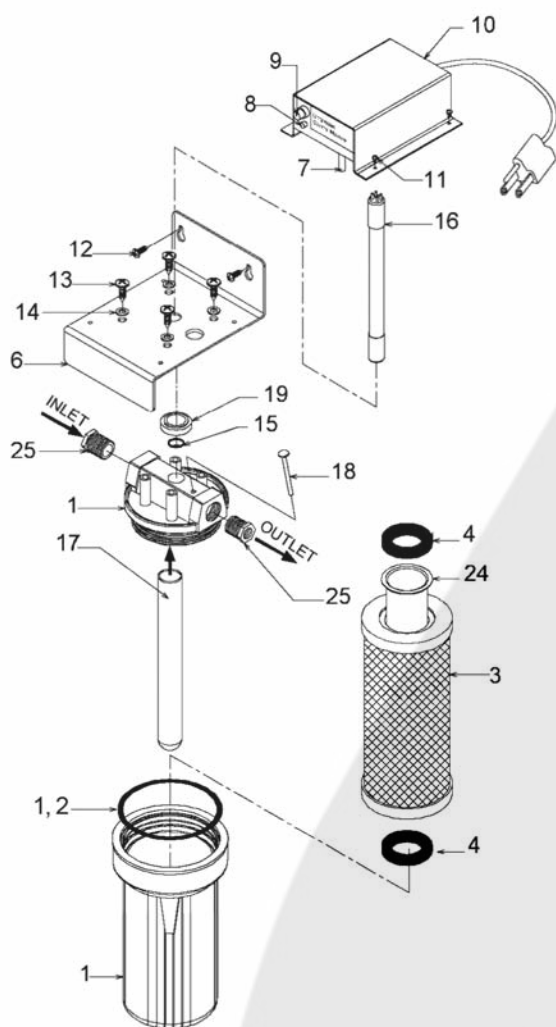
Some parts listed may not be included with this model



Component and Interconnection Locators*

Item No.	Description	Part No.	Item No.	Description	Part No.
1	Tubing, 1/4" OD, poly, natural	92600	Membranes and Filters		
2A	Valve, 3/8", Shut Off	80704	10	Reverse Osmosis TFC Membrane	
2B	Ball valve, 3/8"	33503601		50 GPD, TFC	92607
3	Connector, faucet, 3/8", QC	92601		75 GPD, TFC	92608
4A	Tank, storage, RO, 3800, white, c/w shut off	92313	12	Cartridge, pre-filter, 5 micron	26091
4B	Tank, storage, RO, 4.0 gal., metal	42600029	13	Cartridge, carbon (2 each)	26081
5	Valve, inlet, saddle, self-priming, 3/8"-1/2" pipe	92276	Flow Control		
6	Elbow, 1/4" QC x 1/8" mnpt	92603	19	Control, Flow, 300ml, RO 50 GPD	92610
7	Elbow, 1/4" QC x 1/4" mnpt	92604	19	Control, Flow, 400 ml, RO 75 GPD	92611
8	Elbow, 3/8" QC x 1/4" mnpt	92605	Product Water Faucet		
9	Tee, 3/8", QC	92606	16	Faucet, Standard	92609
10	Membrane, RO		Product Water Tank*		
	50 GPD, TFC	92607	4A	Tank, Storage, Plastic	92313
	75 GPD, TFC	92608	4B	Tank, Storage, Metal	42600029
11	Housing, cartridge, white/black	92026	Installation Kit		
12	Cartridge, pre-filter, 5 micron	26091		Complete Kit	— — —
13	Cartridge, carbon	26081	14	Saddle, Drain, 3/8"	92160
14	Saddle, drain, set, RO, 3/8"	92160	5	Valve, Inlet, Saddle, Self Piercing, 3/8"-1/2" Pipe	92276
15	Clip, pipe, 2", set	92162	3	Connector, Faucet, 3/8", QC	92601
16	Faucet, standard	92609	1	Tubing, 1/4" OD, poly, natural	92600
17	Vessel, membrane	92211	23	Tubing, 3/8" OD, poly, natural	92613
18	Valve, shut-off, auto	92223	24	Reducer, 1/4" x 3/8" Stem x QC	92614
19	Control, flow		25	Tubing, 3/8" OD, poly, blue	92615
	300 ml/min, RO 50 GPD	92610	26	Tubing, 3/8" OD, poly, red	87604
	400 ml/min, RO 75 GPD	92611	27	Tubing, 1/4" OD, poly, red	115201
20	Valve, check, product water	92612	28	Airgap, RO, Remote Plastic	44403001
21	Bracket, RO, 3 housing	92279	Owners Guide		
22	Bracket, Shut Off, Auto	92224		Performance Sheet	90016
23	Tubing, 3/8" OD, poly, natural	92613			90019
24	Reducer 1/4" x 3/8" Stem x QC	92614			
25	Tubing, 3/8" OD, poly, blue	92615			
26	Tubing, 3/8" OD, poly, red	87604			
27	Tubing, 1/4" OD, poly, red	115201			
28	Airgap, RO, Remote, Plastic	44403001			

* Replacement parts can be obtained from your local dealer.

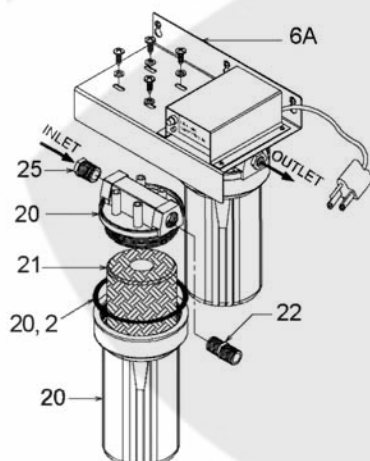


UV Components
UVB1 EPCB™

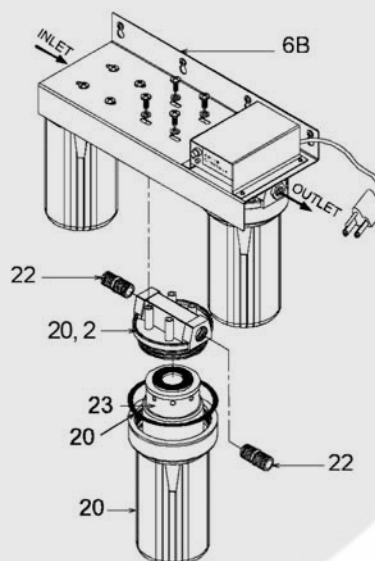
Item No.	Part No.	Description
1	92502	Sump, #10, "O" Ring, Sump #10/20
2	92513	Head UV #10/20 Assy
3	33004030	"O" Ring, Housing, UVB
4	---	Filter, Carbon EPCB™ 10"
6	---	Gasket, c/w Filter
6A	31910101	Mounting Bracket, 1 Sump
6B	31910201	Mounting Bracket, 2 Sump
7	---	Mounting Bracket, 3 Sump
8	---	Switch, Safety
9	---	Indicator, LED
10	---	Fuse, 1A Type 3AG
11	40200116†	Module, UV Control #11
12	32701063	Screw, 6/32 x 3/8"
13	32701006	Screw, #10 x 3/4"
14	32701061	Screw, 1/4" x 1-1/2"
15	32800031	Washer, #14 Nylon
16	34202021	"O" Ring, Quartz Sleeve, Standard (1)
17	36002017	Lamp, UV #11
18	36003034	Sleeve Quartz #11 w/"O" Rings
19	22401015	Rod, Safety Plunger
20	22401016	Spacer, Bushing #10/20
21	92501	Head, Filter 3/4" #10/20, "O" Ring, Sump, Filter #10/20
22	33003051	Filter, Sediment 10" 5 micron
23	33601023	Nipple, 3/4"
24	33004024	Filter, GC 10" 5 micron
25	30120506	Sleeve, Teflon
n/s‡	33300017	Bushing, 3/4" x 3/8"
	92508	Wrench, Sump #10/20

† Consult Factory to determine part number for applications other than 120V/60hz

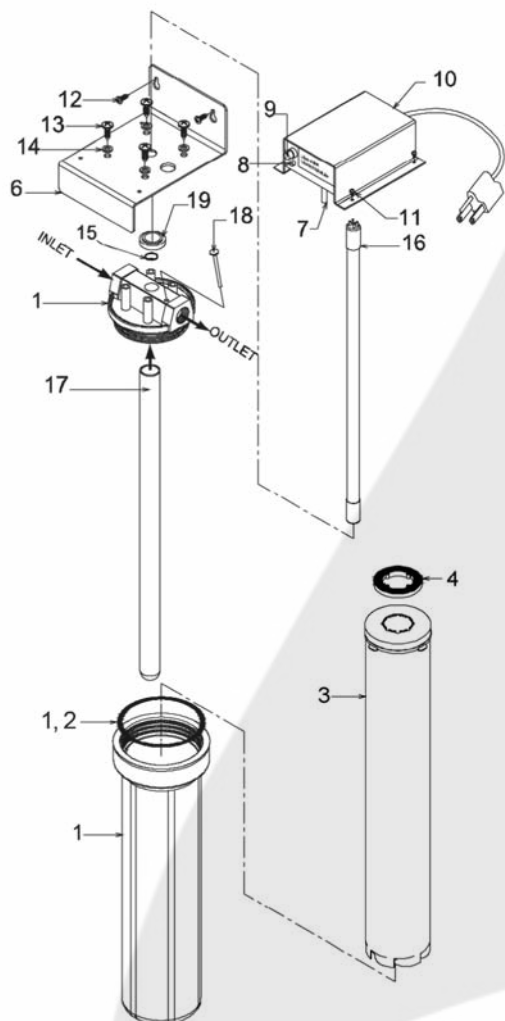
‡ not shown



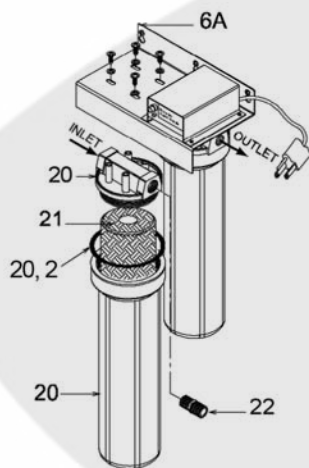
Sediment Filter Components
UVB2 EPCB™/SD



Carbon Filter Components
UVB3 EPCB™/GC/SD



UV Components
UV20-1

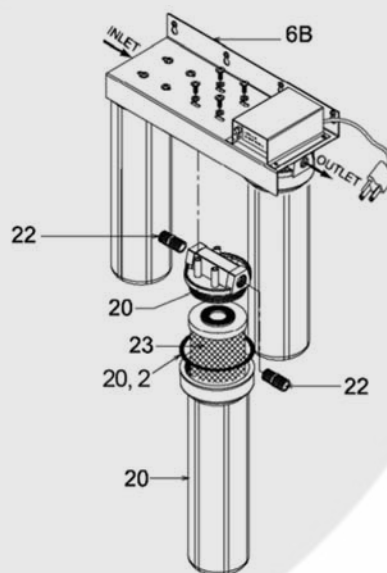


Sediment Filter Components
UV20-2/SD

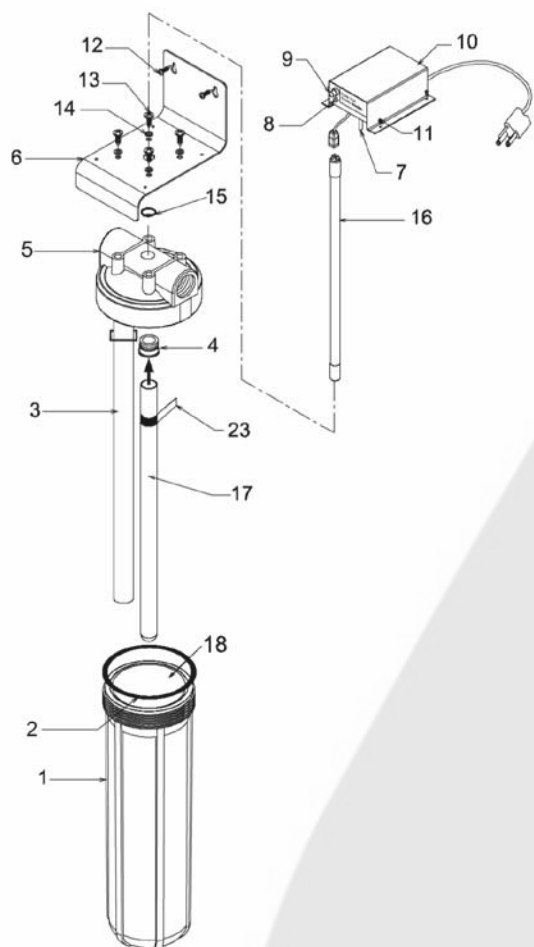
Item No.	Part No.	Description
1	92504	Housing, UV, Sump, #20, "O" Ring, Head UV, #10/20
2	92513	"O" Ring, Sump #10/20
3	44301007	Sleeve, Channeling S/S, #20
4	36099205	Gasket, Sleeve
6	31910101	Mounting Bracket, 1 Sump
6A	31910201	Mounting Bracket, 2 Sump
6B	31910301	Mounting Bracket, 3 Sump
7	---	Switch, Safety
8	---	Indicator, LED
9	31000006	Fuse, 1A Type 3AG
10	40200116†	Module, UV Control #20
11	32701063	Screw, 6/32 x 3/8"
12	32701006	Screw, #10 x 3/4"
13	32701061	Screw, " x 1-1/2"
14	32800031	Washer, #14 Nylon
15	34202021	"O" Ring, Quartz Sleeve, Standard (1)
16	36002018	Lamp UV #20
17	36003035	Sleeve Quartz #20, with "O" Rings
18	22401015	Rod, Safety Plunger
19	22401016	Spacer, Bushing #10/20
20	92503	Housing, Filter 3/4" #10/20, "O" Ring, Sump, Head
21	33003033	Filter, Sediment 20" 5 micron
22	33601023	Nipple, 3/4"
23	33004022	Filter, Carbon Block 20" EPM 10 micron
n/s‡	92508	Wrench, Sump #10/20

† Consult Factory to determine part number for applications other than 120V/60hz

‡ not shown



Carbon Filter Components
UV20-3 CB20X/SD

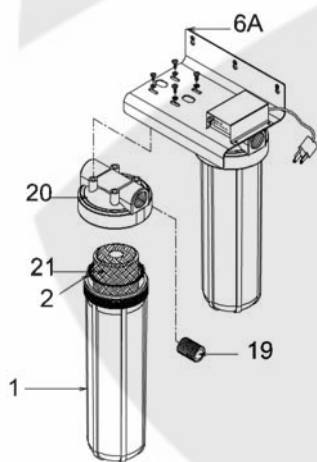


UVBB-1 Components

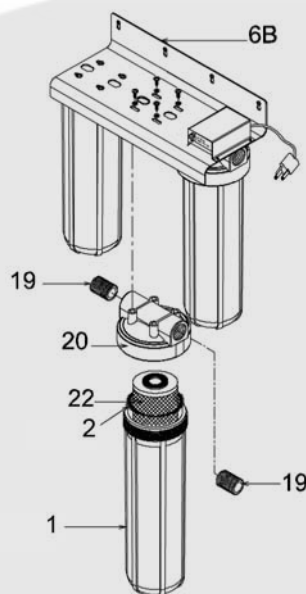
Item No.	Part No.	Description
1	92506	Sump, UV #20 BB, "O" Ring, Sump BB, Head UV #20 BB, Assy (3 pieces)
2	92512	"O" Ring, Housing, BB
3	44301015	Sleeve, Teflon, Delivery BB c/w clamp
4	44301009	Sleeve, Quartz Adapter with "O" Rings
n/s†	34202022	"O" Ring, Quartz Adapter Sleeve Inner (2 pieces)
n/s†	34201039	"O" Ring, Quartz Adapter Sleeve Outer (2 pieces)
6	31910102	Mounting Bracket, 1 Sump BB
6A	31910202	Mounting Bracket, 2 Sump BB
6B	31910302	Mounting Bracket, 3 Sump BB
7	---	Switch, Safety
8	---	Indicator, LED
9	31000006	Fuse, 1A Type 3AG
10	44302403†	Module, UV Control BB
11	32701063	Screw, 6/32 x 3/8"
12	32701060	Screw, #14 x 1"
13	32701074	Screw, 5/16 x 1-1/4"
14	32800029	Washer, 5/16"
15	34202022	"O" Ring, Quartz Sleeve BB (1)
16	36002018	Lamp, UV #20
17	36003036	Sleeve, Quartz #22 with "O" Rings
18	36099106	Sleeve, BB, #20, S/S
19	33601024	Nipple, 1-1/2"
20	92505	Head, Filter 1-1/2" BB Sump, UV#20 BB, Filter "O" Ring, Sump BB, Filter (3 pieces)
21	33003117	Filter, Sediment 20" 5 micron BB
22	33004015	Filter, Carbon Block 20" 10 micron BB, EPM
n/s†	92509	Wrench, Sump #20 BB
23	---	Red Tape

† Consult Factory to determine part number for applications other than 120V/60hz

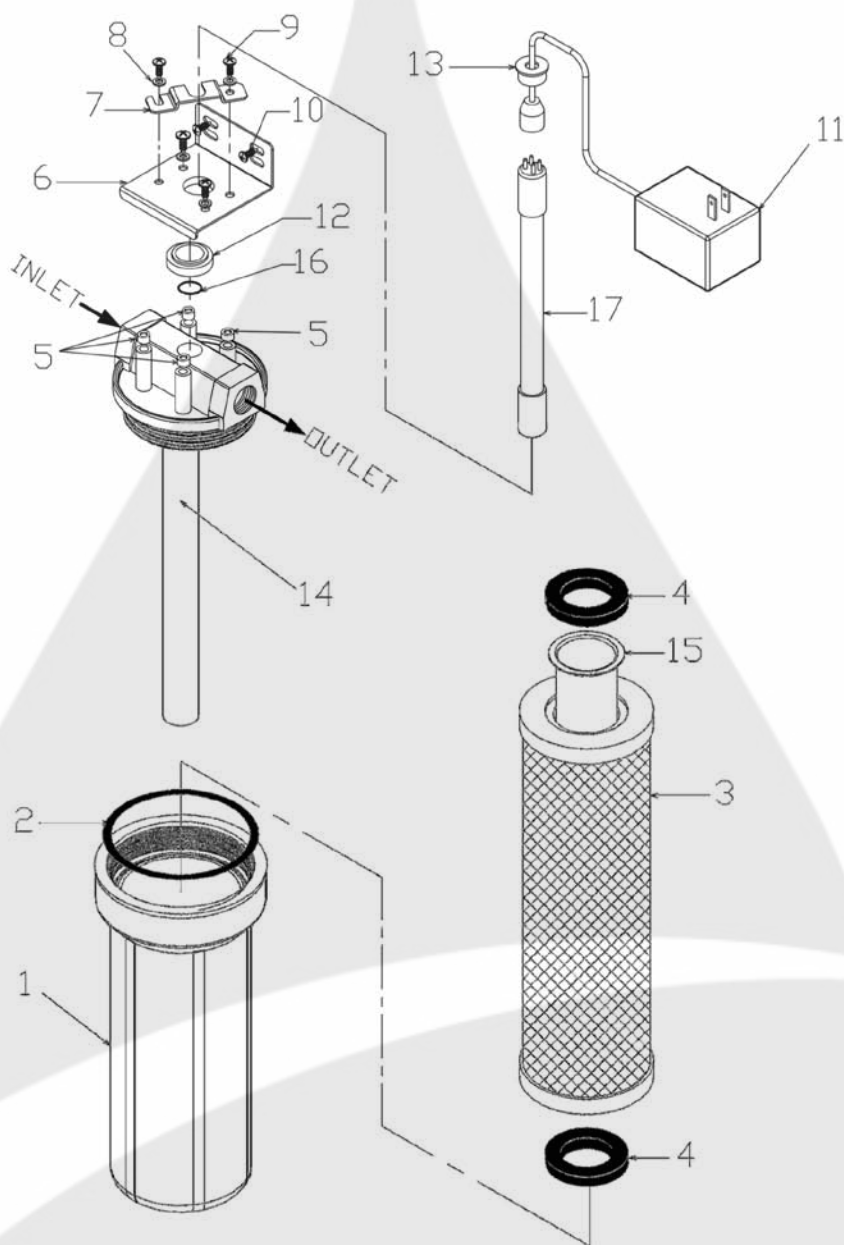
‡ not shown



Sediment Filter Components
UVBB-2



Carbon Filter Components
UVBB-3

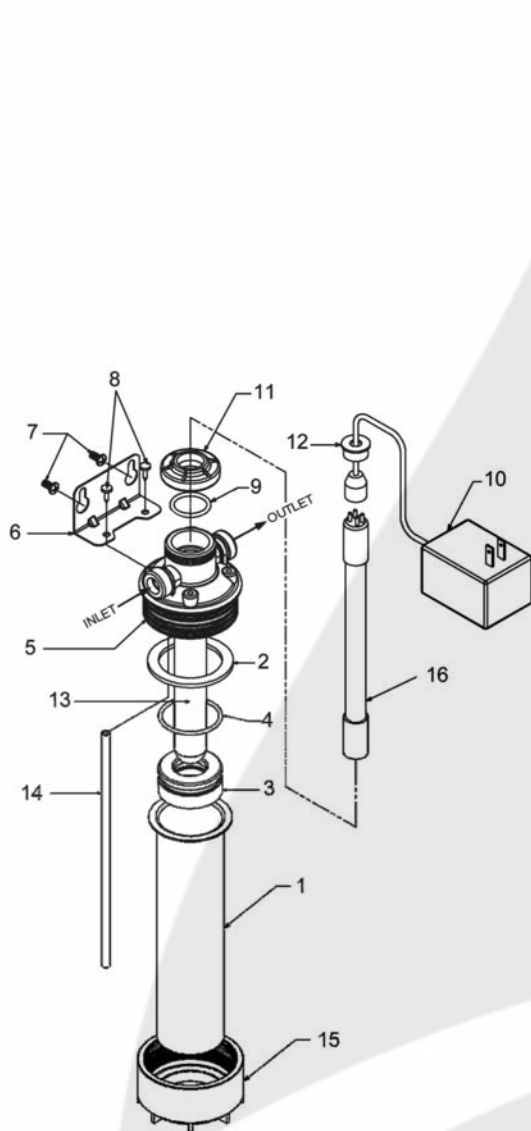


UV1 Series Components

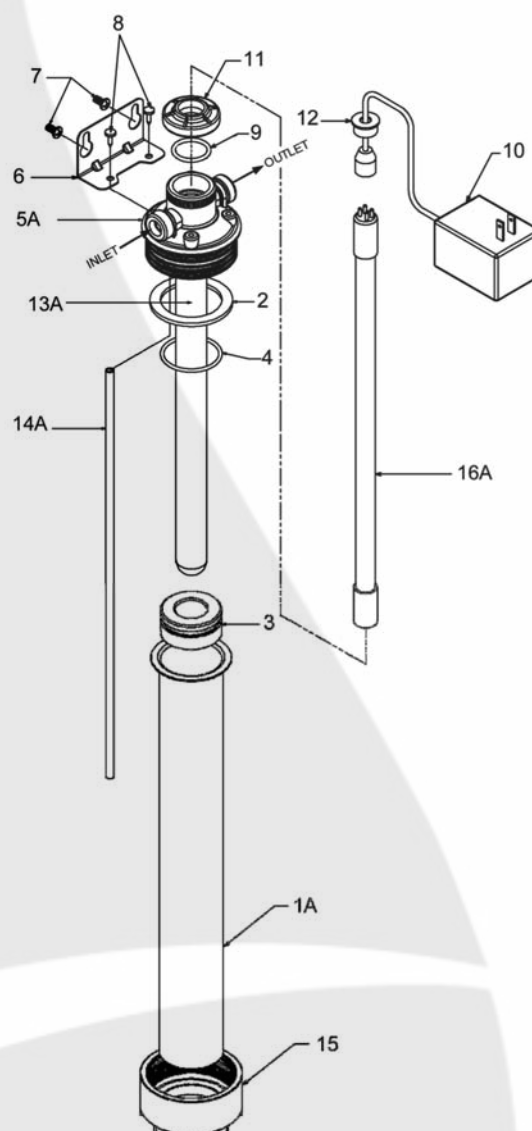
Item No.	Part No.	Description
1	92500-1	Housing, UV1, Pura*
2	92060	"O" Ring, UV1, Pura
3	33004030	Filter, Carbon EPCB? 10"
4	—	Gasket, c/w Filter
5	32701010	Spacer, UV1, Pura
6	31910107	Mounting Bracket, UV1, Pura
7	31910408	Retainer, UV Lamp UV1
8	32800031	Washer, #14 Nylon
9	32701007	Screw, #10-16 x 1"
10	32701006	Screw, #10 x 3/4"

Item No.	Part No.	Description
11	40200080†	UV Control, with Finish Cap
12	22401017	Bushing, Spacer #10 SL
13	—	Cap, Finish, c/w Control
14	36003033	Sleeve, Quartz #10 with "O" Rings
15	30120506	Sleeve, Teflon
16	34202020	"O" Ring Quartz Sleeve UV1 (1)
17	36002016	Lamp, UV #10

† Consult Factory to determine part number for applications other than 120V/60hz



UV Addon 1 GPM



UV Addon 3 GPM

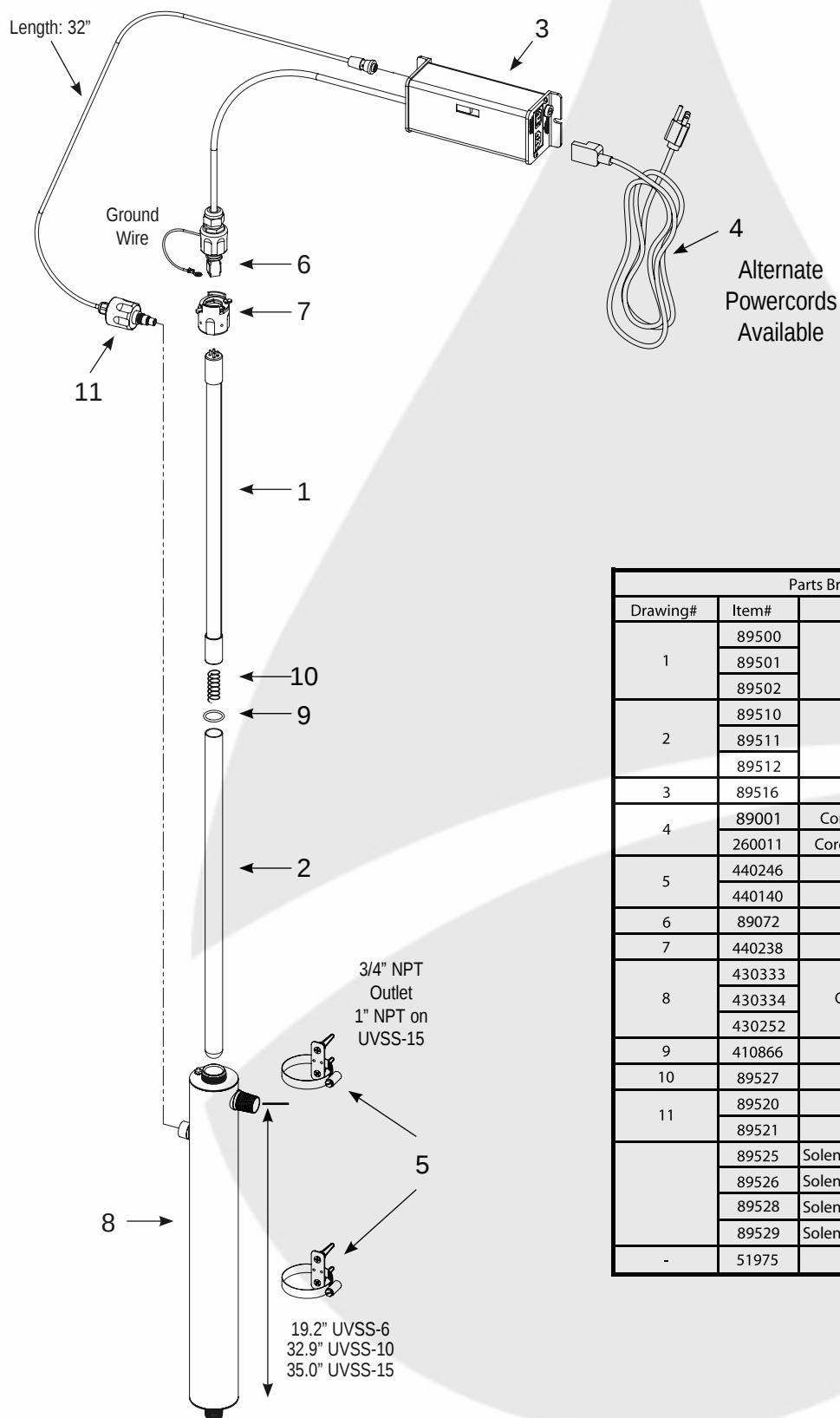
Item No.	Part No.	Description
1	31910007	Sump, 1gpm Addon
1A	31910006	Sump, 3gpm Addon
2	21001004	Gasket, Sump Addon
3	22401031	Plug, Bottom
4	34202037	"O" Ring, Bottom Plug
5	44301002†	Head, UV Addon White 1gpm
5A	44301005†	Head, UV Addon White 3gpm
6	31910401	Mounting Bracket, Addon
7	32701006	Screw, #10 x 3/4"
8	318526	Screw, #10 x 5/8"
9	34202021	"O" Ring, Quartz Sleeve Standard (1)
10	40200080‡	UV Control, with Finish Cap
11	22401012	Retainer, "O" Ring

Item No.	Part No.	Description
12	—	Cap, Finish, c/w Control
13	36003034	Sleeve, Quartz #11 with "O" Rings
13A	36003035	Sleeve, Quartz #20 with "O" Rings
14	35817019	Tube, Delivery 1gpm
14A	22403202	Tube, Delivery 3gpm
15	22401011†	Collar, Addon White
16	36002016	Lamp, UV #10
16A	36002018	Lamp, UV #20

† Part also available in black

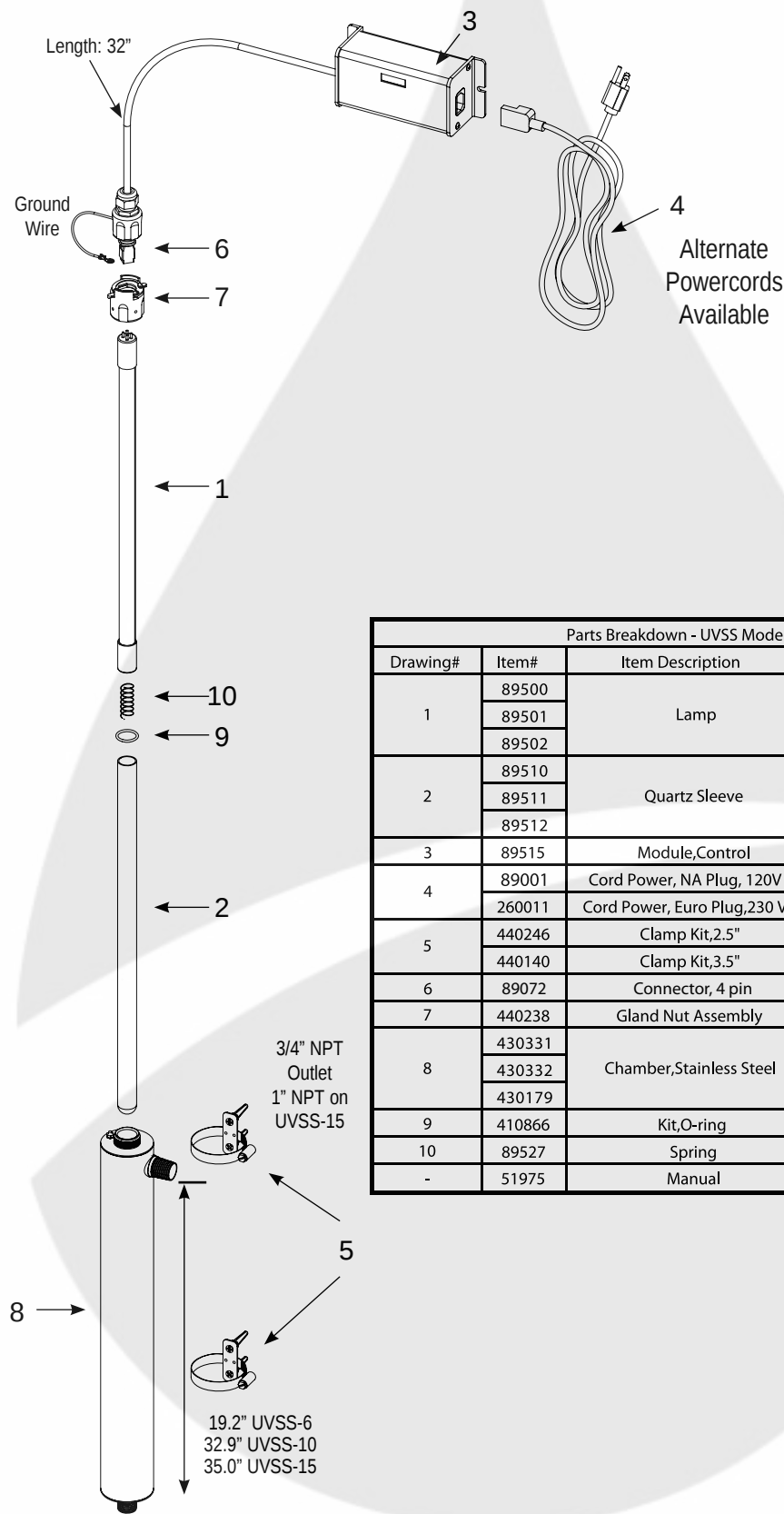
‡ Consult Factory to determine part number for applications other than 120V/60hz

UVSS-M Models (Monitored)



Parts Breakdown - UVSS-M Models			
Drawing#	Item#	Item Description	UV Models
1	89500	Lamp	UVSS-6M
	89501		UVSS-10M
	89502		UVSS-15M
2	89510	Quartz Sleeve	UVSS-6M
	89511		UVSS-10M
	89512		UVSS-15M
3	89516	Module,Control	All UVSS-M Models
4	89001	Cord Power, NA Plug, 120V	All UVSS Models
	260011	Cord Power, Euro Plug,230 V	NA UVSS Models
5	440246	Clamp Kit,2.5"	UVSS-6M,UVSS-10M
	440140	Clamp Kit,3.5"	UVSS-15M
6	89072	Connector, 4 pin	All UVSS-M Models
7	440238	Gland Nut Assembly	All UVSS-M Models
8	430333	Chamber,Stainless Steel	UVSS-6M
	430334		UVSS-10M
	430252		UVSS-15M
9	410866	Kit,O-ring	UVSS-6M
10	89527	Spring	UVSS-6M
11	89520	UV Sensor Assy	UVSS-6M,UVSS-10M
	89521	UV Sensor Assy	UVSS-15M
	89525	Solenoid Valve (optional),3/4",120V	UVSS-6M,UVSS-10M
	89526	Solenoid Valve (optional),1",120V	UVSS-15M
	89528	Solenoid Valve (optional),3/4",230V	UVSS-6M,UVSS-10M
	89529	Solenoid Valve (optional),1",230V	UVSS-15M
-	51975	Manual	All UVSS-M Models

UVSS Models



Parts Breakdown - UVSS Models			
Drawing#	Item#	Item Description	UV Models
1	89500	Lamp	UVSS-6
	89501		UVSS-10
	89502		UVSS-15
2	89510	Quartz Sleeve	UVSS-6
	89511		UVSS-10
	89512		UVSS-15
3	89515	Module,Control	All UVSS Models
4	89001	Cord Power, NA Plug, 120V	NA UVSS Models
	260011	Cord Power, Euro Plug,230 V	EURO UVSS Models
5	440246	Clamp Kit,2.5"	UVSS-6,UVSS-10
	440140	Clamp Kit,3.5"	UVSS-15
6	89072	Connector, 4 pin	All UVSS Models
7	440238	Gland Nut Assembly	All UVSS Models
8	430331	Chamber,Stainless Steel	UVSS-6
	430332		UVSS-10
	430179		UVSS-15
9	410866	Kit,O-ring	All UVSS Models
10	89527	Spring	All UVSS Models
-	51975	Manual	All UVSS Models



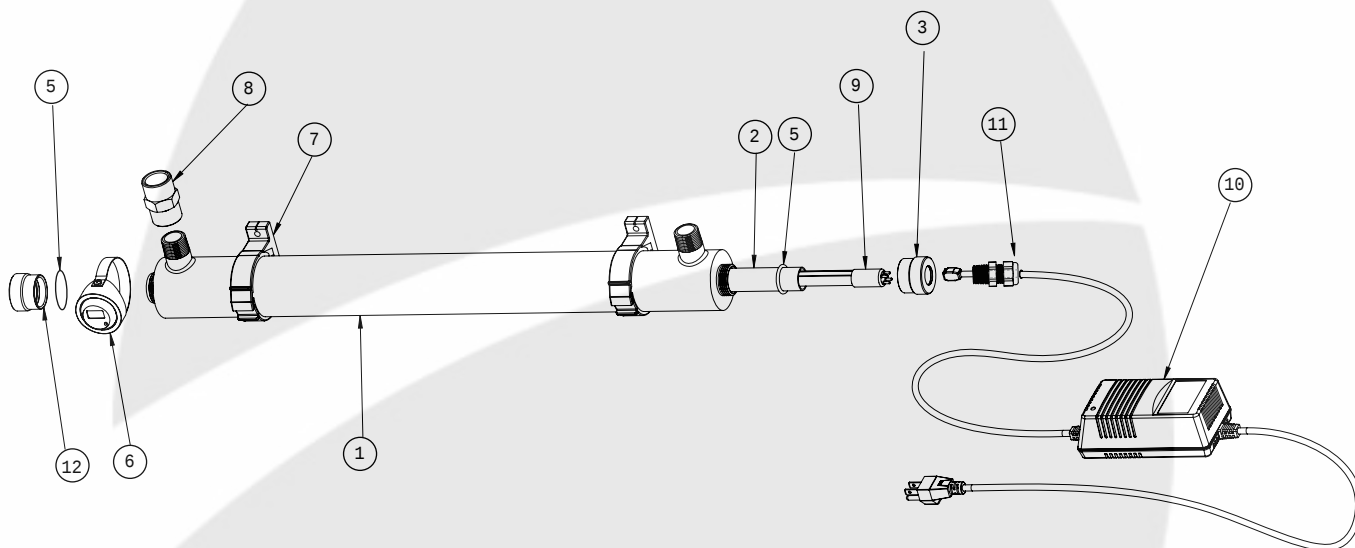
System Tested and Certified by NSF International against NSF/ANSI Standard 55 for Disinfection Performance, Class B

Parts Breakdown — Buv Models

Item #	Part Ref	Description	Qty	For UV Model
89573	2	Quartz Sleeve, Buv-6	1	ABuv-6
89574	2	Quartz Sleeve, Buv-8	1	ABuv-8
89575	2	Quartz Sleeve, Buv-12	1	ABuv-12
89577	3	Chamber Nut, Lamp Entry, Threaded	2	All Models
89578	5	O-Ring	2	All Models
89584	6	Countdown Timer, c/w Bracket	1	All Models
89579	7	Clip	2	All Models
89581	8	Flow Control, 6 GPM, 1/2" NPT	1	ABuv-6
89582	8	Flow Control, 8 GPM, 3/4" NPT	1	ABuv-8
89583	8	Flow Control, 12 GPM, 1" NPT	1	ABuv-12
89570	9	Lamp, UV, Buv-6	1	ABuv-6
89571	9	Lamp, UV, Buv-8	1	ABuv-8
89572	9	Lamp, UV, Buv-12	1	ABuv-12
89580	10	Ballast	1	All Models
89576	11	Strain relief	1	All Models
89585	12	Chamber Nut, c/w Stopper Bottom	1	All Models

Replacement Lamps for ABuv Models

Model	ABuv-6	ABuv-8	ABuv-12
Part #	89570	89571	89572



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

[illegible]