



**impact**  
WATER PRODUCTS

We will not compete in the race to the bottom!

# Product Catalog

Supplying Water Quality Improvement Professionals

**We support the American work-  
force. The majority of our systems  
and components are made and  
assembled in the USA!**



# Table of Contents

| Topic                                                      | Pg | Topic                                                      | Pg |
|------------------------------------------------------------|----|------------------------------------------------------------|----|
| Commercial Customization                                   | 5  | i5 2" Composite Control Valve Specifications               | 44 |
| i5 1" Control Valve                                        | 6  | i5 2" Composite Commercial Softener                        | 45 |
| i5 1" Metered Softener                                     | 8  | i5 2" Composite Progressive Flow Softener                  | 46 |
| i5 1" Backwashing Systems                                  | 9  | i5 2" Progressive Flow Softener Specifications and Orde... | 47 |
| Liberator 1" & 1.25" Catalytic Carbon & Softening          | 10 | i5 2" Composite Valve Backwash Systems                     | 48 |
| Midway Cation & Anion Resin                                | 11 | Iron, Manganese, H2S Reduction                             | 49 |
| i5 1" Twin Alternating Softener                            | 12 | i5 2" Brass Control Valve Specifications                   | 50 |
| Cabinet Softeners                                          | 13 | i5 2" Brass Commercial Softener                            | 51 |
| Ox Mag Salt Free Conditioning                              | 14 | i5 Brass 2" Progressive Flow Softener Systems              | 52 |
| Double Barrel Backwash                                     | 16 | i5 2" Progressive Flow Softener Specifications and Orde... | 53 |
| Double Barrel                                              | 17 | i5 2" Brass Valve Backwash Systems                         | 54 |
| 1" - 2" In/Out Carbon Tanks                                | 18 | Sodium Chloride NaCl vs. Potassium Chloride KCl            | 55 |
| 1" - 3" Scale Reduction                                    | 19 | Clack WS2HF                                                | 56 |
| Scale Reduction & Up-Flow/Down-Flow Start-Up               | 20 | WS2HF 2" Commercial Softener                               | 57 |
| Anti-Scale and Catalytic Carbon                            | 21 | WS2HF 2" Progressive Flow Softener Systems                 | 58 |
| EcoMix with i5 Valve                                       | 23 | WS2HF 2" Valve Backwash Systems                            | 59 |
| i5 AIO3/AIO Backwashing Systems                            | 24 | Clack WS3                                                  | 60 |
| Calcium Carbonate Neutralizing System                      | 25 | WS3 3" Commercial Softener                                 | 61 |
| i5 1.25" Control Valve                                     | 26 | WS3 3" Progressive Flow Softener Systems                   | 62 |
| i5 1.25" Softener                                          | 27 | WS3 3" Commercial Backwash Systems                         | 63 |
| i5 1.25" Progressive Flow Softener                         | 28 | Grey Water Recycling & Brine Diversion                     | 64 |
| i5 1.25" Progressive Flow Softener Specifications and O... | 29 | DI Tanks                                                   | 65 |
| i5 1.25" Backwash Systems                                  | 30 | i5 Composite Control Valves                                | 66 |
| i5 1" - 1.25" Installation Parts & Accessories             | 31 | i5 Brass/WS2HF/WS3 Control Valves                          | 67 |
| i5 1.5" Composite Control Valve                            | 32 | Meters & Accessories                                       | 68 |
| i5 1.5" Composite Softener Systems                         | 33 | Flow Controls                                              | 69 |
| i5 1.5" Composite Progressive Flow Softener                | 34 | MAV and NHWP Valves                                        | 70 |
| i5 1.5" Progressive Flow Softener Specifications and Or... | 35 | Commercial Water Softener Sizing                           | 71 |
| i5 1.5" Composite Valve Backwash Systems                   | 36 | i5 & Clack Service Parts                                   | 72 |
| How to Size a Softener                                     | 37 | i5 & Clack Service Parts                                   | 73 |
| i5 Brass 1.5" Control Valve                                | 38 | Clack Injectors, Draw & Feed Tubes                         | 74 |
| i5 Brass 1.5" Metered Softener Systems                     | 39 | Stainless Flex Lines                                       | 75 |
| i5 Brass 1.5" Progressive Flow Softener                    | 40 | Cartridge Tank Filtration                                  | 76 |
| i5 1.5" Progressive Flow Softener Specifications and Or... | 41 | High Capacity Specialty Filters                            | 77 |
| i5 1.5" Brass Valve Backwash Systems                       | 42 | Polymeric UF Ultrafiltration                               | 78 |
| Softening Efficiency, Capacity & Leakage                   | 43 | 1/2" MPT Vacuum Break                                      | 79 |

# Table of Contents (continued)

| Topic                                                      | Pg  | Topic                                                      | Pg  |
|------------------------------------------------------------|-----|------------------------------------------------------------|-----|
| Whole House PFOA, PFOS, Lead, Cyst, Chlorine, Chloramin... | 80  | Aquatec Accessories                                        | 119 |
| Clack Mineral Tanks 6"-35"                                 | 82  | Wall Mount 500 Reverse Osmosis                             | 120 |
| Polyglass Mineral Tanks 6"-16"                             | 83  | Custom Light Commercial Reverse Osmosis                    | 121 |
| Enpress Mineral Tanks                                      | 84  | LC Reverse Osmosis                                         | 122 |
| Tank Jackets                                               | 85  | LC Reverse Osmosis                                         | 123 |
| Structural Mineral Tanks 18"-63"                           | 86  | WP - 12k                                                   | 124 |
| Softener Flow Rates                                        | 87  | WP - 24k                                                   | 126 |
| Filtration Medias & Carbon (GAC)                           | 88  | Sea Water RO                                               | 135 |
| Iron, Manganese, H2S, Arsenic, Fluoride Reduction          | 89  | Commercial RO Components                                   | 136 |
| Cation & Anion Resins                                      | 90  | Commercial RO Components                                   | 137 |
| Backwash Rated By Tank Diameter                            | 91  | Commercial Membrane Housings                               | 140 |
| 13/16", 1.05" & 1.32" Screens                              | 92  | Commercial RO Electronics                                  | 141 |
| 1-1/2" - 3" Commercial Distributor Systems                 | 93  | Pressure Tanks                                             | 143 |
| In/Out Heads                                               | 94  | QC Sanitary Filter Systems & Components                    | 146 |
| Portable Exchange Tank Components                          | 95  | Pentek Housings                                            | 147 |
| Tank Adapters/Caps/Vacuum Breaks/Tools                     | 96  | Commercial Bronco - XL Filters                             | 148 |
| Drain Components                                           | 97  | Commercial Bronco - XL Filters                             | 149 |
| Brine Tanks and Components                                 | 98  | Ice Maker/Kitchen Faucet Filter Systems                    | 150 |
| Brine Tanks & Components                                   | 99  | Big Blue & Slim Line Filter Systems                        | 151 |
| Brine Tank Capacities                                      | 100 | Residential RO Components                                  | 152 |
| Water Testing                                              | 102 | RO & Drinking Water Faucets                                | 153 |
| Stenner Pumps                                              | 104 | Filter Brackets                                            | 155 |
| Reliable Peristaltic Metering Pumps Manufactured by Ste... | 105 | Residential & Light Commercial Membranes                   | 156 |
| Clack Retention Tanks                                      | 106 | Commercial Membranes                                       | 157 |
| Flexcon Baffled Retention Tanks                            | 107 | Available in a nearly limitless number of configuration... | 160 |
| Neutralizing with Stenner                                  | 108 | Shown with two medias and separator pad.                   | 161 |
| Chemicals                                                  | 109 | 5.1                                                        | 168 |
| Pilot Testing                                              | 110 | 4.1                                                        | 169 |
| Scaliminator                                               | 111 | 5.1 BB 1" UV w/Filtration                                  | 170 |
| Reverse Osmosis Comparison                                 | 112 | RAINIER                                                    | 176 |
| Reverse Osmosis Troubleshooting                            | 113 | UV Lamps                                                   | 177 |
| IQ4 Reverse Osmosis                                        | 114 | Flow Meter                                                 | 179 |
| TFC-400                                                    | 115 | Common Water Contaminants                                  | 180 |
| QC Reverse Osmosis                                         | 116 | Common Water Contaminants (continued)                      | 181 |
| Traditional Reverse Osmosis                                | 117 | Glossary                                                   | 182 |
| Aquatec Pumps                                              | 118 | Glossary (continued)                                       | 183 |



We will not compete in the race to the bottom!

Impact Water Products actively supports American manufacturing by sourcing primarily USA-made products from respected U.S.-based companies. We believe the bitterness of poor quality lingers long after the sweetness of a low price is forgotten. Serving water quality improvement professionals and distributors, we offer exceptional customer support, technical assistance, custom literature, and quality products at competitive prices. Contact our friendly WQA Master Water Specialist (MWS) certified support team and experience the difference.

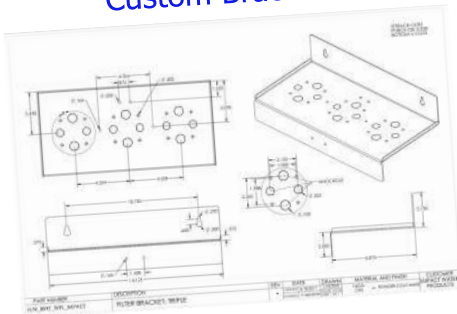




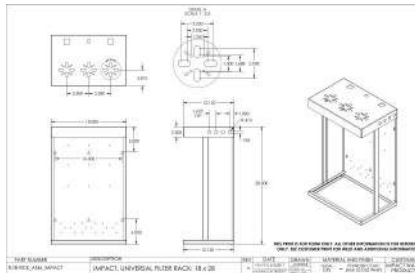
# Commercial Customization

Impact Water Products delivers fully customized water system builds tailored to your exact requirements. From initial prototype through to finished product, our research and development team partners with you to create a successful solution. Whether you need a simple residential RO system with customized controls or a complex ultra-high-purity water system, we bring the experience and technical expertise to turn your ideas into reality.

## Custom Brackets



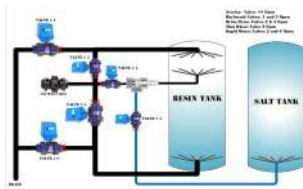
## Light Commercial RO



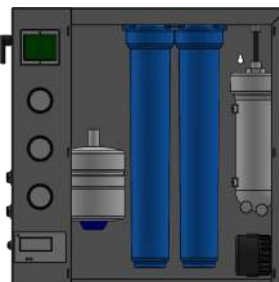
## Custom Skid Design



## Custom PLC



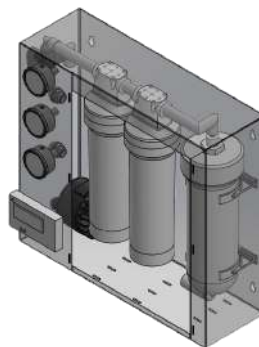
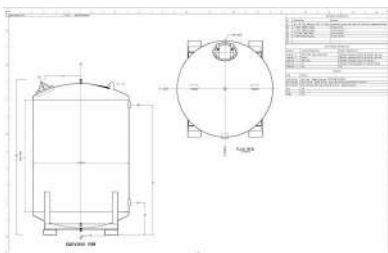
## 3D CAD



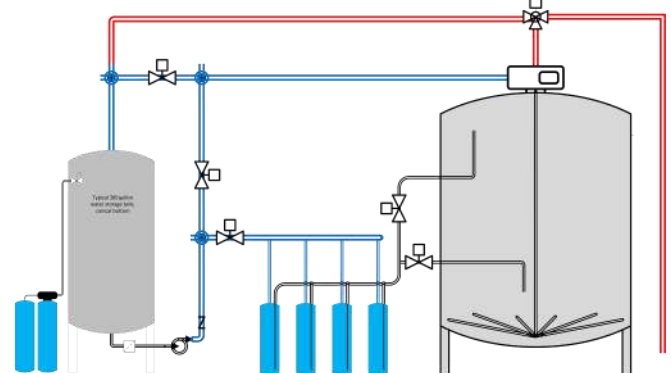
## Bracket Prototyping



## Custom Steel Tanks



## Regeneration Plant Design



# i5 1" Control Valve



The i5 series controller by IWP. Simple and intuitive programming. Exceptional troubleshooting and diagnostics capabilities. Private labelling and marketing. Clack reliability!

## Features!

- ◆ Dual MAV Drivers, timed, flow, regeneration, cycle based control!
  - ◆ Dual relay driver, highly programmable
- ◆ 1", 1.25", 1.5", 2" single, 1" and 1.5" twin plastic, 1.5" and 2" brass
  - ◆ Progressive flow without a system controller, up to 4 units!
- ◆ Your name, phone number on the main screen for repeat business!
- ◆ Programmable service alarms based on time and/or volume used.
  - ◆ Algorithmic salt level indicator!

Customize your i5 or standard Clack valve! All polyurethane domed stickers are available for easy customization!

Not ready to customize? No worries, our stock polyurethane domed stickers are included and look amazing! When you are ready, choose the stickers you want to customize and our team is ready to assist!



## Specifications

Inlet/Outlet ..... 3/4" to 1-1/2" NPS  
 Cycles ..... Up to 6  
 Valve Material..... Noryl or equivalent  
 Regeneration.....Upflow/Downflow

## Control valve Flow Rates

Service @15 psi drop (includes meter).....27 gpm  
 Backwash @ 25 psi drop..... 27 gpm  
 Cv Service..... 7.0  
 Cv Backwash.....5.4

## Operating Pressures

Minimum/Maximum.....20 psi – 125 psi

## Operating Temperatures

Minimum/Maximum..... 40° – 110° F

## Meter specifications

Accuracy..... ± 5%  
 Flow Rate Range.....0.25 – 27 GPM  
 Gallon Range..... 20 – 1,500,000 gallons  
 Totalizer.....1000 – 9,999,000 gallons

## Dimensions & Weight / Distributor Pilot

Distributor Pilot.....1.05" OD (3/4" NPS)  
 Drain: .....3/4" or 1" Male NPT  
 Brine Line Connection.....3/8" or 1/2" OD Poly Tube Compression  
 Mounting Base..... 2-1/2" - 8 NPSM  
 Height From Top Of Tank.....7-3/8"  
 Shipping Weight With Meter.....4.5 lbs.

| Electrical Specifications | AC Adapter   | U.S.    | International |
|---------------------------|--------------|---------|---------------|
| Supply Voltage.....       | 120V AC..... | 230V AC |               |
| Supply Frequency.....     | 60 Hz.....   | 50 Hz   |               |
| Output Voltage.....       | 15VDC.....   | 15VDC   |               |
| Output Current.....       | 500 mA.....  | 500 mA  |               |

## Tank Applications

Water Softener..... 6" – 21" diameter  
 Water Filter @ 10 gpm, per ft2.....6" – 21" diameter

| Cycles of Operation | Softener | Filter |
|---------------------|----------|--------|
|---------------------|----------|--------|

## Cycle Range of time in minutes

|                                             |                 |               |
|---------------------------------------------|-----------------|---------------|
| 1. Backwash 1st (upflow).....               | 1-95.....       | Backwash 1-95 |
| 2. Regenerate Draw/Slow Rinse (downflow)... | 1-180           |               |
| 3. Backwash 2nd (upflow).....               | 1-95            |               |
| 4. Fast Rinse (downflow).....               | 1-95.....       | Rinse 1-95    |
| 5. Regenerant Refill .....                  | 0.1-99.0 or off |               |
| 6. Service (downflow)                       |                 |               |

*Options: External Inline Mixing Valve, Backwash Filter, Bypass, Weather Cover, No Hard Water Bypass, Alternate Source Valve, Alternator Valves, Micro-Switches, and Much More.*

Compatible with the following typical concentration of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



**Standard Clack valves in stock!**

- 1" top mount control valve suited for residential and light commercial applications
- Noryl or equivalent valve body
- Optional integrated meter assembly
- Service flow rate of 27 gpm, backwash 27 gpm
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- 15-volt output DC Adapter provides safe and easy installation
- Post treated water regenerant refill
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127
- Reliable and proven DC drive



*Optional External  
 Inline Mixing Valve*



Certified to NSF/  
 ANSI 61 and 372\*



# i5 1" Metered Softener

The i5 series by IWP. Simple maintenance, highly adaptable, and impressive flow rates. Ideal for most homes or light commercial applications. 1" i5 series systems include a high flow bypass. Add the brine tank and plumbing connector of your choice.

| Model #          | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow | Peak Flow | Height Inches | Dry Pounds |
|------------------|------------|-----------------------|------------------------|----------------|--------------|-----------|---------------|------------|
| WS-i10M-0948-AA6 | 9x48       | 1                     | 15"x17"                | 2.2            | 1-8          | 21        | 57            | 90         |
| WS-i10M-1054-AA6 | 10x54      | 1.5                   | 15"x17"                | 2.2            | 2-10         | 21        | 63            | 120        |
| WS-i10M-1235-AA6 | 12x35      | 1.5                   | 15"x17"                | 3.2            | 2-15         | 23        | 44            | 120        |
| WS-i10M-1252-AA6 | 12x52      | 2                     | 18"x33"                | 3.2            | 2-15         | 23        | 61            | 155        |
| WS-i10M-1354-AA6 | 13x54      | 2.5                   | 18"x40"                | 4.2            | 3-18         | 24        | 63            | 190        |
| WS-i10M-1465-AA6 | 14x65      | 3                     | 18"x40"                | 5.3            | 3-21         | 25        | 74            | 240        |
| WS-i10M-1653-AA6 | 16x53      | 3                     | 18"x40"                | 6.5            | 4-23         | 26        | 61            | 250        |
| WS-i10M-1665-AA6 | 16x65      | 4                     | 24"x41"                | 6.5            | 4-23         | 26        | 74            | 320        |

See the 1" /1.25" i5 Installation page and choose the installation kit and brine tank of your choice

Salt-based water softeners stand as one of the most effective and reliable solutions for tackling hard water problems in homes. By using ion exchange technology, they replace stubborn calcium and magnesium minerals with sodium ions, dramatically reducing scale buildup that can shorten the lifespan of water heaters, dishwashers, washing machines, and plumbing systems. The result is noticeably softer skin and silkier hair, brighter and spot-free dishes and glassware, and far more efficient use of soaps, detergents, and shampoos—often cutting usage by up to 50%. Over time, homeowners enjoy lower energy bills, fewer repairs, and the peace of mind that comes from protecting their investment in appliances and fixtures, all while enjoying the luxurious feel of truly soft water straight from every tap. Our systems include a commercial grade 10% crosslink resin, 8% available on request.

Available with the traditional EE electronics package. Shown with optional 90° adapters, John Guest connectors and hardness blender valve.





# i5 1" Backwashing Systems

The i5 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger houses or light commercial applications. i5 1" series backwashing units include a high flow totalizing meter and bypass. Add a connector of your choice.

Coconut shell carbon is used to reduce chlorine, trihalomethanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalomethanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Nano Titanium oxide removes arsenic (III & V), lead, mercury, cadmium, and other heavy metals from drinking water.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

Calcite helps neutralize acidic water, tanks include a dome hole for refilling.

Katalox Light is a catalytic filter media that effectively removes iron, manganese, and hydrogen sulfide and turbidity from water. Most effective when an oxidant is added. AIO and AIO3 versions available.

| Model #                                                                                           | Media Tank | Ft <sup>3</sup> Media | DLFC Flow Rate | Service Flow           | Peak Flow | Height Inches | Dry Pounds |
|---------------------------------------------------------------------------------------------------|------------|-----------------------|----------------|------------------------|-----------|---------------|------------|
| <b>i510 12x40 Acid Washed Coconut Shell GAC</b>                                                   |            |                       |                |                        |           |               |            |
| BW-i10M-0948-C1A                                                                                  | 9x48       | 1                     | 4.2            | Cl 1-4                 | 8         | 57            | 75         |
| BW-i10M-1054-C1A                                                                                  | 10x54      | 1.5                   | 5.3            | Cl 2-5                 | 10        | 63            | 90         |
| BW-i10M-1235-C1A                                                                                  | 12x35      | 1.5                   | 7.5            | Cl 2-7                 | 15        | 44            | 90         |
| BW-i10M-1252-C1A                                                                                  | 12x52      | 2                     | 7.5            | Cl 2-7                 | 15        | 61            | 115        |
| BW-i10M-1354-C1A                                                                                  | 13x54      | 2.5                   | 9              | Cl 3-9                 | 18        | 63            | 140        |
| BW-i10M-1465-C1A                                                                                  | 14x65      | 3                     | 10             | Cl 3-11                | 22        | 74            | 180        |
| BW-i10M-1653-C1A                                                                                  | 16x53      | 3                     | 13             | Cl 3-14                | 25        | 61            | 190        |
| BW-i10M-1665-C1A                                                                                  | 16x65      | 4                     | 13             | Cl 4-14                | 25        | 74            | 230        |
| <b>i510 12x40 Catalytic GAC</b>                                                                   |            |                       |                |                        |           |               |            |
| BW-i10M-0948-C2A                                                                                  | 9x48       | 1                     | 4.2            | NH <sub>2</sub> Cl 1-2 | 8         | 57            | 75         |
| BW-i10M-1054-C2A                                                                                  | 10x54      | 1.5                   | 5.3            | NH <sub>2</sub> Cl 2-3 | 10        | 63            | 90         |
| BW-i10M-1235-C2A                                                                                  | 12x35      | 1.5                   | 7.5            | NH <sub>2</sub> Cl 2-3 | 15        | 44            | 90         |
| BW-i10M-1252-C2A                                                                                  | 12x52      | 2                     | 7.5            | NH <sub>2</sub> Cl 2-4 | 15        | 61            | 115        |
| BW-i10M-1354-C2A                                                                                  | 13x54      | 2.5                   | 9              | NH <sub>2</sub> Cl 3-5 | 18        | 63            | 140        |
| BW-i10M-1465-C2A                                                                                  | 14x65      | 3                     | 10             | NH <sub>2</sub> Cl 3-6 | 22        | 74            | 180        |
| BW-i10M-1653-C2A                                                                                  | 16x53      | 3                     | 13             | NH <sub>2</sub> Cl 4-6 | 25        | 61            | 190        |
| BW-i10M-1665-C2A                                                                                  | 16x65      | 4                     | 13             | NH <sub>2</sub> Cl 4-8 | 25        | 74            | 230        |
| <b>i510 Nano Titanium Oxide (Arsenic and Heavy Metal Reduction)</b>                               |            |                       |                |                        |           |               |            |
| BW-i10M-1054-NTA                                                                                  | 10x54      | 1.25                  | 2.2            | As < 5 <sup>1</sup>    | < 5       | 63            | 115        |
| BW-i10M-1235-NTA                                                                                  | 12x35      | 1.25                  | 3.2            | As < 6 <sup>1</sup>    | < 6       | 44            | 115        |
| BW-i10M-1252-NTA                                                                                  | 12x52      | 1.5                   | 3.2            | As < 7 <sup>1</sup>    | < 7       | 61            | 135        |
| BW-i10M-1354-NTA                                                                                  | 13x54      | 2                     | 4.2            | As < 9 <sup>1</sup>    | < 9       | 63            | 155        |
| BW-i10M-1447-NTA                                                                                  | 14x47      | 2                     | 5.3            | As < 10 <sup>1</sup>   | < 10      | 56            | 165        |
| <b>i510 Clinoptilolite AKA Filter-Ag+/Zeolite (5 Micron Sediment Reduction, Water Clarifying)</b> |            |                       |                |                        |           |               |            |
| BW-i10M-0948-CLA                                                                                  | 9x48       | 1                     | 6.5            | 1-5                    | 8         | 57            | 105        |
| BW-i10M-1054-CLA                                                                                  | 10x54      | 1.5                   | 7.5            | 2-6                    | 10        | 63            | 135        |
| BW-i10M-1235-CLA                                                                                  | 12x35      | 1.5                   | 11             | 2-9                    | 15        | 44            | 135        |
| BW-i10M-1252-CLA                                                                                  | 12x52      | 2                     | 11             | 2-9                    | 15        | 61            | 175        |
| BW-i10M-1354-CLA                                                                                  | 13x54      | 2.5                   | 13             | 3-11                   | 18        | 63            | 215        |
| BW-i10M-1465-CLA                                                                                  | 14x65      | 3                     | 15             | 3-13                   | 22        | 74            | 270        |
| BW-i10M-1653-CLA                                                                                  | 16x53      | 3                     | 20             | 4-16                   | 27        | 61            | 280        |
| BW-i10M-1665-CLA                                                                                  | 16x65      | 4                     | 20             | 4-16                   | 27        | 74            | 350        |
| <b>i510 Calcite (pH Adjustment and Remineralizing)</b>                                            |            |                       |                |                        |           |               |            |
| BW-i10M-1054DH-CCA                                                                                | 10x54DH    | 1.5                   | 5.3            | 2-4                    | 10        | 63            | 165        |
| BW-i10M-1354DH-CCA                                                                                | 13x54DH    | 2.5                   | 9              | 3-6                    | 15        | 63            | 260        |
| <b>i510 Katalox Light (Also available with Filter-Ox)</b>                                         |            |                       |                |                        |           |               |            |
| BW-i10M-0948-FLA                                                                                  | 9x48       | 1                     | 5.3            | 1-5                    | 6         | 57            | 115        |
| BW-i10M-1054-FLA                                                                                  | 10x54      | 1.5                   | 6.5            | 2-6                    | 8         | 63            | 150        |
| BW-i10M-1235-FLA                                                                                  | 12x35      | 1.5                   | 10             | 2-9                    | 11        | 44            | 150        |
| BW-i10M-1252-FLA                                                                                  | 12x52      | 2                     | 10             | 2-9                    | 11        | 61            | 195        |
| BW-i10M-1354-FLA                                                                                  | 13x54      | 2.5                   | 11             | 3-11                   | 13        | 63            | 240        |
| BW-i10M-1465-FLA                                                                                  | 14x65      | 3                     | 13             | 3-13                   | 16        | 74            | 300        |
| BW-i10M-1653-FLA                                                                                  | 16x53      | 3                     | 17             | 4-16                   | 20        | 61            | 310        |
| BW-i10M-1665-FLA                                                                                  | 16x65      | 4                     | 17             | 4-16                   | 20        | 74            | 390        |

See the 1" /1.25" i5 Installation page and choose the installation kit of your choice



Basic EE and TC valve available.



# Liberator 1" & 1.25" Catalytic Carbon & Softening



Clear tank is not included, actual tank is Black.

Highly effective Catalytic Carbon for enhanced Chloramines, chlorine, taste and odor reduction.

Mid Plate keeps the media as properly separated and creates the most effective backwashing!

Softening resin makes your water silky smooth by reducing scale forming minerals.

Bottom Plate for the highest flow rates!

The "Liberator" Carbon/Softener plated system! The upper chamber contains a high grade catalytic carbon for the highest levels of chloramine and chlorine reduction. Catalytic GAC is excellent for the reduction of many contaminants including many of the byproducts of chlorine. The lower chamber includes a commercial grade water softening resin for the most luxurious water! Available in many more configurations. Call your customer service representative to discuss custom system designs.

**GAC targets organic compounds and related issues common in treated municipal supplies**

- **Taste and odor compounds** — Such as those from algae (e.g., geosmin, MIB) or organic matter. This is one of its primary traditional uses.
- **Chlorine and chloramine** — Reduces residual disinfectants, improving taste and reducing chemical smells.
- **Disinfection byproducts (DBPs)** — Especially trihalomethanes (THMs) and other halogenated organics formed when chlorine reacts with natural organic matter.
- **Volatile Organic Compounds (VOCs)** — Such as chlorinated solvents (e.g., trichloroethylene/TCE, tetrachloroethylene/PCE), benzene, and industrial chemicals. Removal efficiencies can reach up to 99.9% for many VOCs.
- **Pesticides, herbicides, and other synthetic organics** — From agricultural runoff or industrial sources.
- **Per- and polyfluoroalkyl substances (PFAS)** — Including PFOA, PFOS, and others ("forever chemicals").

**Twin Alternating Valve Available!**



| Liberator Carbon & Softening                           |                |           |                          |                              |          |                        |                     |           |         |                  |
|--------------------------------------------------------|----------------|-----------|--------------------------|------------------------------|----------|------------------------|---------------------|-----------|---------|------------------|
| Model #                                                | Control Valve  | Tank Size | Ft <sup>3</sup> of Resin | Ft <sup>3</sup> of Catalytic | DLFC GPM | Recommended Brine Tank | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| WS-i10M-1054V2-AA6                                     | i5 1"          | 10x54     | 1                        | .5                           | 2.2      | 15"x17"                | 2-10                | 21        | 63"     | 110              |
| WS-i10M-1354V2-AA6                                     | i5 1'          | 13x54     | 1.5                      | 1                            | 4.2      | 15"x17"                | 3-18                | 24        | 63"     | 170              |
| WS-i12M-1054V2-AA6                                     | i5 1.25"       | 10x54     | 1                        | .5                           | 1.7      | 15"x17"                | 2-10                | 28        | 63"     | 110              |
| WS-i12M-1354V2-AA6                                     | i5 1.25'       | 13x54     | 1.5                      | 1                            | 3        | 15"x17"                | 3-18                | 32        | 63"     | 170              |
| Liberator Carbon & Softening Twin Alternating Valve 1" |                |           |                          |                              |          |                        |                     |           |         |                  |
| WS-i10A-1054V2-AA6                                     | i5 Twin 1" (2) | 10x54     | 2                        | 1                            | 2.2      | 15"x17"                | 2-10                | 21        | 63"     | 220              |
| WS-i10A-1354V2-AA6                                     | i5 Twin 1" (2) | 13x54     | 3                        | 2                            | 4.2      | 15"x17"                | 3-18                | 24        | 63"     | 340              |

See the 1" /1.25" i5 Installation page and choose the installation kit and brine tank of your choice

2101 E. Francis Street, Ontario, CA USA 91761 • 909-939-8008 • [www.ImpactWaterProducts.com](http://www.ImpactWaterProducts.com)

Data herein is provided as a courtesy and is subject to change without notice.





# Midway Cation & Anion Resin

Finally, an appropriately designed Cation and Anion resin system in a single tank. All cation/anion systems include an up-flow regeneration control valve to mitigate the resin fouling that is common with mixed resin designs. The upper chamber uses a high grade cation resin for softening the water prior to entering the anion chamber. call for details!

| Model Number       | Media Tank Size | Softener Resin ft <sup>3</sup> | Anion Media Type/ft <sup>3</sup> | ≈Service /Peak GPM | ≈Height | ≈Dry Lbs. | Rec. Brine Tank | Valve Model |
|--------------------|-----------------|--------------------------------|----------------------------------|--------------------|---------|-----------|-----------------|-------------|
| ASN-i10M-1054V2-AA | 10x54           | 1.25                           | Nitrate/.5                       | 2/20               | 63"     | 90        | 15x17           | i5          |
| ASN-i10M-1354V2-AA | 13x54           | 1.75                           | Nitrate/1                        | 4/20               | 63"     | 130       | 18x40           | i5          |
| ASU-i10M-1054V2-AA | 10x54           | 1.25                           | Arsenic or Uranium/.5            | 2/20               | 63"     | 90        | 15x17           | i5          |
| ASU-i10M-1354V2-AA | 13x54           | 1.75                           | Arsenic or Uranium/1             | 4/20               | 63"     | 130       | 18x40           | i5          |
| AST-i10M-1054V2-AA | 10x54           | 1.25                           | Tannin/.5                        | 2/20               | 63"     | 90        | 15x17           | i5          |
| AST-i10M-1354V2-AA | 13x54           | 1.75                           | Tannin/1                         | 4/20               | 63"     | 130       | 18x40           | i5          |



**Clear tank is not included, actual tank is Black.**

| Twin Alternating i5 |                 |                                |                                  |                    |         |           |                 |             |
|---------------------|-----------------|--------------------------------|----------------------------------|--------------------|---------|-----------|-----------------|-------------|
| Model #             | Media Tank Size | Softener Resin ft <sup>3</sup> | Anion Media Type/ft <sup>3</sup> | ≈Service /Peak GPM | ≈Height | ≈Dry Lbs. | Rec. Brine Tank | Valve Model |
| ASN-i10A-1054V2-AA  | (2) 10x54       | 2.5                            | Nitrate/1                        | 2/20               | 63"     | 180       | 15x17           | I5 Twin     |
| ASN-i10A-1354V2-AA  | (2) 13x54       | 3.5                            | Nitrate/2                        | 4/20               | 63"     | 260       | 18x40           | I5 Twin     |
| ASU-i10A-1054V2-AA  | (2) 10x54       | 2.5                            | Arsenic or Uranium/1             | 2/20               | 63"     | 180       | 15x17           | I5 Twin     |
| ASU-i10A-1354V2-AA  | (2) 13x54       | 3.5                            | Arsenic or Uranium/2             | 4/20               | 63"     | 260       | 18x40           | I5 Twin     |
| AST-i10A-1054V2-AA  | (2) 10x54       | 2.5                            | Tannin/1                         | 2/20               | 63"     | 180       | 15x17           | I5 Twin     |
| AST-i10A-1354V2-AA  | (2) 13x54       | 3.5                            | Tannin/2                         | 4/20               | 63"     | 260       | 18x40           | I5 Twin     |

Choose the installation kit and brine tank of your choice

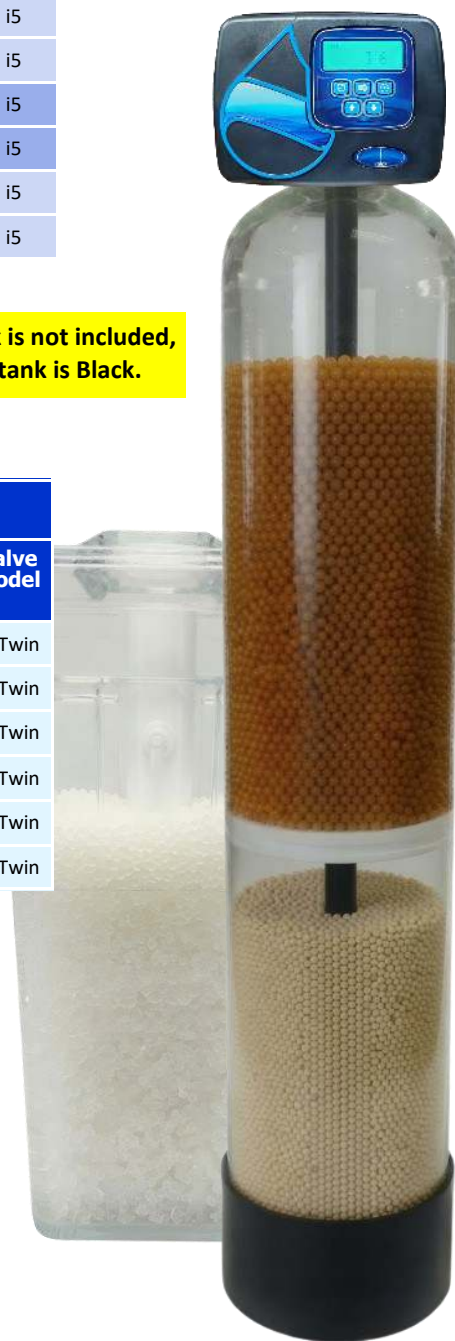


High levels of nitrate in well water often result from improper well construction, well location, overuse of chemical fertilizers, or improper disposal of human and animal waste.

Uranium is a common naturally occurring and radioactive substance that enters the water by leaching from soil and rocks.

Arsenic is a common naturally occurring substance that enters the water by leaching from soil and rocks.

Tannin in water is caused by organics in the water. Tannin selective resin is a common solution though pilot testing should be considered.





# i5 1" Twin Alternating Softener

The i5 Twin series by IWP. Simple maintenance, highly adaptable, and impressive flow rates 24/7. Ideal for most homes or light commercial applications. Most i5 series systems include a high flow bypass. Add the brine tank and plumbing connector of your choice.

| Model #          | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow | Peak Flow | Height Inches | Dry Pounds |
|------------------|------------|-----------------------|------------------------|----------------|--------------|-----------|---------------|------------|
| WS-i10A-0948-AA6 | 9x48       | 2                     | 15"x17"                | 2.2            | 1-8          | 21        | 57            | 180        |
| WS-i10A-1054-AA6 | 10x54      | 3                     | 15"x17"                | 2.2            | 2-10         | 21        | 63            | 240        |
| WS-i10A-1235-AA6 | 12x35      | 3                     | 15"x17"                | 3.2            | 2-15         | 23        | 44            | 240        |
| WS-i10A-1252-AA6 | 12x52      | 4                     | 18"x33"                | 3.2            | 2-15         | 23        | 61            | 310        |
| WS-i10A-1354-AA6 | 13x54      | 5                     | 18"x40"                | 4.2            | 3-18         | 24        | 63            | 380        |
| WS-i10A-1465-AA6 | 14x65      | 6                     | 18"x40"                | 5.3            | 3-21         | 25        | 74            | 480        |
| WS-i10A-1653-AA6 | 16x53      | 6                     | 18"x40"                | 6.5            | 4-23         | 26        | 61            | 500        |
| WS-i10A-1665-AA6 | 16x65      | 8                     | 24"x41"                | 6.5            | 4-23         | 26        | 74            | 640        |
| WS-i10A-1865-AA6 | 18x65      | 10                    | 24"x40"                | 7.5            | 5-23         | 26        | 75            | 850        |
| WS-i10A-2162     | 21x62      | 12                    | 24"x50"                | 11             | 7-23         | 26        | 75            | 1050       |

See the 1" /1.25" i5 Installation page and choose the installation kit and brine tank of your choice



- Excellent service rates (up to 28 GPM and 15 GPM backwash flow rate, valve only)
- Regenerates with soft water for optimum operating efficiency and reduced maintenance
- i5 Controller for ease of service and maintenance
- Micro-switch available for lock-out
- Cartridge rebuild for fast maintenance
- Large display, easy to program control
- Electronic positioning for the most consistent performance
- Soft water refill for better brine saturation.
- Highly programmable and simple i5 Electronics
- Programming will not be lost due to power outages
- Time of day backup for up to 12 hours of power loss



Bypass Included



EE Available





## Cabinet Softeners

Finally, a high quality USA made cabinet softener system! Maximum capacity with the 12"x35" mineral tank is 1½ ft³ of resin! All systems include a safety float assembly, sliding cover, and a clear protective cover over the valve. Add the straight plumbing connector of your choice.

| 45" Tall Cabinet Systems (45"x14"x21") |            |           |                |              |            |               |             |
|----------------------------------------|------------|-----------|----------------|--------------|------------|---------------|-------------|
| Item Number                            | Media Tank | Ft³ Resin | DLFC Flow Rate | Service Flow | ≈Peak Flow | Height Inches | ≈Dry Pounds |
| WCWS-i10m-1035-AA6                     | 10x35      | 1         | 2.2            | 1-8          | 16         | 45            | 100         |
| WCWS-i10M-1235-AA6                     | 12x35      | 1.5       | 3.2            | 2-15         | 20         | 45            | 130         |
| 28" Tall Cabinet Systems (28"x14"x21") |            |           |                |              |            |               |             |
| WCWS-i10m-1018-AA6                     | 10x18      | .33       | 2.2            | 1-6          | 12         | 45            | 70          |

## RV Softener/Mini Exchange Tanks

RV softeners include a drinking water rated garden hose and large removable cap with wrench for easy regeneration. Just remove the cap, add the appropriate amount of salt and rinse until the water is no longer salty. Mini portable exchange tanks are ideal for espresso, steamers and other small commercial applications where soft water is required. Call your IWP rep for assistance in designing your exchange tank.



| Item #<br>RV Softener | Tank Size | Ft³ Resin Capacity | ≈Grains Capacity* | ≈Gallons Capacity* | ≈Salt #'s Per Regeneration |
|-----------------------|-----------|--------------------|-------------------|--------------------|----------------------------|
| IOR-11F-1018          | 10"x18"   | .6                 | 14,400            | 960                | 5                          |

\*Based on 15 Grains incoming hardness and 8# salt per ft³ per regeneration  
Add 5" to the tank height for the systems total height.



Unique ultra low profile fine mesh heavy duty bottom screen maximizes system capacity and reliability!



IWP can custom build your portable exchange tanks to meet your needs!



# Ox Mag Salt Free Conditioning

The Ox!Mag featuring advanced electronic controls with your company name and phone number prominently displayed. Integrated flow meter allows you to show

the homeowner relevant data including daily water use, peak flow rate and a totalizer. Our unique media blend uses a high grade "All Catalytic" coconut shell carbon, not a blend of the less expensive and less effective standard carbon. Polishing layers of natural Clinoptilolite, Almandine Garnet, and Quartz under-bedding ensure impactful whole house water filtration.

Optional tank jacket adds durability and enhanced aesthetics.

Highly effective catalytic coconut shell carbon for enhanced chlorine, chloramines and organic chemical reduction.



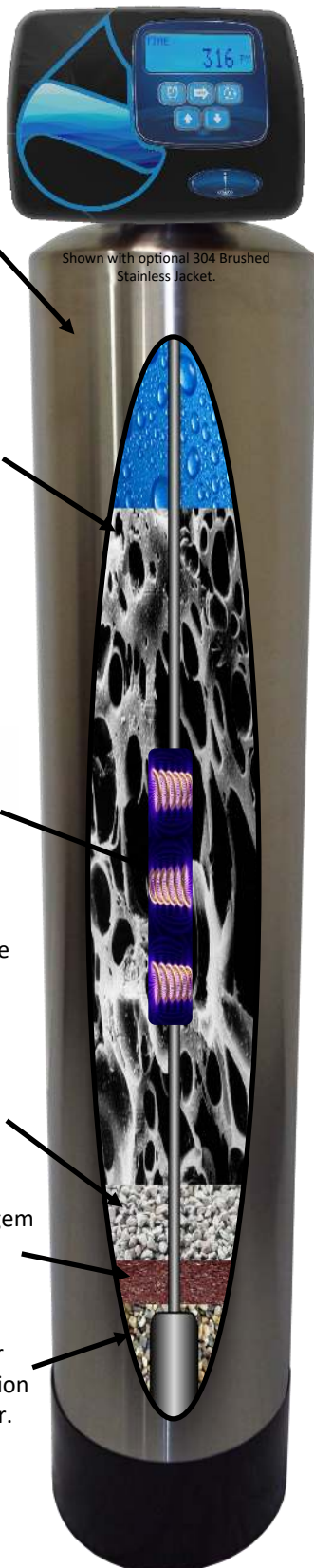
**Ox!Mag**  
for enhanced scale reduction

Natural Clinoptilolite reduces sediment down to the 3-5 micron range. For superior water clarification.

Almandine Garnet gem mineral filtration media.



Quartz media for enhanced distribution and cleaner water.



| Model #                                   | Media Tank | Ft <sup>3</sup> Media | DLFC Flow Rate | Service Flow | Peak Flow | Height Inches | Dry Pounds |
|-------------------------------------------|------------|-----------------------|----------------|--------------|-----------|---------------|------------|
| i510 12x40 Catalytic GAC with Conditioner |            |                       |                |              |           |               |            |
| OM-i10M-1054-C2A                          | 10x54      | 1.5                   | 5.3            | NH2Cl 2-3    | 10        | 63            | 90         |
| OM-i10M-1354-C2A                          | 13x54      | 2.5                   | 9              | NH2Cl 3-5    | 18        | 63            | 140        |

The conditioner module includes a "Tri-Pole" magnetic field featuring a strong neodymium magnetic module. This device is designed for limited scale reduction in constantly wetted areas only.



The Superior Water Conditioner® are designed to retain minerals, such as calcium and magnesium that are beneficial for human consumption. The Superior unit is a salt free technology, but not a water softener and should not be represented as such. The Superior unit conditions the water to mitigate the minerals ability to form hard water scale, though evaporative spotting may occur due to the retention of these desirable minerals.

| Item #                                      | Description                               | Design Flow |
|---------------------------------------------|-------------------------------------------|-------------|
| OxiMag™ Conditioner w/Riser & Bottom Screen |                                           |             |
| IWP-MAG105-54                               | 1.05" (¾" PVC) Magnetic Module Riser 54"  | 8 GPM       |
| IWP-MAG131-54                               | 1.315" (1" PVC) Magnetic Module Riser 54" | 15 GPM      |
| OxiMag™ Module Only                         |                                           |             |
| IWP-MAG105                                  | 1.05" (¾" PVC) Magnetic Module            | 8 GPM       |
| IWP-MAG131                                  | 1.315" (1" PVC) Magnetic Module           | 15 GPM      |
| Superior Riser Pipe Module                  |                                           |             |
| 91-D08                                      | 1.05" (¾" PVC) Riser Module               | 8 GPM       |
| 91-D15                                      | 1.32" (1" PVC) Riser Module               | 15 GPM      |
| 91-D50                                      | 1.5" Riser Module                         | 50 GPM      |
| 91-D75                                      | 2" Riser Module                           | 75 GPM      |







# AOS-HS-1200

## HomeShield™ Whole House Water Filtration With PFAS Reduction

Experience healthier, cleaner water throughout your home with A. O. Smith HomeShield™. This robust, cutting-edge system features patent-pending anti-channeling technology for consistent water flow through a patent-pending media blend, ensuring superior filtration and extended contaminant reduction. With real-time performance monitoring, long-lasting reliability, and a space-saving design, HomeShield is the smart choice to

- Certified to reduce PFAS<sup>1</sup> to less than 4 ng/L for 500,000 gallons
- Reduces chlorine (taste & odor) for improved taste and quality water from every tap
- Space-saving design and no drain line required for greater installation flexibility
- No wastewater for economical and eco-friendly performance

<sup>1</sup> PFAS substances include: PFNA, PFOA, PFOS, PFHpA, PFHxS.

### SPECIFICATIONS

|                                          |                                |
|------------------------------------------|--------------------------------|
| Rated Flow Rate                          | 5.7 gpm                        |
| Flow Rate @ 15 psid <sup>2</sup>         | 11.2 gpm                       |
| Chlorine Reduction Capacity <sup>3</sup> | 500K gal @ 2 ppm free chlorine |
| Min / Max Pressure                       | 25 psi / 100 psi               |
| Min / Max Temperature                    | 40° F (4° C) / 90° F (32° C)   |
| Cold Water Line                          | Yes                            |
| Total Dimensions                         | 15.5" W x 59.5" H              |

<sup>1</sup>PFAS substances include: PFNA, PFOA, PFOS, PFHpA, PFHxS.

<sup>2</sup> Claim is not performance tested by WQA. System is not validated for contaminant reduction at this flow rate. Frequent operation at this flow rate may result in reduced overall capacity.

<sup>3</sup>Chlorine reduction capacity based on internal validation. Not tested and certified by WQA.



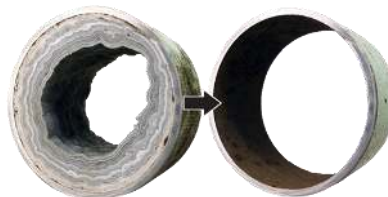
# Double Barrel Backwash

## Backwashing Carbon and Anti-Scale

### Combine a backwashing carbon tank and a Scale Reduction tank

The Double Barrel BW from IWP offers effective scale mitigation and exceptional chemical reduction without salt. Ideal for those who prefer a “Salt Free” alternative to traditional water softening and the highest performing chemical reduction system. The addition of a backwashing valve virtually eliminates the problems associated with non backwashing carbon tanks. No slippery feeling and great tasting water at every tap! The “Double Barrel BW” by IWP includes the interconnector and bypasses for a quick and professional installation. Available with plumbing connections from 3/4” to 1-1/2”. Tank jackets, various plumbing connections and many more options available. Contact your IWP associate for more details.

Purge kit and  
Ban-T included!



# Double Barrel

## Scale and Chemical Reduction



### Combine an In/Out carbon tank and a Scale Reduction tank

The Double Barrel from IWP offers effective scale and chemical reduction without salt, electricity, or regenerant water. Ideal for those who prefer a “Salt Free” alternative to traditional water softening. No slippery feeling and great tasting water at every tap! The “Double Barrel” by IWP includes the interconnector, bypasses, a purge kit and Ban T. Available in Upflow/Upflow and Downflow/Upflow configurations.

Shown with optional pressure gauge.



Shown with optional tank jackets.



Purge kit and  
Ban-T included!





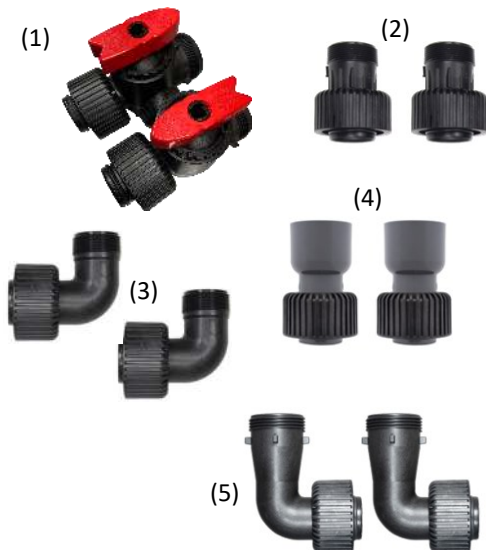
# 1" - 2" In/Out Carbon Tanks

Simple Downflow and Upflow carbon tanks for economical water treatment. 1" and 1.25" systems include a bypass and purge kit for easy start up and future maintenance. Downflow is the most common and preferred method but installations with sediment in the water can be problematic without regular purging. Upflow is not prone to sediment fouling but flow rates and effectiveness will be reduced. Contact IWP for application assistance.

Purge kit included on 1" and 1-1/4" systems.



| 1.5" and 2" Connectors |                  |
|------------------------|------------------|
| Bypass                 | (1) 39V-V4678    |
| 1.5" Straight NPT Kit  | (2) 39V-V4430-01 |
| 1.5" Elbow NPT Kit     | (3) 39V-V4430-07 |
| 1.5" & 2" PVC Glue Kit | (4) 39V-V4430-13 |
| QC Elbow Kit           | (5) 39V-V4430-14 |



| Model #                                                   | Media Tank | Carbon Ft3 | Service Flow | Peak Flow | Height Inches | Dry Pounds |
|-----------------------------------------------------------|------------|------------|--------------|-----------|---------------|------------|
| 1" Upflow Carbon (Add Connectors 39V-V3007-XX)            |            |            |              |           |               |            |
| IO-11-0844-C8A                                            | 8x44       | .75        | 1-2          | 4         | 51            | 60         |
| IO-11-0948-C8A                                            | 9x48       | 1          | 1-3          | 5         | 55            | 70         |
| IO-11-1054-C8A                                            | 10x54      | 1.5        | 2-4          | 8         | 61            | 100        |
| IO-11-1235-C8A                                            | 12x35      | 1.5        | 2-4          | 8         | 42            | 100        |
| IO-11-1252-C8A                                            | 12x52      | 2          | 2-6          | 12        | 59            | 145        |
| IO-11-1354-C8A                                            | 13x54      | 2.5        | 3-8          | 14        | 61            | 170        |
| 1.25" Upflow Carbon (Add Connectors 39V-V3007-XX)         |            |            |              |           |               |            |
| IO-13-1054-C8A                                            | 10x54      | 1.5        | 2-4          | 8         | 61            | 100        |
| IO-13-1235-C8A                                            | 12x35      | 1.5        | 2-4          | 8         | 42            | 100        |
| IO-13-1252-C8A                                            | 12x52      | 2          | 2-6          | 12        | 59            | 145        |
| IO-13-1354-C8A                                            | 13x54      | 2.5        | 3-8          | 14        | 61            | 170        |
| IO-13-1465-C8A                                            | 14x65      | 3          | 3-9          | 17        | 72            | 200        |
| IO-13-1653-C8A                                            | 16x53      | 3          | 4-9          | 18        | 60            | 210        |
| IO-13-1665-C8A                                            | 16x65      | 4          | 4-12         | 20        | 72            | 245        |
| 1" Downflow Carbon (Add Connectors 39V-V3007-XX)          |            |            |              |           |               |            |
| IOD-11-0948-C1A                                           | 9x48       | 1          | 1-4          | 8         | 55            | 70         |
| IOD-11-1054-C1A                                           | 10x54      | 1.5        | 2-5          | 10        | 61            | 100        |
| IOD-11-1235-C1A                                           | 12x35      | 1.5        | 2-7          | 15        | 42            | 100        |
| IOD-11-1252-C1A                                           | 12x52      | 2          | 2-7          | 15        | 59            | 145        |
| IOD-11-1354-C1A                                           | 13x54      | 2.5        | 3-9          | 18        | 61            | 170        |
| 1.25" Downflow Carbon (Add Connectors 39V-V3007-XX)       |            |            |              |           |               |            |
| IOD-13-1054-C1A                                           | 10x54      | 1.5        | 2-5          | 10        | 61            | 100        |
| IOD-13-1235-C1A                                           | 12x35      | 1.5        | 2-7          | 15        | 42            | 100        |
| IOD-13-1252-C1A                                           | 12x52      | 2          | 2-7          | 15        | 59            | 145        |
| IOD-13-1354-C1A                                           | 13x54      | 2.5        | 3-9          | 18        | 61            | 170        |
| IOD-13-1465-C1A                                           | 14x65      | 3          | 3-11         | 22        | 72            | 200        |
| IOD-13-1653-C1A                                           | 16x53      | 3          | 3-14         | 28        | 60            | 210        |
| 1.5" and 2" Downflow Carbon (Add Connectors 39V-V4430-XX) |            |            |              |           |               |            |
| IOD-15-1465-1C1                                           | 14x65      | 3          | 3-14         | 28        | 61            | 210        |
| IOD-15-1665-1C1                                           | 16x65      | 4          | 4-14         | 28        | 73            | 245        |

Add Connectors

Upflow/Upflow systems pass water through an expanding, partially fluidized GAC media bed. As water demand increases, media expansion, contact time and contaminant removal decreases. The service flow will lift the smallest and lightest media fines to the top of the tank and out to the application plumbing system. A typical top screen may alleviate this for a period, but ultimately the fines break down enough to pass through the slots of the screen. Mitigation options include lessening the media content to about half the tank volume, limiting service rate with a flow control and installing an effluent sediment cartridge to capture exiting fines. These methods cannot overcome the lost contact time in the partially fluidized media bed. Sprinting through a sprinkler leaves you mostly dry, but swimming through a pool soaks you to the bone. The same is true with GAC as decreased contact time produces insufficient performance. Downflow/Upflow systems will benefit from an inlet sediment filter and may require periodic manual upflow purging especially in applications where the incoming water contains sediment. Downflow carbon systems with intermittent manual backwashing is the preferred option but does require that the system be maintained and that the water supply be relatively free of sediment. Our systems include a purge kit that is ideal for this procedure!



# 1" - 3" Scale Reduction

Scale Reduction systems are used in place of traditional salt softeners in many applications. Recommended where salt based softeners are not allowed, desired, or are economically unfeasible. Popular uses include whole house residential, pre-treatment to commercial RO systems, and many commercial applications. Simple installation and low maintenance make this a popular alternative for some traditional softening applications. Water must be free of copper, iron, and other contaminants that may foul the scale reduction media. It is highly recommended that pre-treatment include a properly designed carbon system and a post filter to minimize the potential for media loss during excessive flow rate conditions. Scale Reduction systems are installed in an Up-Flow configuration so as to fluidize the media during service.

| Model #                                                                 | Media Tank | Anti-Scale Media | Bypass Included | Service Flow | Peak Flow | Height Inches | Dry Pounds |
|-------------------------------------------------------------------------|------------|------------------|-----------------|--------------|-----------|---------------|------------|
| <b>1" Scale Reduction System (Add Connectors 39V-V3007-XX)</b>          |            |                  |                 |              |           |               |            |
| SR-11-0844                                                              | 8x44       | 3                | Yes             | 6            | 9         | 51            | 40         |
| SR-11-0948                                                              | 9x48       | 4                | Yes             | 8            | 12        | 55            | 45         |
| SR-11-1054                                                              | 10x54      | 4.5              | Yes             | 9            | 13        | 61            | 55         |
| SR-11-1235                                                              | 12x35      | 4.5              | Yes             | 9            | 13        | 42            | 55         |
| SR-11-1252                                                              | 12x52      | 6.5              | Yes             | 13           | 19        | 59            | 70         |
| SR-11-1354                                                              | 13x54      | 7.5              | Yes             | 15           | 22        | 61            | 80         |
| <b>1.25" Scale Reduction System (Add Connectors 39V-V3007-XX)</b>       |            |                  |                 |              |           |               |            |
| SR-13-1054                                                              | 10x54      | 4.5              | Yes             | 9            | 13        | 61            | 55         |
| SR-13-1235                                                              | 12x35      | 4.5              | Yes             | 9            | 13        | 42            | 55         |
| SR-13-1252                                                              | 12x52      | 6.5              | Yes             | 13           | 19        | 59            | 70         |
| SR-13-1354                                                              | 13x54      | 7.5              | Yes             | 15           | 22        | 61            | 80         |
| SR-13-1465                                                              | 14x65      | 12.5             | Yes             | 25           | 30        | 72            | 90         |
| SR-13-1653                                                              | 16x53      | 12.5             | Yes             | 25           | 35        | 60            | 90         |
| SR-13-1665                                                              | 16x65      | 16.5             | Yes             | 30           | 35        | 72            | 100        |
| <b>1.5" and 2" Scale Reduction System (Add Connectors 39V-V4430-XX)</b> |            |                  |                 |              |           |               |            |
| SR-15-1665                                                              | 16x65      | 16.5             | Optional        | 33           | 49        | 72            | 140        |
| SR-15-1865                                                              | 18x65      | 20               | Optional        | 40           | 60        | 73            | 190        |
| SR-15-2162                                                              | 21x62      | 28               | Optional        | 56           | 60        | 73            | 260        |
| SR-15-2472                                                              | 24x72      | 40               | Optional        | 80           | 100       | 93            | 325        |
| <b>3" FIP Scale Reduction System</b>                                    |            |                  |                 |              |           |               |            |
| SR-3-3072                                                               | 30x72      | 60               | No              | 120          | 160       | 104           | 620        |

Add Connectors

| 1.5" and 2" Connectors |                  |
|------------------------|------------------|
| Bypass                 | (1) 39V-V4678    |
| 1.5" Straight NPT Kit  | (2) 39V-V4430-01 |
| 1.5" Elbow NPT Kit     | (3) 39V-V4430-07 |
| 1.5" & 2" PVC Glue Kit | (4) 39V-V4430-13 |
| QC Elbow Kit           | (5) 39V-V4430-14 |

Purge kit and Ban-T included on 1" and 1-14/" systems.

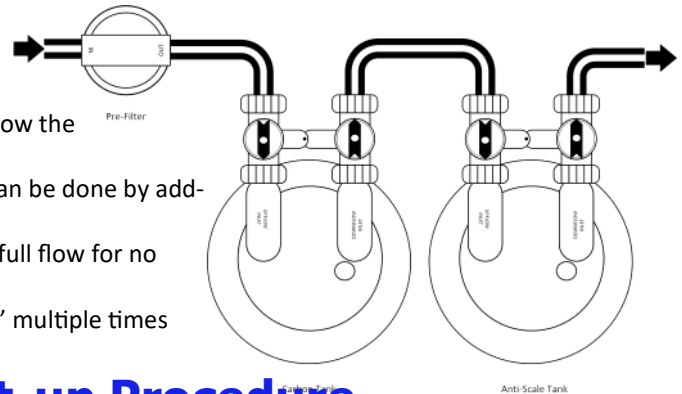


# Scale Reduction & Up-Flow/Down-Flow Start-Up

System performance, longevity, and water quality all depend on a proper start-up procedure. Follow the start-up procedure below carefully. Do not rush! Take the time to start up your equipment properly and you can experience years of trouble free service. The included "Purge Kit" can be used to clear the top screen in "Up-Flow" systems, or to manually backwash "Down-Flow" systems with ease!

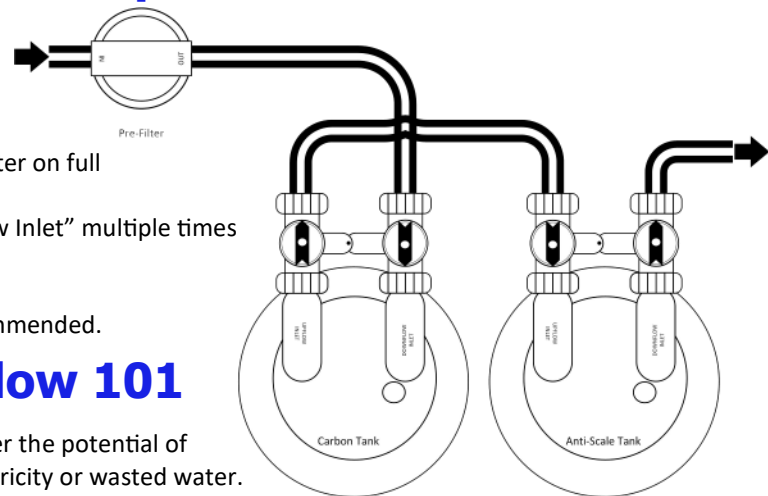
## Carbon Tank Start-up Procedure

- 1) Attach the purge kit to the "Upflow Inlet." Connect a standard garden hose to the purge kit and open the water very slowly. Allow the tank to fill with water. To prevent damage to the upper screen.
- 2) Once water comes out of the "Downflow Inlet" turn off the water and allow the media to soak for 48 hours.
- 3) If soaking is not possible or feasible, an accelerated start-up procedure can be done by adding the extended downflow purge in step 4.
- 4) Switch the purge kit to the "Downflow Inlet" port and turn the water on full flow for no less than 20 minutes.
- 5) Alternate the purge kit between the "Upflow Inlet" and "Downflow Inlet" multiple times until the water runs clear.



## Anti-Scale Tank Start-up Procedure

- 1) Attach the purge kit to the "Upflow Inlet." Connect to a standard garden hose and open the water very slowly. Allow the tank to fill with water.
- 2) Once water comes out of the "Downflow Inlet" turn off the water.
- 3) Switch the purge kit to the "Downflow Inlet" port and turn the water on full flow for no less than 2 minutes.
- 4) Alternate the purge kit between the "Upflow Inlet" and "Downflow Inlet" multiple times until the water runs clear.
- 5) Disconnect the purge kit and continue with the installation.
- 6) The use of a teaspoon of "Ban-T" in the dishwasher is highly recommended.

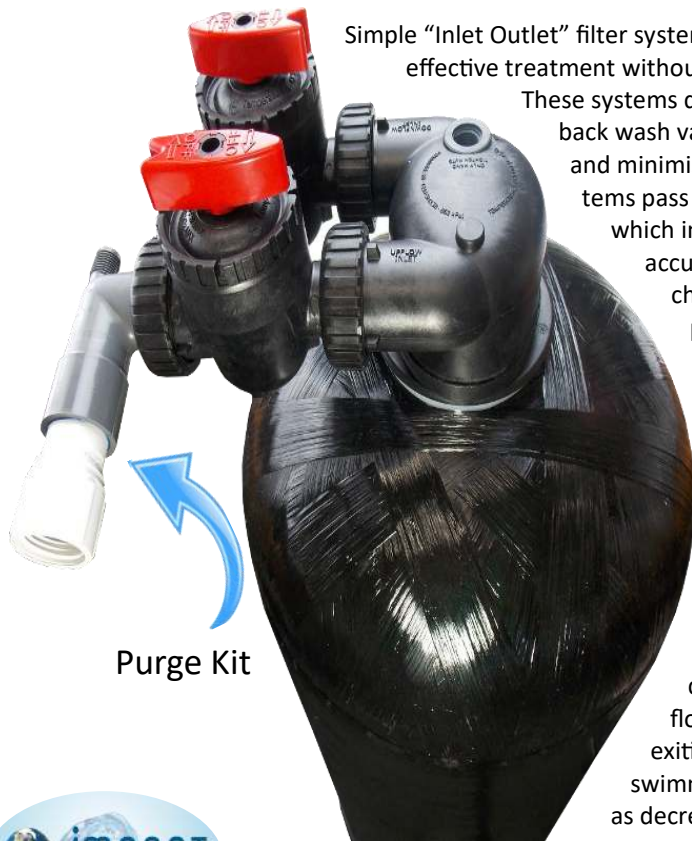


## UpFlow/DownFlow 101

Simple "Inlet Outlet" filter systems offer the potential of effective treatment without electricity or wasted water.

These systems do not incorporate an automatic

back wash valve which is designed to reclassify the media, dispose of media fines and minimize particulate accumulation on top of the media bed. Down flow systems pass through a compacted media bed providing for increased contact time which improves contaminant reduction and overall capacity. However, the accumulation of particulates within the media tank may eventually lead to channeling and flow restriction. Maintaining an inlet filter may slow this process, but it is not a solution. A thorough manual back wash upon installation is essential and periodic backwashing will greatly improve the long-term performance and capacity of a down flow inlet outlet GAC system. Upflow systems pass water through an expanding, partially fluidized media bed. As water demand increases, media expansion also increases causing contact time and contaminant removal to decrease. The service flow will lift the smallest and lightest media fines to the top of the tank and out to the applications plumbing system. A typical top screen may alleviate this for a period, but ultimately the fines break down enough to pass through the slots of the screen. Mitigation options include lessening the media content to about half the tank volume, limiting service rate with a flow control and installing an effluent sediment cartridge to capture exiting fines. Sprinting through a sprinkler leaves you mostly dry, but swimming through a pool soaks you to the bone. The same is true with GAC as decreased contact time produces insufficient performance.





# 1" Scaliminator® Max

## Anti-Scale and Catalytic Carbon

Scaliminator® MAX can provide years of trouble free water conditioning for your residential or light commercial application. The single tank design uses mid and bottom plates eliminating the need for multiple units or stacked tank designs.

| Scaliminator Max |           |                 |                  |                     |              |         |                  |
|------------------|-----------|-----------------|------------------|---------------------|--------------|---------|------------------|
| Model #          | Tank Size | Anti-Scale Qty. | Ft³ of Catalytic | ≈Design Service GPM | ≈Design peak | ≈Height | ≈Weight Lbs. Dry |
| SP-11-1035V2-A   | 10x35     | 2.5 Ltr.        | .75              | 6                   | 9            | 41      | 70               |
| SP-11-1054V2-A   | 10x54     | 4 Ltr.          | .1               | 8                   | 13           | 61      | 90               |
| SP-11-1354V2-A   | 13x54     | 6 Ltr.          | 1.5              | 13                  | 19           | 61      | 160              |

**GAC targets organic compounds and related issues common in treated municipal supplies**

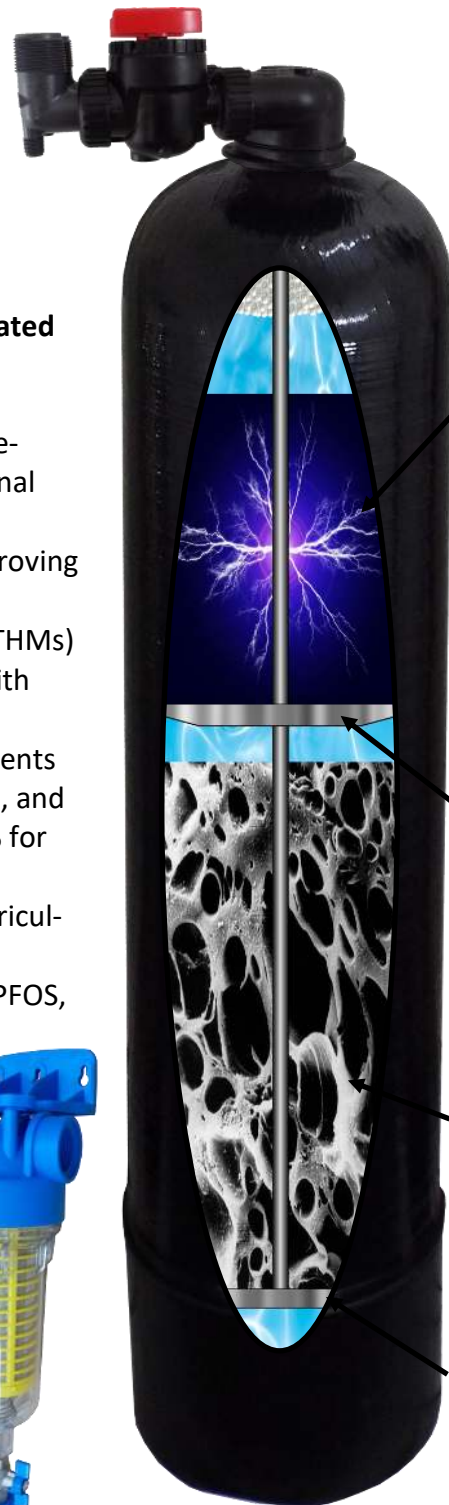
- **Taste and odor compounds** — Such as those from algae (e.g., geosmin, MIB) or organic matter. This is one of its primary traditional uses.
- **Chlorine and chloramine** — Reduces residual disinfectants, improving taste and reducing chemical smells.
- **Disinfection byproducts (DBPs)** — Especially trihalomethanes (THMs) and other halogenated organics formed when chlorine reacts with natural organic matter.
- **Volatile Organic Compounds (VOCs)** — Such as chlorinated solvents (e.g., trichloroethylene/TCE, tetrachloroethylene/PCE), benzene, and industrial chemicals. Removal efficiencies can reach up to 99.9% for many VOCs.
- **Pesticides, herbicides, and other synthetic organics** — From agricultural runoff or industrial sources.
- **Per- and polyfluoroalkyl substances (PFAS)** — Including PFOA, PFOS, and others ("forever chemicals").

| Options     | Pre-Filter                                 |
|-------------|--------------------------------------------|
| 78-H116-PP5 | Hydra, 50 Micron 1" Pre and/or Post Filter |
| 78-H116-PE9 | Hydra, 90 Micron 1" Pre and/or Post Filter |

Add install connectors, see the i5 install parts page



Purge kit and Ban-T included!



Anti-Scale media, our most popular water conditioning design!

Mid Plate for the most effective water conditioning.

High grade catalytic carbon reduces chlorine, chloramine, organic chemicals and much more!

Bottom Plate for the highest flow rates!

# ECOMIX®

ECOMIX is an Advanced softening material for the reduction of hardness, iron, manganese and tannins from potable water. The media is regenerated in the same manner as a standard water softener with sodium chloride.

ECOMIX has the ability to reduce ferrous and organic iron by adsorption and oxidation on the surface of the media. ECOMIX C works in waters with pH ranging from 5.0-9.0.

ECOMIX reduces tannins with a patented media blend that does not impart an odor if chlorine levels are below 1 ppm. Hydrogen Sulfide does not affect the media and simply passes through.

In areas where high TOC is present additional pre-treatment may be needed.

The ECOMIX media is Certified in compliance with NSF/ANSI standards:

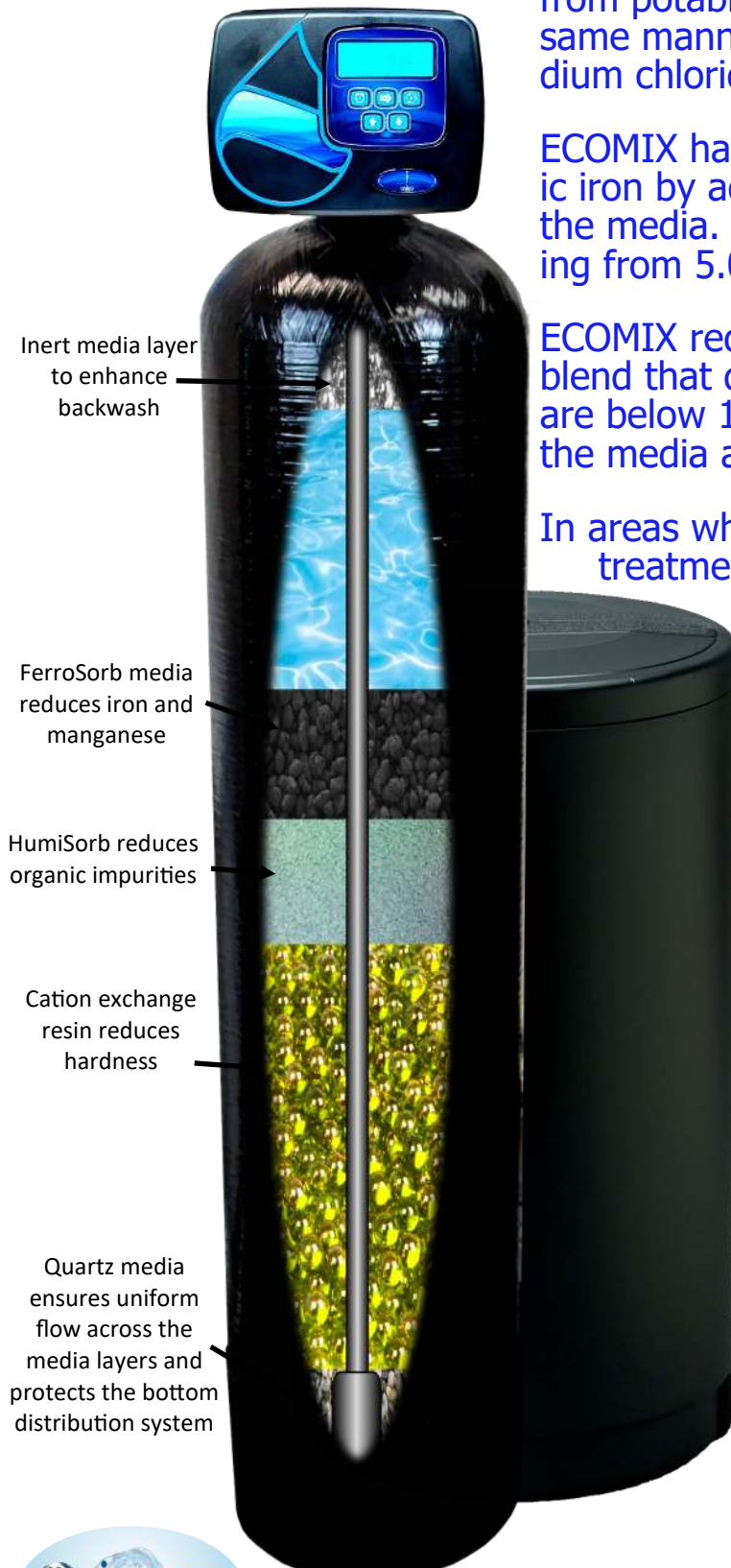
-NSF/ANSI Standard 44 Residential Cation Exchange Water Softeners

-NSF/ANSI Standard 61 Drinking Water System Components - Health Effects

-NSF/ANSI Standard 372 Drinking Water System Components -Lead Content

IWP recommended that a 50 micron Hydra filter system and a 5µ sediment filter be installed ahead of the ECOMIX unit.

The ECOMIX media has an average service life of 5 years and will require re-bedding as performance diminishes.



Inert media layer  
to enhance  
backwash

FerroSorb media  
reduces iron and  
manganese

HumiSorb reduces  
organic impurities

Cation exchange  
resin reduces  
hardness

Quartz media  
ensures uniform  
flow across the  
media layers and  
protects the bottom  
distribution system



## EcoMix with i5 Valve

| Model #      | ≈Service GPM | ≈Backwash Rate/Time | Hardness Grains Capacity | Pounds Salt/Regeneration | Rec. Brine Tank | Injector/Brine-Rinse | ≈Width/Height | ≈Ship Weight |
|--------------|--------------|---------------------|--------------------------|--------------------------|-----------------|----------------------|---------------|--------------|
| EM-i10M-1054 | 4-6          | 3.2/15 Min          | 17,000                   | 9                        | 15"x17"         | Red/60 Min           | 11"/67"       | 100          |
| EM-i10M-1235 | 4-6          | 4.2/15 Min          | 17,000                   | 9                        | 15"x17"         | Red/60 Min           | 12"/42"       | 100          |
| EM-i10M-1252 | 6-8          | 4.2/15 Min          | 23,000                   | 11                       | 15"x17"         | White/60 Min         | 13"/65"       | 125          |
| EM-i10M-1354 | 8-10         | 5.3/15 Min          | 28,500                   | 14                       | 18"x40"         | White/60 Min         | 14"/67"       | 150          |
| EM-i10M-1465 | 10-12        | 6.5/15 Min          | 34,500                   | 17                       | 18"x40"         | #Blue/60 Min         | 17"/79"       | 200          |
| EM-i10M-1665 | 12-15        | 7.5/15 min          | 46,000                   | 22                       | 24"x40"         | Orange/60 Min        | 17"/82"       | 250          |
| EM-i10M-2162 | 20-25        | 11/15 Min           | 69,000                   | 33                       | 24"x40"         | Light Blue/60 Min    | 22"/82"       | 350          |

Add plumbing connectors of your choice, see i5 Install parts page

### Advantages

- Broad operating range for high iron reduction
- Mixture of natural and synthetic ion exchange adsorptive medias reduce equipment costs
- Effective hardness, iron, manganese and tannin reduction
- Reduces organic color due to tannins without the risk of odor common with other tannin reduction medias
- Not affected by Hydrogen Sulfide and may slightly reduce the rotten egg smell
- Low attrition loss for long bed life
- Resistant to chlorine, up to 1 ppm
- No amine smell

### Specifications/Operating Parameters

- Hardness 44 GPG
- Iron 15 ppm
- Tannins 5 ppm (TOC 17 ppm)
- Manganese 3 ppm
- TDS 4000 ppm
- Resistant to chlorine, up to 1 ppm
- pH 5.0-9.0
- Service Flow 8-10 GPM/ft<sup>2</sup>
- EcoMix comes in 25 liter bags (.88 ft<sup>3</sup>). System sized by the bag. 12 liter bags available
- Use non chemically treated salt only, iron cleaning salt will reduce system life
- Regeneration override should be set to 4 days.

**85SC-21P-202**  
Pilot test filter available, simulates 4 GPM on a 12x52 tank



BB 20" Filter Assembly  
FS-42U-116TW

5 micron Sediment Cartridge  
60-SD422505

IWP highly recommends a 5 micron filter ahead of the ECOMIX Systems.





# i5 AIO3/AIO Backwashing Systems

## Katalox Light/Filter-Ox Backwashing Systems for Well Water Treatment

Katalox Light and Filter-Ox are high-performance catalytic medias used in backwashing filtration systems to remove iron, manganese, and hydrogen sulfide from well water. The media works by oxidizing dissolved metals and gases, which then precipitate and are trapped in the filter bed. During the regeneration cycle, the system uses either ozonated or non ozonated air draw to introduce oxygen (or ozone) into the media bed, recharging its oxidative capacity without harsh chemicals. Standard air draw is simple, inexpensive, and low maintenance, relying on ambient air to oxidize contaminants, however, it can promote bacterial growth (such as iron-oxidizing bacteria) in certain conditions potentially leading to biofouling, reduced efficiency, and unpleasant odors. Ozonated air draw addresses this by introducing a powerful oxidant and disinfectant that rapidly oxidizes iron, manganese, and H<sub>2</sub>S while killing bacteria and breaking down organics. Ozone offers superior performance in most applications.



Ozone/Air Blocker traps water in its chambers, blocking the head of air in the tank from entering the control valve, reducing iron oxidation in the valve.



Greatly enhance the performance of your system with Ozone!



| Ozone Components |                         |
|------------------|-------------------------|
| 79T-47026        | Inlet Check Valve       |
| 79T-47070        | Brine Elbow Check Valve |
| 79T-47044        | CD Cell Cleaning kit    |
| 79T-218          | Replacement CD Cell     |

| Model #                        | Media Tank | Ft <sup>3</sup> Media | DLFC Flow Rate | Service Flow | Peak Flow | Height Inches | Dry Pounds |
|--------------------------------|------------|-----------------------|----------------|--------------|-----------|---------------|------------|
| 1" AIO3 Ozonated Air Draw      |            |                       |                |              |           |               |            |
| BW-i10M3-1054-FLA              | 10x54      | 1                     | 6.5            | 2-6          | 8         | 63            | 130        |
| BW-i10M3-1235-FLA              | 12x35      | 1                     | 10             | 2-9          | 11        | 44            | 130        |
| BW-i10M3-1252-FLA              | 12x52      | 1.5                   | 10             | 2-9          | 11        | 61            | 175        |
| BW-i10M3-1354-FLA              | 13x54      | 2                     | 11             | 3-11         | 13        | 63            | 220        |
| BW-i10M3-1465-FLA              | 14x65      | 2.5                   | 13             | 3-13         | 16        | 74            | 280        |
| BW-i10M3-1665-FLA              | 16x53      | 2.5                   | 17             | 4-16         | 20        | 61            | 290        |
| 1" AIO3 Air Draw (No Ozone)    |            |                       |                |              |           |               |            |
| BW-i10M2-1054-FLA              | 10x54      | 1                     | 6.5            | 2-6          | 8         | 63            | 130        |
| BW-i10M2-1235-FLA              | 12x35      | 1                     | 10             | 2-9          | 11        | 44            | 130        |
| BW-i10M2-1252-FLA              | 12x52      | 1.5                   | 10             | 2-9          | 11        | 61            | 175        |
| BW-i10M2-1354-FLA              | 13x54      | 2                     | 11             | 3-11         | 13        | 63            | 220        |
| BW-i10M2-1465-FLA              | 14x65      | 2.5                   | 13             | 3-13         | 16        | 74            | 280        |
| BW-i10M2-1665-FLA              | 16x65      | 2.5                   | 17             | 4-16         | 20        | 61            | 290        |
| 1.25" AIO3 Ozonated Air Draw   |            |                       |                |              |           |               |            |
| BW-i12M3-1354-FLA              | 13x54      | 2                     | 11             | 3-11         | 13        | 63            | 220        |
| BW-i12M3-1465-FLA              | 14x65      | 2.5                   | 13             | 3-13         | 16        | 74            | 280        |
| BW-i12M3-1653-FLA              | 16x53      | 2.5                   | 17             | 4-16         | 20        | 61            | 290        |
| BW-i12M3-1665-FLA              | 16x65      | 3.5                   | 17             | 4-16         | 20        | 74            | 370        |
| BW-i12M3-1865-FLA              | 18x65      | 4.5                   | 20             | 5-21         | 27        | 75            | 440        |
| 1.25" AIO3 Air Draw (No Ozone) |            |                       |                |              |           |               |            |
| BW-i12M2-1354-FLA              | 13x54      | 2                     | 11             | 3-11         | 13        | 63            | 220        |
| BW-i12M2-1465-FLA              | 14x65      | 2.5                   | 13             | 3-13         | 16        | 74            | 280        |
| BW-i12M2-1653-FLA              | 16x53      | 2.5                   | 17             | 4-16         | 20        | 61            | 290        |
| BW-i12M2-1665-FLA              | 16x65      | 3.5                   | 17             | 4-16         | 20        | 74            | 370        |
| BW-i12M2-1865-FLA              | 18x65      | 4.5                   | 20             | 5-21         | 27        | 75            | 440        |
| 1.5" AIO3 Ozonated Air Draw    |            |                       |                |              |           |               |            |
| BW-i15PC3-1465-FLA             | 14x65      | 2.5                   | 13             | 3-13         | 16        | 74            | 280        |
| BW-i15PC3-1665-FLA             | 16x65      | 3.5                   | 17             | 4-16         | 20        | 74            | 370        |
| BW-i15PC31865-FLA              | 18x65      | 4.5                   | 20             | 5-21         | 27        | 75            | 440        |
| 1.5" AIO3 Air Draw (No Ozone)  |            |                       |                |              |           |               |            |
| BW-i15PC3-1465-FLA             | 14x65      | 2.5                   | 13             | 3-13         | 16        | 74            | 280        |
| BW-i15PC3-1665-FLA             | 16x65      | 3.5                   | 17             | 4-16         | 20        | 74            | 370        |
| BW-i15PC31865-FLA              | 18x65      | 4.5                   | 20             | 5-21         | 27        | 75            | 440        |



# Calcium Carbonate Neutralizing System

Water with low pH can cause corrosion of the copper plumbing and bluish green staining on the plumbing fixtures. Calcium Carbonate and Magnesium Oxide are commonly used to raise the pH of acidic water. Calcium carbonate is typically used when water is  $\approx 5\text{-}7\text{pH}$ . For inordinately low influent pH or to achieve accelerated pH adjustment, blends of magnesium oxide may be advantageous. Neutralization with calcium carbonate and or magnesium oxide will increase the water hardness, install a subsequent softener as needed. Periodic replenishment of the media(s) will be required. Monitor performance to confirm proper operation. Careful consideration should be taken when designing a system. Flow rates are key to a successful application. Backwashing systems ensure consistent performance, upflow systems are less costly but require consistent water flow for optimum water quality results.



Available in many more configurations, Contact IWP for assistance.

| Upflow Calcium Carbonate In/Out w/ Refill Head |           |                          |                     |           |         |                  |
|------------------------------------------------|-----------|--------------------------|---------------------|-----------|---------|------------------|
| Model #                                        | Tank Size | Ft <sup>3</sup> of Media | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| IO-11F-1044-CCA                                | 10x44     | 1.25                     | 1-2.5               | 4         | 54      | 120              |
| IO-11F-1054-CCA                                | 10x54     | 1.5                      | 1-3                 | 4         | 64      | 145              |
| IO-11F-1235-CCA                                | 12x35     | 1.5                      | 1-3                 | 4         | 45      | 145              |
| IO-11F-1252-CCA                                | 12x52     | 2                        | 1-4                 | 6         | 62      | 205              |
| IO-11F-1354-CCA                                | 13x54     | 2.5                      | 2-5                 | 7         | 64      | 260              |
| IO-11F-1447-CCA                                | 14x47     | 2.5                      | 2-5                 | 7         | 57      | 260              |
| IO-11F-1465-CCA                                | 14x65     | 3                        | 3-6                 | 8         | 75      | 315              |
| IO-11F-1653-CCA                                | 16x53     | 3                        | 3-6                 | 8         | 63      | 315              |
| IO-11F-1665-CCA                                | 16x65     | 4                        | 4-8                 | 10        | 75      | 370              |
| Upflow Calcium Carbonate In/Out w/Dome Hole    |           |                          |                     |           |         |                  |
| IO-11F-1054DH-CCA                              | 10x54     | 1.5                      | 1-3                 | 4         | 64      | 145              |
| IO-11F-1354DH-CCA                              | 13x54     | 2.5                      | 2-5                 | 7         | 64      | 260              |
| i5 Backwashing Calcium Carbonate w/Dome Hole   |           |                          |                     |           |         |                  |
| BW-i10M-1054DH-CCA                             | 10x54DH   | 1.5                      | 2-4                 | 10        | 63      | 165              |
| BW-i10M-1354DH-CCA                             | 13x54DH   | 2.5                      | 3-6                 | 15        | 63      | 265              |



Enhanced picture of a calcite crystal

| Calcium Carbonate/Magnesium Oxide and Accessories |                                                                       |
|---------------------------------------------------|-----------------------------------------------------------------------|
| 15-C                                              | Puri-Cal Calcium Carbonate .50 Ft <sup>3</sup> (45 lbs.) 60 Bags/Skid |
| 15-CC                                             | Calcite Calcium Carbonate .50 Ft <sup>3</sup> (45 lbs.) 49 Bags/Skid  |
| 15-MX                                             | Magnesium Oxide .66 Ft <sup>3</sup> (55 lbs.) 49 Bags Skid            |
| 56-F25                                            | Refill Head Funnel 2.5"                                               |
| 26-CDF                                            | Clack Dome Hole Tank Funnel                                           |



Certified to NSF/  
ANSI 61 and 372\*

# i5 1.25" Control Valve

| Specifications                                |                                       |               |
|-----------------------------------------------|---------------------------------------|---------------|
| Inlet/Outlet .....                            | 3/4" to 1-1/2" NPS                    |               |
| Cycles .....                                  | Up to 6                               |               |
| Valve Material.....                           | Noryl or equivalent                   |               |
| Regeneration.....                             | Upflow/Downflow                       |               |
| Control valve Flow Rates                      |                                       |               |
| Service @15 psi drop (includes meter).....    | 34 gpm                                |               |
| Backwash @ 25 psi drop.....                   | 32 gpm                                |               |
| Cv Service.....                               | 8.8                                   |               |
| Cv Backwash.....                              | 6.4                                   |               |
| Operating Pressures                           |                                       |               |
| Minimum/Maximum.....                          | 20 psi – 125 psi                      |               |
| Operating Temperatures                        |                                       |               |
| Minimum/Maximum.....                          | 40° – 110° F                          |               |
| Meter specifications                          |                                       |               |
| Accuracy.....                                 | ± 5%                                  |               |
| Flow Rate Range.....                          | 0.25 – 34 GPM                         |               |
| Gallon Range.....                             | 20 – 1,500,000 gallons                |               |
| Totalizer.....                                | 1000 – 9,999,000 gallons              |               |
| Dimensions & Weight / Distributor Pilot       |                                       |               |
| Distributor Pilot.....                        | 1.32" OD (1" NPS)                     |               |
| Drain: .....                                  | 3/4" or 1" Male NPT                   |               |
| Brine Line Connection.....                    | 3/8" or 1/2" OD Poly Tube Compression |               |
| Adapter Included.....                         | 1/2" OD Poly Tube Compression         |               |
| Mounting Base.....                            | 2-1/2" - 8 NPSM                       |               |
| Height From Top Of Tank.....                  | 7-3/8"                                |               |
| Shipping Weight With Meter.....               | 4.5 lbs.                              |               |
| Electrical Specifications                     |                                       |               |
| AC Adapter                                    | U.S.                                  | International |
| Supply Voltage.....                           | 120V AC.....                          | 230V AC       |
| Supply Frequency.....                         | 60 Hz.....                            | 50 Hz         |
| Output Voltage.....                           | 15V DC.....                           | 15V DC        |
| Output Current.....                           | 500 mA.....                           | 500 mA        |
| Tank Applications                             |                                       |               |
| Water Softener.....                           | 6" – 21" diameter                     |               |
| Water Filter @ 10 gpm, per ft2.....           | 6" – 24" diameter                     |               |
| Cycles of Operation                           | Softener                              | Filter        |
| Cycle Range of time in minutes                |                                       |               |
| 1. Backwash 1st (upflow).....                 | 1-95.....                             | Backwash 1-95 |
| 2. Regenerate Draw/Slow Rinse (downflow)..... | 1-180                                 |               |
| 3. Backwash 2nd (upflow).....                 | 1-95                                  |               |
| 4. Fast Rinse (downflow).....                 | 1-95.....                             | Rinse 1-95    |
| 5. Regenerant Refill .....                    | 0.1-99.0 or off                       |               |
| 6. Service (downflow)                         |                                       |               |

*Options: External Inline Mixing Valve, Backwash Filter, Bypass, Weather Cover, No Hard Water Bypass, Alternate Source Valve, Alternator Valves, Micro-Switches, and Much More.*

Compatible with the following typical concentration of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines

Shown with i5 valve, optional EE valve available shown below.  
Optional 90° adapters, John Guest connectors and hardness blender valve also pictured.



## WATER SPECIALIST CONTROL VALVE



- 1-1/4" top mount control valve suited for residential and light commercial applications
- Noryl or equivalent valve body
- Optional integrated meter assembly
- Service flow rate of 34 gpm, backwash 32 gpm
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- 15-volt output DC Adapter provides safe and easy installation
- Post treated water regenerant refill
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127





# i5 1.25" Softener

The i5 series by IWP. Simple maintenance, highly adaptable, and impressive flow rates. Ideal for most homes or light commercial applications. i5 series systems include a high flow bypass. IWP uses commercial grade 10% crosslinked resin.



Discover the unmatched excellence of a true salt softener, the ultimate guardian of your home's water quality. It effortlessly transforms harsh, mineral-laden water into pure, silky softness, banishing scale buildup, boosting soap efficiency, and extending appliance life. Experience luxurious showers, spotless dishes, and effortless cleaning—pure hydration perfection delivered by time-tested salt-powered innovation.

| i5 1.25" Softeners |           |                          |          |                     |           |         |                      |                  |
|--------------------|-----------|--------------------------|----------|---------------------|-----------|---------|----------------------|------------------|
| Model #            | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i12M-1054-AA6   | 10x54     | 1.5                      | 2.2      | 2-10                | 28        | 63      | 15x17                | 120              |
| WS-i12M-1235-AA6   | 12x35     | 1.5                      | 3.2      | 2-15                | 31        | 44      | 15x17                | 120              |
| WS-i12M-1252-AA6   | 12x52     | 2                        | 3.2      | 2-15                | 31        | 61      | 18x33                | 155              |
| WS-i12M-1354-AA6   | 13x54     | 2.5                      | 4.2      | 3-18                | 32        | 63      | 18x40                | 190              |
| WS-i12M-1465-AA6   | 14x65     | 3                        | 5.3      | 3-21                | 33        | 74      | 24x40                | 240              |
| WS-i12M-1653-AA6   | 16x53     | 3                        | 6.5      | 4-28                | 34        | 61      | 24x40                | 250              |
| WS-i12M-1665-AA6   | 16x65     | 4                        | 6.5      | 4-28                | 34        | 74      | 24x40                | 310              |
| WS-i12M-1865-AA6   | 18x65-4   | 5                        | 7.5      | 5-31                | 35        | 75      | 24x40                | 410              |
| WS-i12M-2162-AA6   | 21x62-4   | 6                        | 11       | 7-31                | 35        | 75      | 24x50                | 520              |

See the "Click Parts & Accessories" page for installation parts



| i5 1.25" Twin Alternating Softeners |           |                          |          |                     |           |         |                      |                  |
|-------------------------------------|-----------|--------------------------|----------|---------------------|-----------|---------|----------------------|------------------|
| Model #                             | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i12A-1054-AA6                    | 10x54     | 1.5                      | 2.2      | 2-10                | 28        | 63      | (2) 15x17            | 240              |
| WS-i12A-1235-AA6                    | 12x35     | 1.5                      | 3.2      | 2-15                | 31        | 44      | (2) 15x17            | 240              |
| WS-i12A-1252-AA6                    | 12x52     | 2                        | 3.2      | 2-15                | 31        | 61      | (2) 18x33            | 310              |
| WS-i12A-1354-AA6                    | 13x54     | 2.5                      | 4.2      | 3-18                | 32        | 63      | (2) 18x40            | 380              |
| WS-i12A-1447-AA6                    | 14x47     | 2.5                      | 5.3      | 3-21                | 33        | 56      | (2) 18x40            | 400              |
| WS-i12A-1465-AA6                    | 14x65     | 3                        | 5.3      | 3-21                | 33        | 74      | (2) 24x40            | 480              |
| WS-i12A-1653-AA6                    | 16x53     | 3                        | 6.5      | 4-28                | 34        | 61      | (2) 24x40            | 500              |
| WS-i12A-1665-AA6                    | 16x65     | 4                        | 6.5      | 4-28                | 34        | 74      | (2) 24x40            | 620              |
| WS-i12A-1865-AA6                    | 18x65-4   | 5                        | 7.5      | 5-31                | 35        | 75      | (2) 24x40            | 820              |
| WS-i12A-2162-AA6                    | 21x62-4   | 6                        | 11       | 7-31                | 35        | 75      | (2) 24x50            | 1040             |

See the "Click Parts & Accessories" page for installation parts

# i5 1.25" Progressive Flow Softener

Up to (4) "i5" units are controlled without a System Controller allowing for high efficiencies and flow rates. Simple programming and exceptionally functional. The 1.25" i5 valves come pre-plumbed with the NHWBP on the valve side of the bypass as shown! Soft water or standard regeneration available. Installing the NHWBP on the inlet creates a Soft Water Regeneration configuration.



## i5 1.25" Progressive Flow Softener Specifications and Ordering Guide

| Type         | Order Softener (2-4) | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|----------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 10x54 Twin   | (2) WS-i12M-1054-AA6 | WS-i10X2              | (2) 10x54  | 3                     | (2) 15x17              | 2.2            | 2-10             | 28            | 63            | 240        |
| 10x54 Triple | (3) WS-i12M-1054-AA6 | WS-i10X3              | (3) 10x54  | 4.5                   | (3) 15x17              | 2.2            | 2-20             | 56            | 63            | 360        |
| 10x54 Quad   | (4) WS-i12M-1054-AA6 | WS-i10X4              | (4) 10x54  | 6                     | (4) 15x17              | 2.2            | 2-30             | 84            | 63            | 480        |
| 12x35 Twin   | (2) WS-i12M-1235-AA6 | WS-i10X2              | (2) 12x35  | 3                     | (2) 15x17              | 3.2            | 2-15             | 32            | 44            | 240        |
| 12x35 Triple | (3) WS-i12M-1235-AA6 | WS-i10X3              | (3) 12x35  | 4.5                   | (3) 15x17              | 3.2            | 2-30             | 61            | 44            | 360        |
| 12x35 Quad   | (4) WS-i12M-1235-AA6 | WS-i10X4              | (4) 12x35  | 6                     | (4) 15x17              | 3.2            | 2-45             | 93            | 44            | 480        |
| 12x52 Twin   | (2) WS-i12M-1252-AA6 | WS-i10X2              | (2) 12x52  | 4                     | (2) 18x33              | 3.2            | 2-15             | 31            | 61            | 310        |
| 12x52 Triple | (3) WS-i12M-1252-AA6 | WS-i10X3              | (3) 12x52  | 6                     | (3) 18x33              | 3.2            | 2-30             | 62            | 61            | 465        |
| 12x52 Quad   | (4) WS-i12M-1252-AA6 | WS-i10X4              | (4) 12x52  | 8                     | (4) 18x33              | 3.2            | 2-45             | 93            | 61            | 620        |
| 13x54 Twin   | (2) WS-i12M-1354-AA6 | WS-i10X2              | (2) 13x54  | 5                     | (2) 18x40              | 4.2            | 3-18             | 32            | 63            | 380        |
| 13x54 Triple | (3) WS-i12M-1354-AA6 | WS-i10X3              | (3) 13x54  | 7.5                   | (3) 18x40              | 4.2            | 3-36             | 64            | 63            | 570        |
| 13x54 Quad   | (4) WS-i12M-1354-AA6 | WS-i10X4              | (4) 13x54  | 10                    | (4) 18x40              | 4.2            | 3-54             | 96            | 63            | 760        |
| 14x65 Twin   | (2) WS-i12M-1465-AA6 | WS-i10X2              | (2) 14x65  | 6                     | (2) 18x40              | 5.3            | 3-21             | 33            | 74            | 480        |
| 14x65 Triple | (3) WS-i12M-1465-AA6 | WS-i10X3              | (3) 14x65  | 9                     | (3) 18x40              | 5.3            | 3-42             | 66            | 74            | 720        |
| 14x65 Quad   | (4) WS-i12M-1465-AA6 | WS-i10X4              | (4) 14x65  | 13                    | (4) 18x40              | 5.3            | 3-63             | 99            | 74            | 960        |
| 16x53 Twin   | (2) WS-i12M-1653-AA6 | WS-i10X2              | (2) 16x53  | 6                     | (2) 18x40              | 6.5            | 4-28             | 34            | 61            | 500        |
| 16x53 Triple | (3) WS-i12M-1653-AA6 | WS-i10X3              | (3) 16x53  | 9                     | (3) 18x40              | 6.5            | 4-56             | 68            | 61            | 750        |
| 16x53 Quad   | (4) WS-i12M-1653-AA6 | WS-i10X4              | (4) 16x53  | 13                    | (4) 18x40              | 6.5            | 4-84             | 102           | 62            | 1000       |
| 16x65 Twin   | (2) WS-i12M-1665-AA6 | WS-i10X2              | (2) 16x65  | 8                     | (2) 24x40              | 6.5            | 4-28             | 34            | 74            | 640        |
| 16x65 Triple | (3) WS-i12M-1665-AA6 | WS-i10X3              | (3) 16x65  | 12                    | (3) 24x40              | 6.5            | 4-56             | 68            | 74            | 980        |
| 16x65 Quad   | (4) WS-i12M-1665-AA6 | WS-i10X4              | (4) 16x65  | 16                    | (4) 24x40              | 6.5            | 4-84             | 102           | 74            | 1280       |
| 18x65 Twin   | (2) WS-i12M-1865-AA6 | WS-i10X2              | (2) 18x65  | 10                    | (2) 24x50              | 7.5            | 5-31             | 35            | 75            | 820        |
| 18x65 Triple | (3) WS-i12M-1865-AA6 | WS-i10X3              | (3) 18x65  | 15                    | (3) 24x50              | 7.5            | 5-62             | 70            | 75            | 1230       |
| 18x65 Quad   | (4) WS-i12M-1865-AA6 | WS-i10X4              | (4) 18x65  | 20                    | (4) 24x50              | 7.5            | 5-93             | 105           | 75            | 1640       |
| 21x62 Twin   | (2) WS-i12M-2162-AA6 | WS-i10X2              | (2) 21x62  | 12                    | (2) 24x50              | 11             | 5-31             | 35            | 75            | 1040       |
| 21x62 Triple | (3) WS-i12M-2162-AA6 | WS-i10X3              | (3) 21x62  | 18                    | (3) 24x50              | 11             | 5-62             | 70            | 75            | 1560       |
| 21x62 Quad   | (4) WS-i12M-2162-AA6 | WS-i10X4              | (4) 21x62  | 24                    | (4) 24x50              | 11             | 5-93             | 105           | 75            | 2080       |

## Upgrade to the Optional System Controller?

- ◆ Need more than four? The optional **System Controller** operates 2 – 8 units on 1 or 2 independent systems, or operates as a water monitor only
- ◆ Monochrome Graphics Display with blue backlight on front panel for time of day, day of week, days until next regeneration, current system flow rate, and total system volume used (Totalizer)
- ◆ Two input connections that can either be used for meters or other auxiliary inputs
- ◆ On-board Ethernet connection for remote, real-time monitoring of system performance
- ◆ Supports Modbus TCP/IP communications
- ◆ System diagnostic and programming information spreadsheet may be uploaded to a standard USB drive
- ◆ Two fused Single Pole Double Throw (SPDT) relay outputs
- ◆ Single demand-based meter output signal
- ◆ Coin cell lithium battery backup for time of day with easy access cover
- ◆ Front panel LED status indicators for Online, Standby, Regeneration, and Lead Unit Position
- ◆ Language options include: English, Spanish, French, German, Italian, Dutch, and Polish



| Part #            | Description  |
|-------------------|--------------|
| System Controller | 39V-V3030    |
| Power Cable 15'   | 39V-V4276-15 |
| Power Cable 36'   | 39V-V4276-36 |
| Com Cable 8'      | 39V-V3474    |
| Com Cable 12'     | 39V-V3474-12 |
| Com Cable 24'     | 39V-V3474-24 |
| Com Cable 36'     | 39V-V3474-36 |



# i5 1.25" Backwash Systems

The i5 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger houses or light commercial applications. i5 1.25" series backwashing units include a high flow totalizing meter and bypass. Add a connector of your choice.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalomethanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

## i5 1.25" 12x40 Non Catalytic GAC

| Model #          | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
|------------------|-----------|--------------------------|----------|---------------------|-----------|---------|------------------|
| BW-i12M-1054-C1A | 10x54     | 1.5                      | 5.3      | Cl 2-5              | 10        | 63      | 90               |
| BW-i12M-1235-C1A | 12x35     | 1.5                      | 7.5      | Cl 2-7              | 15        | 44      | 90               |
| BW-i12M-1252-C1A | 12x52     | 2                        | 7.5      | Cl 2-7              | 15        | 61      | 115              |
| BW-i12M-1354-C1A | 13x54     | 2.5                      | 9        | Cl 3-9              | 18        | 63      | 140              |
| BW-i12M-1465-C1A | 14x65     | 3                        | 10       | Cl 3-11             | 22        | 74      | 180              |
| BW-i12M-1653-C1A | 16x53     | 3                        | 13       | Cl 3-14             | 28        | 61      | 190              |
| BW-i12M-1665-C1A | 16x65     | 4                        | 13       | Cl 4-14             | 28        | 74      | 230              |
| BW-i12M-1865-C1A | 18x65-4   | 5                        | 17       | Cl 5-18             | 30        | 75      | 310              |
| BW-i12M-2162-C1A | 21x62-4   | 7                        | 25       | Cl 7-24             | 30        | 75      | 410              |

## i5 1.25" 12x40 Catalytic GAC 12x40 Mesh

|                  |         |     |     |                         |    |    |     |
|------------------|---------|-----|-----|-------------------------|----|----|-----|
| BW-i12M-1054-C2A | 10x54   | 1.5 | 5.3 | NH <sub>2</sub> Cl 2-3  | 10 | 63 | 90  |
| BW-i12M-1235-C2A | 12x35   | 1.5 | 7.5 | NH <sub>2</sub> Cl 2-3  | 15 | 44 | 90  |
| BW-i12M-1252-C2A | 12x52   | 2   | 7.5 | NH <sub>2</sub> Cl 2-4  | 15 | 61 | 115 |
| BW-i12M-1354-C2A | 13x54   | 2.5 | 9   | NH <sub>2</sub> Cl 3-5  | 18 | 63 | 140 |
| BW-i12M-1465-C2A | 14x65   | 3   | 10  | NH <sub>2</sub> Cl 3-6  | 22 | 74 | 180 |
| BW-i12M-1653-C2A | 16x53   | 3   | 13  | NH <sub>2</sub> Cl 3-6  | 28 | 61 | 190 |
| BW-i12M-1665-C2A | 16x65   | 4   | 13  | NH <sub>2</sub> Cl 4-8  | 28 | 74 | 230 |
| BW-i12M-1865-C2A | 18x65-4 | 5   | 17  | NH <sub>2</sub> Cl 5-10 | 30 | 75 | 310 |
| BW-i12M-2162-C2A | 21x62-4 | 7   | 25  | NH <sub>2</sub> Cl 7-14 | 30 | 75 | 410 |

## i5 1.25" Katalox Light

|                  |         |     |    |      |     |    |     |
|------------------|---------|-----|----|------|-----|----|-----|
| BW-i12M-1252-FLA | 12x52   | 2   | 10 | 2-9  | 2-9 | 61 | 195 |
| BW-i12M-1354-FLA | 13x54   | 2.5 | 11 | 3-11 | 11  | 63 | 240 |
| BW-i12M-1465-FLA | 14x65   | 3   | 13 | 3-13 | 13  | 74 | 300 |
| BW-i12M-1653-FLA | 16x53   | 3   | 17 | 4-16 | 16  | 61 | 310 |
| BW-i12M-1665-FLA | 16x65   | 4   | 17 | 4-16 | 20  | 74 | 390 |
| BW-i12M-1865-FLA | 18x65-4 | 5   | 20 | 5-21 | 27  | 75 | 510 |

## i5 1.25" Clinoptilolite AKA Filter-Ag+/Zeolite

|                  |         |     |    |      |    |    |     |
|------------------|---------|-----|----|------|----|----|-----|
| BW-i12M-1252-CLA | 12x52   | 2   | 11 | 2-9  | 15 | 61 | 175 |
| BW-i12M-1354-CLA | 13x54   | 2.5 | 13 | 3-11 | 18 | 63 | 205 |
| BW-i12M-1465-CLA | 14x65   | 3   | 15 | 3-13 | 22 | 74 | 280 |
| BW-i12M-1653-CLA | 16x53   | 3   | 20 | 4-16 | 28 | 61 | 280 |
| BW-i12M-1665-CLA | 16x65   | 4   | 20 | 4-16 | 28 | 74 | 350 |
| BW-i12M-1865-CLA | 18x65-4 | 5   | 25 | 5-21 | 30 | 75 | 460 |

See the i5 Installation page and choose the installation kit of your choice



All 1.25" systems include a bypass!



# i5 1" - 1.25" Installation Parts & Accessories

| Item #         | Description                            |
|----------------|----------------------------------------|
| 39V-V3007-18   | (1) 3/4" Plastic Male NPT              |
| 39V-V3007-04   | (2) 1" Plastic Male NPT                |
| 39V-V3007-05   | (3) 1.25" Plastic Male NPT             |
| IWP-V3007-07T  | (4) 1.5" Plastic Male NPT              |
| 39V-V3007      | (5) 1" PVC Male NPT Elbow              |
| 39V-V3007-01   | (6) 3/4" x 1" PVC Solvent Elbow        |
| 39V-V3007-07   | (7) 1.25" & 1.5" PVC Solvent           |
| 39V-V3007-03LF | (8) 3/4" Brass Sweat                   |
| 39V-V3007-02LF | (9) 1" Brass Sweat                     |
| 39V-V3007-09LF | (10) 1.25" x 1.5" Brass Sweat          |
| 39V-V3007-22   | (11) 1" ProPress/Sweat                 |
| 39V-V3007-15   | (12) 3/4" John Guest Elbow             |
| 39V-V3007-19   | (13) 3/4" John Guest                   |
| 39V-V3007-20   | (14) 1" John Guest Elbow               |
| 39V-V3007-17   | (15) 1" John Guest                     |
| 39V-V3007-12   | (16) 3/4" SharkBite                    |
| 39V-V3007-13   | (17) 1" SharkBite                      |
| IC-V3712       | (18) 3/4" Inter-Connector              |
| IWP-V3007-GHT  | (19) 3/4" GHT x Clack Purge Kit        |
| 39V-V3191-01   | (20) Vertical 90° Adapter              |
| 39V-V3006      | (21) Bypass Assembly                   |
| 39V-V4099      | (22) External In-line Mixing Valve     |
| 27-RC1         | Port Protector Outlet Screen           |
| 39V-V3014      | (24) Microswitch Kit w/ Wire           |
| 39V-V3193-02   | (25) Clack Service Tool                |
| 39V-V3022      | (26) WS1 Stack Puller                  |
| 39V-V3022-15   | (27) WS1.25/WS1.5 Stack Puller         |
| 39V-V3070FM    | (28) No Hard Water Bypass FxM          |
| 39V-V3070FF    | (29) No Hard Water Bypass FxF          |
| 39V-V3069MM-01 | (30) MAV MxM                           |
| 39V-V3069FF-01 | (31) MAV FxF                           |
| 39V-V3175WC-W  | (32) EE/TC White Weather Cover         |
| 40-V3366W      | (33) I5 1"-1.5" Weather Cover          |
| 39V-V3192      | (34) 5/8" Nut Only                     |
| 39V-V3192K     | (35) 5/8" Nut (1/2" Pex) and Insert    |
| 51-331         | SS lex Clack QC x 3/4" FNPT x 18"      |
| 51-449         | SS Flex Clack QC x 1" FNPT x 18"       |
| 51-451         | SS Flex Clack QC x 1" FNPT x 24"       |
| 51-453         | SS Flex 3/4" JG x 3/4" Clack QC x 18"  |
| 51-455         | (36) SS Flex 1" JG x 1" Clack QC x 24" |
| 51-459         | SS Flex Clack QC x Clack QC x 24"      |







# i5 1.5" Composite Control Valve

Certified to NSF/  
ANSI 61 and 372\*

| Specifications                                            |                               |                      |
|-----------------------------------------------------------|-------------------------------|----------------------|
| Inlet/Outlet .....                                        | 1.5" Male NPT                 |                      |
| Cycles .....                                              | Up to 6                       |                      |
| Valve Material.....                                       | Glass Filled Composite        |                      |
| Regeneration.....                                         | Downflow/Upflow               |                      |
| Control valve Flow Rates                                  |                               |                      |
| Service @15 psi drop (includes meter).....                | 48 gpm                        |                      |
| Backwash @ 25 psi drop.....                               | 43 gpm                        |                      |
| Operating Pressures                                       |                               |                      |
| Minimum/Maximum.....                                      | 20 psi – 125 psi              |                      |
| Operating Temperatures                                    |                               |                      |
| Minimum/Maximum.....                                      | 40° – 110° F                  |                      |
| Meter specifications                                      |                               |                      |
| Accuracy.....                                             | ± 5%                          |                      |
| Flow Rate Range.....                                      | 0.5 – 75 GPM                  |                      |
| Gallon Range.....                                         | 20 – 1,500,000 gallons        |                      |
| Totalizer.....                                            | 1 – 9,999,000 gallons         |                      |
| Dimensions & Weight / Distributor Pilot                   |                               |                      |
| Valve bodies with 1.5" Female NPT Inlet & Outlet.....     | 1.90" OD (1.5" NPS)           |                      |
| Drain: .....                                              | 1" Male NPT                   |                      |
| Brine Line Connection.....                                | 1/2" OD Poly Tube             |                      |
| Adapter Included.....                                     | 1/2" OD Poly Tube Compression |                      |
| Mounting Base.....                                        | 4" - 8 UN                     |                      |
| Height From Top Of Tank.....                              | 10.75"                        |                      |
| Shipping Weight .....                                     | 9 lbs.                        |                      |
| Electrical Specifications                                 |                               |                      |
| <b>AC Adapter</b>                                         | <b>U.S.</b>                   | <b>International</b> |
| Supply Voltage.....                                       | 120V AC.....                  | 230V AC              |
| Supply Frequency.....                                     | 60 Hz.....                    | 50 Hz                |
| Output Voltage.....                                       | 15V DC.....                   | 15V DC               |
| Output Current.....                                       | 500 mA.....                   | 500 mA               |
| Tank Applications                                         |                               |                      |
| Water Softener.....                                       | 12" – 24" diameter            |                      |
| Filter: @ 10 gpm of backwash per ft² of bed area.....     | 12" – 24" diameter            |                      |
| Cycle Range of time in minutes                            |                               |                      |
| 1. Backwash 1st (upflow).....                             | 1-95                          |                      |
| 2. Regenerate Draw/Slow Rinse (downflow).....             | 1-180                         |                      |
| 3. Backwash 2nd (upflow).....                             | 1-95                          |                      |
| 4. Fast Rinse (downflow).....                             | 1-95                          |                      |
| 5. Regenerant Refill (in service with treated water)..... | 0.1-99.0 or off               |                      |
| 6. Service (downflow)                                     |                               |                      |



Optional High Flow Bypass Available!



- 1.5" top mount control valve suited for large residential and mid-size commercial/industrial applications
- Glass filled composite valve body.
- Economical stainless steel optional meter assembly
- Service flow rate of 48gpm, backwash 42 gpm
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume, remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- 15-volt output DC Adapter provides safe and easy installation
- Post treated water regenerant refill
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127
- Reliable and proven DC drive





# i5 1.5" Composite Softener Systems

i15BP Softeners systems are easily configured for most applications. The dual MAV/NHWBP driver allows for separate source backwashing and/or no hard water bypass at the same time. Progressive flow up to four tanks without a System Controller.

| i5PB 1.5" Composite Metered Softeners |           |                          |          |                     |           |                |                      |                  |
|---------------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Softener Meter                        | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i15PBM-1465-1A96                   | 14x65     | 3                        | 5.3      | 3-21                | 40        | 81             | 24x40                | 240              |
| WS-i15PBM-1665-1A96                   | 16x65     | 4                        | 6.5      | 4-27                | 45        | 81             | 24x40                | 310              |
| WS-i15PBM-1865-1A96                   | 18x65     | 5                        | 7.5      | 5-35                | 48        | 82             | 24x40                | 410              |
| WS-i15PBM-2162-1A96                   | 21x62     | 7                        | 11       | 7-48                | 48        | 82             | 24x50                | 570              |
| WS-i15PBM-2460-1A96                   | 24x60     | 8                        | 15       | 9-48                | 48        | 80             | 24X60                | 740              |
| WS-i15PBM-2472-1A96                   | 24x72     | 10                       | 15       | 9-48                | 48        | 90             | 30X48                | 900              |



Shown with optional Bypass

| i5PB 1.5" Twin Alternating Composite Softeners |           |                          |          |                     |           |                |                      |                  |
|------------------------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                                        | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i15PTA-1465-1A96                            | (2)14x65  | 6                        | 5.3      | 3-19                | 33        | 81             | 24x40                | 480              |
| WS-i15PTA-1665-1A96                            | (2) 16x65 | 8                        | 6.5      | 4-25                | 38        | 81             | 24x40                | 620              |
| WS-i15PTA-1865-1A96                            | (2) 18x65 | 10                       | 7.5      | 5-31                | 40        | 82             | 24x40                | 820              |
| WS-i15PTA-2162-1A96                            | (2) 21x62 | 14                       | 11       | 7-40                | 46        | 82             | 24x50                | 1140             |
| WS-i15PTA-2460-1A96                            | (2) 24x60 | 16                       | 15       | 9-41                | 47        | 80             | 24X60                | 1480             |
| WS-i15PTA-2472-1A96                            | (2) 24x72 | 20                       | 15       | 9-41                | 47        | 90             | 30X48                | 1800             |



| Item #       | Install Parts for i5 Composite               |
|--------------|----------------------------------------------|
| 39V-V4678    | Bypass                                       |
| 39V-V4430-01 | 1.5" MNPT QC Straight Fitting (2 Pieces)     |
| 39V-V4430-07 | 1.5" MNPT QC Elbow Fitting (2 Pieces)        |
| 39V-V4430-13 | 1.5" & 2" PVC Glue Kit (2 Pieces)            |
| 39V-V4430-14 | QC Elbow Kit                                 |
| 39V-V4430-03 | 1.5" QC to QC Coupler Straight               |
| 39V-V4430-09 | 1.5" QC to QC Coupler Elbow                  |
| 39V-V3035    | No Hard Water Bypass (Add Connectors)        |
| 39V-V3034    | Motorized Alternating Valve (Add connectors) |
| 51-618       | 1.5" x 18" Stainless Flex Line               |
| 51-624       | 1.5" x 24" Stainless Flex Line               |
| 56-VAC150    | 1.5" Vacuum Break                            |

# i5 1.5" Composite Progressive Flow Softener

Up to (4) "i15PB" units are controlled without a System Controller allowing for high efficiencies and flow rates. Simple programming and exceptionally functional. Soft water or standard regeneration available. Installing the NHWBP on the inlet creates a Soft Water Regeneration configuration.



Optional  
bypass  
available!



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## i5 1.5" Progressive Flow Softener Specifications and Ordering Guide

| Type         | Order Softener (2-4)   | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|------------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 14x65 Twin   | (2) WS-i15PBM-1465-AA6 | WS-i15PX2             | (2) 14x65  | 6                     | (2) 24x40              | 5.3            | 3-21             | 37            | 81            | 480        |
| 14x65 Triple | (3) WS-i15PBM-1465-AA6 | WS-i15PX3             | (3) 14x65  | 9                     | (3) 24x40              | 5.3            | 3-42             | 74            | 81            | 720        |
| 14x65 Quad   | (4) WS-i15PBM-1465-AA6 | WS-i15PX4             | (4) 14x65  | 13                    | (4) 24x40              | 5.3            | 3-63             | 111           | 81            | 960        |
| 16x65 Twin   | (2) WS-i15PBM-1665-AA6 | WS-i15PX2             | (2) 16x65  | 8                     | (2) 24x50              | 6.5            | 4-28             | 42            | 81            | 620        |
| 16x65 Triple | (3) WS-i15PBM-1665-AA6 | WS-i15PX3             | (3) 16x65  | 12                    | (3) 24x50              | 6.5            | 4-56             | 82            | 81            | 930        |
| 16x65 Quad   | (4) WS-i15PBM-1665-AA6 | WS-i15PX4             | (4) 16x65  | 16                    | (4) 24x50              | 6.5            | 4-84             | 126           | 81            | 1240       |
| 18x65 Twin   | (2) WS-i15PBM-1865-AA6 | WS-i15PX2             | (2) 18x65  | 10                    | (2) 24x50              | 7.5            | 5-35             | 45            | 82            | 820        |
| 18x65 Triple | (3) WS-i15PBM-1865-AA6 | WS-i15PX3             | (3) 18x65  | 15                    | (3) 24x50              | 7.5            | 5-70             | 90            | 82            | 1230       |
| 18x65 Quad   | (4) WS-i15PBM-1865-AA6 | WS-i15PX4             | (4) 18x65  | 20                    | (4) 24x50              | 7.5            | 5-105            | 135           | 82            | 1640       |
| 21x62 Twin   | (2) WS-i15PBM-2162-AA6 | WS-i15PX2             | (2) 21x62  | 14                    | (2) 24x50              | 11             | 7-45             | 48            | 82            | 1040       |
| 21x62 Triple | (3) WS-i15PBM-2162-AA6 | WS-i15PX3             | (3) 21x62  | 21                    | (3) 24x50              | 11             | 7-90             | 96            | 82            | 1560       |
| 21x62 Quad   | (4) WS-i15PBM-2162-AA6 | WS-i15PX4             | (4) 21x62  | 28                    | (4) 24x50              | 11             | 7-135            | 144           | 82            | 2080       |
| 24x60 Twin   | (2) WS-i15PBM-2460-AA6 | WS-i15PX2             | (2) 24x60  | 16                    | (2) 24x60              | 15             | 7-46             | 48            | 80            | 1480       |
| 24x60 Triple | (3) WS-i15PBM-2460-AA6 | WS-i15PX3             | (3) 24x60  | 24                    | (3) 24x60              | 15             | 7-92             | 96            | 80            | 2220       |
| 24x60 Quad   | (4) WS-i15PBM-2460-AA6 | WS-i15PX4             | (4) 24x60  | 32                    | (4) 24x60              | 15             | 7-138            | 144           | 80            | 2960       |
| 24x72 Twin   | (2) WS-i15PBM-2472-AA6 | WS-i15PX2             | (2) 24x72  | 20                    | (2) 30x48              | 15             | 9-45             | 48            | 90            | 1800       |
| 24x72 Triple | (3) WS-i15PBM-2472-AA6 | WS-i15PX3             | (3) 24x72  | 30                    | (3) 30x48              | 15             | 9-90             | 96            | 90            | 2700       |
| 24x72 Quad   | (4) WS-i15PBM-2472-AA6 | WS-i15PX4             | (4) 24x72  | 40                    | (4) 30x48              | 15             | 9-135            | 144           | 90            | 3600       |



## Upgrade to the Optional System Controller?

- Need more than four? The optional **System Controller** operates 2 – 8 units on 1 or 2 independent systems, or operates as a water monitor only
- Monochrome Graphics Display with blue backlight on front panel for time of day, day of week, days until next regeneration, current system flow rate, and total system volume used (Totalizer)
- Two input connections that can either be used for meters or other auxiliary inputs



- On-board Ethernet connection for remote, real-time monitoring of system performance
- Supports Modbus TCP/IP communications
- System diagnostic and programming information spreadsheet may be uploaded to a standard USB drive
- Two fused Single Pole Double Throw (SPDT) relay outputs

| Item #       | Install Parts for i15 Composite              |
|--------------|----------------------------------------------|
| 39V-V4678    | Bypass                                       |
| 39V-V4430-01 | 1.5" MNPT QC Straight Fitting (2 Pieces)     |
| 39V-V4430-07 | 1.5" MNPT QC Elbow Fitting (2 Pieces)        |
| 39V-V4430-13 | 1.5" & 2" PVC Glue Kit (2 Pieces)            |
| 39V-V4430-14 | QC Elbow Kit                                 |
| 39V-V4430-03 | 1.5" QC to QC Coupler Straight               |
| 39V-V4430-09 | 1.5" QC to QC Coupler Elbow                  |
| 39V-V3035    | No Hard Water Bypass (Add Connectors)        |
| 39V-V3034    | Motorized Alternating Valve (Add connectors) |
| 51-618       | 1.5" x 18" Stainless Flex Line               |
| 51-624       | 1.5" x 24" Stainless Flex Line               |

| Part #            | Description  |
|-------------------|--------------|
| System Controller | 39V-V3030    |
| Power Cable 15'   | 39V-V4276-15 |
| Power Cable 36'   | 39V-V4276-36 |
| Com Cable 8'      | 39V-V3474    |
| Com Cable 12'     | 39V-V3474-12 |
| Com Cable 24'     | 39V-V3474-24 |
| Com Cable 36'     | 39V-V3474-36 |



# i5 1.5" Composite Valve Backwash Systems

The 1.5" i5 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger houses or light commercial applications. i5 series backwashing units offer an optional high flow totalizing meter, No Hard Water Bypass and a Motorized Alternating Valve.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalomethanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

| i515P 12x40 Non Catalytic GAC |           |                          |          |                     |           |         |                  |
|-------------------------------|-----------|--------------------------|----------|---------------------|-----------|---------|------------------|
| Model #                       | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| BW-i5PC-1465-1C1              | 14x65     | 3                        | 10       | Cl 3-11             | 22        | 81      | 180              |
| BW-i5PC-1665-1C1              | 16x65     | 4                        | 13       | Cl 4-14             | 28        | 81      | 230              |
| BW-i5PC-1865-1C1              | 18x65     | 5                        | 17       | Cl 5-18             | 36        | 82      | 310              |
| BW-i5PC-2162-1C1              | 21x62     | 7                        | 25       | Cl 7-24             | 48        | 82      | 410              |
| BW-i5PC-2460-1C1              | 24x60     | 8                        | 30       | Cl 9-31             | 50        | 80      | 560              |
| BW-i5PC-2472-1C1              | 24x72     | 10                       | 30       | Cl 9-31             | 50        | 90      | 640              |

| i515P 12x40 Catalytic GAC 12x40 Mesh |       |     |    |                         |    |    |     |
|--------------------------------------|-------|-----|----|-------------------------|----|----|-----|
| BW-i5PC-1465-1C2                     | 14x65 | 2.5 | 10 | NH <sub>2</sub> Cl 3-6  | 22 | 81 | 180 |
| BW-i5PC-1665-1C2                     | 16x65 | 4   | 13 | NH <sub>2</sub> Cl 4-8  | 28 | 81 | 230 |
| BW-i5PC-1865-1C2                     | 18x65 | 5   | 17 | NH <sub>2</sub> Cl 5-10 | 36 | 82 | 310 |
| BW-i5PC-2162-1C2                     | 21x62 | 7   | 25 | NH <sub>2</sub> Cl 7-14 | 48 | 82 | 410 |
| BW-i5PC-2460-1C2                     | 24x60 | 8   | 30 | NH <sub>2</sub> Cl 9-16 | 50 | 80 | 560 |
| BW-i5PC-2472-1C2                     | 24x72 | 10  | 30 | NH <sub>2</sub> Cl 9-20 | 50 | 90 | 640 |

| i515P 12x40 Catalytic GAC 20x50 Fine Mesh |          |    |    |                          |    |    |      |
|-------------------------------------------|----------|----|----|--------------------------|----|----|------|
| BW-i5PC-3072-1C2                          | 30x72-FL | 15 | 20 | NH <sub>2</sub> Cl 15-37 | 49 | 94 | 1000 |
| BW-i5PC-3672-1C2                          | 36x72-FL | 20 | 30 | NH <sub>2</sub> Cl 20-50 | 50 | 94 | 1250 |

| i515P Katalox Light (Also available with Filter-Ox) |       |    |    |      |    |    |      |
|-----------------------------------------------------|-------|----|----|------|----|----|------|
| BW-i5PC-1465-1FL                                    | 14x65 | 3  | 13 | 3-13 | 16 | 81 | 300  |
| BW-i5PC-1665-1FL                                    | 16x65 | 4  | 17 | 4-16 | 20 | 81 | 390  |
| BW-i5PC-1865-1FL                                    | 18x65 | 5  | 20 | 5-21 | 27 | 82 | 510  |
| BW-i5PC-2162-1FL                                    | 21x62 | 7  | 30 | 7-28 | 36 | 82 | 640  |
| BW-i5PC-2460-1FL                                    | 24x60 | 8  | 40 | 9-37 | 47 | 80 | 880  |
| BW-i5PC-2472-1FL                                    | 24x72 | 10 | 40 | 9-37 | 47 | 90 | 1040 |

| i515P Clinoptilolite AKA Filter-Ag+ (Also Available with Filter-Ag)* |       |   |    |      |    |    |     |
|----------------------------------------------------------------------|-------|---|----|------|----|----|-----|
| BW-i5PC-1465-1CL                                                     | 14x65 | 3 | 15 | 3-13 | 22 | 81 | 280 |
| BW-i5PC-1665-1CL                                                     | 16x65 | 4 | 20 | 4-16 | 27 | 81 | 350 |
| BW-i5PC-1865-1CL                                                     | 18x65 | 5 | 25 | 5-21 | 36 | 82 | 460 |
| BW-i5PC-2162-1CL                                                     | 21x62 | 7 | 35 | 7-28 | 48 | 82 | 580 |



| Item #       | Install Parts for i15 Composite              |
|--------------|----------------------------------------------|
| 39V-V4678    | Bypass                                       |
| 39V-V4430-01 | 1.5" MNPT QC Straight Fitting (2 Pieces)     |
| 39V-V4430-07 | 1.5" MNPT QC Elbow Fitting (2 Pieces)        |
| 39V-V4430-13 | 1.5" & 2" PVC Glue Kit (2 Pieces)            |
| 39V-V4430-14 | QC Elbow Kit                                 |
| 39V-V4430-03 | 1.5" QC to QC Coupler Straight               |
| 39V-V4430-09 | 1.5" QC to QC Coupler Elbow                  |
| 39V-V3035    | No Hard Water Bypass (Add Connectors)        |
| 39V-V3034    | Motorized Alternating Valve (Add connectors) |
| 51-618       | 1.5" x 18" Stainless Flex Line               |
| 51-624       | 1.5" x 24" Stainless Flex Line               |



# How to Size a Softener

Proper water softener sizing must recognize the balance between water quality and efficiency. Under-sizing will lead to salt and water inefficiency and low quality water, over-sizing can lead to channeling and excessive equipment costs. Use the chart below as a guideline to properly size a softener. Local efficiency requirements, high TDS, and other competing ions may affect your system sizing. When in doubt, a larger or twin alternating system is preferable.

**Water Consumption** is an important factor to consider. The average residential water use in the USA is approximately 60 gallons of water per person per day. This does not include irrigation. Large multi-head showers, older plumbing fixtures, animals and other variables may impact your actual water usage.

**Water Hardness** must be tested every job, every time. Water hardness will vary and it is not uncommon to realize significant fluctuations. Every customer should be supplied with a quality hardness test kit. Employing proper analysis, even hardness levels in excess of 100 GPG (1 GPG = 17.1 ppm of hardness) can be treated with a softener. Since water softeners are an "Ion Exchange" technology, the hardness levels will decrease and the sodium levels will increase.

**Compensated Hardness** should be applied as the chart below indicates. Iron and manganese are discussed later in this catalog in the iron removal sections. It is IWP's belief that iron and manganese removal by traditional softening is highly inefficient and should be avoided whenever possible. Compensated hardness takes into consideration minerals and other ions that are not detected by a standard hardness test. To arrive at compensated hardness multiply your hardness by the factor in the chart below.

**System Capacity** is based on the balance of quality and efficiency. A cubic foot of resin can remove 32,000 grains of hardness but this will require excessive amounts of salt and is highly inefficient. 16 pounds of salt will net 30,000 grains removal, 4 pounds of salt per cubic foot will net approximately 15,000 grains removal. 4 times the salt for half the capacity is not a proper way to size a softener. The balance to consider is that lower salt settings will marginally lower water quality and efficiency. For most applications our personal preference is 4-8 pounds of salt per cubic foot for good efficiency and quality.

**Regeneration Frequency** greatly affects system efficiency. A single tank system should be sized to regenerate no less than every 7 days for high efficiency. You do not gain any noticeable efficiency increases beyond 15 days, and systems should regenerate no less than every 30 days. Modern high end softeners have automated reserve calculations and several of IWP's systems include highly complex algorithmic based regenerations that further increase system efficiencies. Twin alternating systems are ideal in excessive hardness or households with a high number of occupants. Twin alternating systems provide 24 hour soft water and can regenerate multiple times per day if needed. Twin alternators are highly recommended for most commercial applications.

The inlet and outlet diameter of the water softener must match the diameter of the water supply piping at the location where the softener will be installed. UPC 610.2

## Water Softener Sizing Chart for Residential Applications

| Water Hardness in GPG | Number of Residents               |                                   |                                   |                                   |                                   |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|                       | 2                                 | 4                                 | 6                                 | 8                                 | 10                                |
| 10                    | 1 ft <sup>3</sup>                 | 1 ft <sup>3</sup>                 | 1.5 ft <sup>3</sup>               | 2 ft <sup>3</sup>                 | 2.5 ft <sup>3</sup>               |
| 15                    | 1 ft <sup>3</sup>                 | 1.5 ft <sup>3</sup>               | 2 ft <sup>3</sup>                 | 2.5 ft <sup>3</sup>               | 1.5 ft <sup>3</sup> per tank Twin |
| 20                    | 1 ft <sup>3</sup>                 | 2 ft <sup>3</sup>                 | 2.5 ft <sup>3</sup>               | 1.5 ft <sup>3</sup> per tank Twin | 1.5 ft <sup>3</sup> per tank Twin |
| 30                    | 1.5 ft <sup>3</sup>               | 2.5 ft <sup>3</sup>               | 1.5 ft <sup>3</sup> per tank Twin | 1.5 ft <sup>3</sup> per tank Twin | 2 ft <sup>3</sup> per tank Twin   |
| 40                    | 2 ft <sup>3</sup>                 | 1.5 ft <sup>3</sup> per tank Twin | 1.5 ft <sup>3</sup> per tank Twin | 2 ft <sup>3</sup> per tank Twin   | 2.5 ft <sup>3</sup> per tank Twin |
| 50                    | 2.5 ft <sup>3</sup>               | 1.5 ft <sup>3</sup> per tank Twin | 2 ft <sup>3</sup> per tank Twin   | 2.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin |
| 75                    | 1.5 ft <sup>3</sup> per tank Twin | 2 ft <sup>3</sup> per tank Twin   | 2.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin |
| 100                   | 1.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin | 2.5 ft <sup>3</sup> per tank Twin |

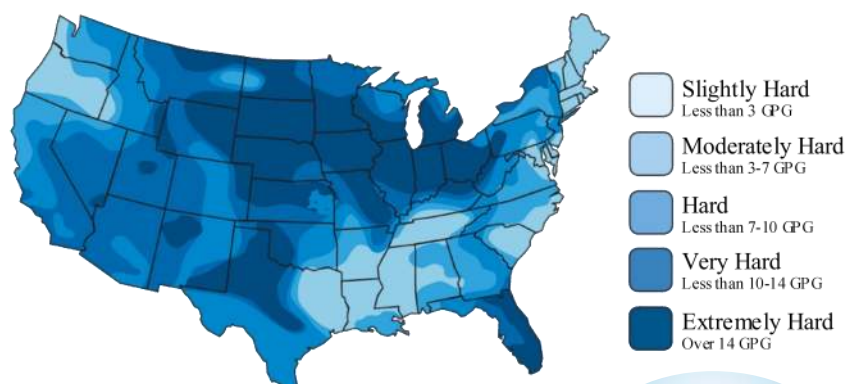
System sizing is based on 6 pounds of salt per ft<sup>3</sup>, 7 days between regenerations (Single Tank)

## Compensated Hardness Chart

When sizing a softener use the compensated hardness chart below. Certain minerals and other factors will reduce the softening capacity of a softener and cannot be picked up by a standard hardness test.

| Water Hardness      | Multiply by |
|---------------------|-------------|
| <b>1 - 20 GPG</b>   | <b>1.1</b>  |
| <b>21 - 40 GPG</b>  | <b>1.2</b>  |
| <b>41 - 70 GPG</b>  | <b>1.3</b>  |
| <b>71 - 100 GPG</b> | <b>1.4</b>  |
| <b>100+ GPG</b>     | <b>1.5</b>  |

## Water Hardness Levels in the U.S.





Certified to NSF/  
ANSI 61 and 372\*

# i5 Brass 1.5" Control Valve



Shown with Meter and NHWP

## Specifications

Inlet/Outlet ..... 1.5" Female NPT  
Cycles ..... Up to 6  
Valve Material..... Epoxy coated brass  
Regeneration..... Downflow

## Control valve Flow Rates

Service @15 psi drop (includes meter).....70 GPM  
Backwash @ 25 psi drop..... 52 gpm  
Cv Service..... 18.1  
Cv Backwash..... 10.4

## Operating Pressures

Minimum/Maximum..... 20 psi – 125 psi

## Operating Temperatures

Minimum/Maximum..... 40° – 110° F

## Meter specifications

Accuracy..... ± 5%  
Flow Rate Range..... 0.5 – 75 GPM  
Gallon Range..... 20 – 1,500,000 gallons  
Totalizer..... 1 – 9,999,000 gallons

## Dimensions & Weight / Distributor Pilot

Valve bodies with 1.5" Female NPT Inlet & Outlet..... 1.90" OD (1.5" NPS)  
Drain: ..... 1.25" Female NPT  
Adapter Included..... 3/4" Male NPT Elbow  
Brine Line Connection..... 3/4" Female NPT  
Adapter Included..... 1/2" OD Poly Tube Compression  
Mounting Base..... 4" - 8 UN  
Height From Top Of Tank..... 7.5"  
Shipping Weight With Meter..... 21 lbs.

| Electrical Specifications | AC Adapter   | U.S.    | International |
|---------------------------|--------------|---------|---------------|
| Supply Voltage.....       | 120V AC..... | 230V AC |               |
| Supply Frequency.....     | 60 Hz.....   | 50 Hz   |               |
| Output Voltage.....       | 15V DC.....  | 15V DC  |               |
| Output Current.....       | 500 mA.....  | 500 mA  |               |

## Tank Applications

Water Softener..... 12" – 30" diameter  
Filter: @ 10 gpm of backwash per ft<sup>2</sup> of bed area..... 12" – 30" diameter

## Cycle Range of time in minutes

1. Backwash 1st (upflow)..... 1-95
2. Regenerate Draw/Slow Rinse (downflow)..... 1-180
3. Backwash 2nd (upflow)..... 1-95
4. Fast Rinse (downflow)..... 1-95
5. Regenerant Refill (in service with treated water)..... 0.1-99.0 or off
6. Service (downflow)



- 1.5" top mount control valve suited for mid-size commercial/ industrial applications
- Epoxy coated lead free brass valve body
- Economical stainless steel optional meter assembly
- Service flow rate of 70 GPM, backwash 52 GPM
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or up flow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- 15-volt output DC Adapter provides safe and easy installation
- Post treated water regenerant refill
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127
- Reliable and proven DC drive



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# i5 Brass 1.5" Metered Softener Systems

i5 Brass softeners systems are easily configured for most applications. The dual MAV/NHWBP driver allows for separate source backwashing and/or no hard water bypass at the same time. Progressive flow up to four tanks without a System Controller.



| Item #     | Install Parts for i15 Brass Valve        |
|------------|------------------------------------------|
| 39V-V3097  | No Hard Water Bypass                     |
| 39V-V3071  | Motorized Alternating Valve              |
| 51-618P    | 1.5" x 18" Stainless Flex Line w/ Nipple |
| 51-624P    | 1.5" x 24" Stainless Flex Line w/ Nipple |
| 39V-V3666W | Outdoor Cover                            |
| 56-VAC150  | 1.5" Vacuum Breaker                      |

| I5 1.5" Brass Metered Softeners |           |                          |          |                     |           |                |                      |                  |
|---------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                         | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i15M-1465-1A96               | 14x65     | 3                        | 5.3      | 3-21                | 44        | 78             | 24x40                | 250              |
| WS-i15M-1665-1A96               | 16x65     | 4                        | 6.5      | 4-28                | 50        | 78             | 24x40                | 320              |
| WS-i15M-1865-1A96               | 18x65     | 5                        | 7.5      | 5-35                | 54        | 79             | 24x40                | 420              |
| WS-i15M-2162-1A96               | 21x62     | 7                        | 11       | 7-48                | 60        | 79             | 24x50                | 580              |
| WS-i15M-2460-1A96               | 24x60     | 8                        | 15       | 9-55                | 62        | 77             | 24x60                | 750              |
| WS-i15M-2472-1A96               | 24x72     | 10                       | 15       | 9-54                | 61        | 87             | 30x48                | 910              |
| WS-i15M-3072-6A96               | 30x72-FL  | 15                       | 20       | 15-55               | 62        | 94             | 39x48                | 1370             |



| I5 1.5" Brass Twin Alternating Metered Softeners |              |                          |          |                     |           |                |                      |                  |
|--------------------------------------------------|--------------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                                          | Tank Size    | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i15A-1465-1A96                                | (2) 14x65    | 6                        | 5.3      | 3-21                | 44        | 78             | 24x40                | 555              |
| WS-i15A-1665-1A96                                | (2) 16x65    | 8                        | 6.5      | 4-28                | 50        | 78             | 24x40                | 645              |
| WS-i15A-1865-1A96                                | (2) 18x65    | 10                       | 7.5      | 5-35                | 54        | 79             | 24x40                | 845              |
| WS-i15A-2162-1A96                                | (2) 21x62    | 14                       | 11       | 7-48                | 60        | 79             | 24x50                | 1160             |
| WS-i15A-2460-1A96                                | (2) 24x60    | 16                       | 15       | 9-55                | 62        | 77             | 24x60                | 1505             |
| WS-i15A-2472-1A96                                | (2) 24x72    | 20                       | 15       | 9-54                | 61        | 87             | 30x48                | 1825             |
| WS-i15A-3072-6A96                                | (2) 30x72-FL | 30                       | 20       | 15-55               | 62        | 94             | 39x48                | 2745             |



# i5 Brass 1.5" Progressive Flow Softener

Up to (4) "i5" units are controlled without a System Controller allowing for high efficiencies and flow rates. Simple programming and exceptionally functional. Soft water or standard regeneration available. Installing the NHWBP on the inlet creates a Soft Water Regeneration configuration.



## i5 1.5" Progressive Flow Softener Specifications and Ordering Guide

| Type         | Order Softener (2-4) | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|----------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 14x65 Twin   | (2) WS-i15M-1465-AA6 | WS-i15X2              | (2) 14x65  | 6                     | (2) 24x40              | 5.3            | 3-21             | 44            | 78            | 480        |
| 14x65 Triple | (3) WS-i15M-1465-AA6 | WS-i15X3              | (3) 14x65  | 9                     | (3) 24x40              | 5.3            | 3-42             | 88            | 78            | 720        |
| 14x65 Quad   | (4) WS-i15M-1465-AA6 | WS-i15X4              | (4) 14x65  | 13                    | (4) 24x40              | 5.3            | 3-63             | 132           | 78            | 960        |
| 16x65 Twin   | (2) WS-i15M-1665-AA6 | WS-i15X2              | (2) 16x65  | 8                     | (2) 24x50              | 6.5            | 4-28             | 50            | 78            | 620        |
| 16x65 Triple | (3) WS-i15M-1665-AA6 | WS-i15X3              | (3) 16x65  | 12                    | (3) 24x50              | 6.5            | 4-56             | 100           | 78            | 930        |
| 16x65 Quad   | (4) WS-i15M-1665-AA6 | WS-i15X4              | (4) 16x65  | 16                    | (4) 24x50              | 6.5            | 4-84             | 150           | 78            | 1240       |
| 18x65 Twin   | (2) WS-i15M-1865-AA6 | WS-i15X2              | (2) 18x65  | 10                    | (2) 24x50              | 7.5            | 5-35             | 54            | 79            | 820        |
| 18x65 Triple | (3) WS-i15M-1865-AA6 | WS-i15X3              | (3) 18x65  | 15                    | (3) 24x50              | 7.5            | 5-70             | 108           | 79            | 1230       |
| 18x65 Quad   | (4) WS-i15M-1865-AA6 | WS-i15X4              | (4) 18x65  | 20                    | (4) 24x50              | 7.5            | 5-105            | 162           | 79            | 1640       |
| 21x62 Twin   | (2) WS-i15M-2162-AA6 | WS-i15X2              | (2) 21x62  | 14                    | (2) 24x50              | 11             | 7-48             | 60            | 79            | 1040       |
| 21x62 Triple | (3) WS-i15M-2162-AA6 | WS-i15X3              | (3) 21x62  | 21                    | (3) 24x50              | 11             | 7-96             | 120           | 79            | 1560       |
| 21x62 Quad   | (4) WS-i15M-2162-AA6 | WS-i15X4              | (4) 21x62  | 28                    | (4) 24x50              | 11             | 7-144            | 180           | 79            | 2080       |
| 24x60 Twin   | (2) WS-i15M-2460-AA6 | WS-i15X2              | (2) 24x60  | 16                    | (2) 24x60              | 15             | 9-55             | 62            | 77            | 1480       |
| 24x60 Triple | (3) WS-i15M-2460-AA6 | WS-i15X3              | (3) 24x60  | 24                    | (3) 24x60              | 15             | 9-110            | 124           | 77            | 2220       |
| 24x60 Quad   | (4) WS-i15M-2460-AA6 | WS-i15X4              | (4) 24x60  | 32                    | (4) 24x60              | 15             | 9-165            | 186           | 77            | 2960       |
| 24x72 Twin   | (2) WS-i15M-2472-AA6 | WS-i15X2              | (2) 24x72  | 20                    | (2) 30x48              | 15             | 9-54             | 61            | 87            | 1800       |
| 24x72 Triple | (3) WS-i15M-2472-AA6 | WS-i15X3              | (3) 24x72  | 30                    | (3) 30x48              | 15             | 9-108            | 122           | 87            | 2700       |
| 24x72 Quad   | (4) WS-i15M-2472-AA6 | WS-i15X4              | (4) 24x72  | 40                    | (4) 30x48              | 15             | 9-162            | 183           | 87            | 3600       |
| 30x72 Twin   | (2) WS-i15M-3072-AA6 | WS-i15X2              | (2) 30x72  | 30                    | (2) 39x48              | 20             | 15-55            | 62            | 94            | 2740       |
| 30x72 Triple | (3) WS-i15M-3072-AA6 | WS-i15X3              | (3) 30x72  | 45                    | (3) 39x48              | 20             | 15-110           | 124           | 94            | 4110       |
| 30x72 Quad   | (4) WS-i15M-3072-AA6 | WS-i15X4              | (4) 30x72  | 60                    | (4) 39x48              | 20             | 15-165           | 186           | 94            | 5480       |



## Upgrade to the Optional System Controller?

- Need more than four? The optional **System Controller** operates 2 – 8 units on 1 or 2 independent systems, or operates as a water monitor only
- Monochrome Graphics Display with blue backlight on front panel for time of day, day of week, days until next regeneration, current system flow rate, and total system volume used (Totalizer)
- Two input connections that can either be used for meters or other auxiliary inputs

| Item #     | Install Parts for i15 Composite              |
|------------|----------------------------------------------|
| 39V-V3666W | White Outdoor Cover                          |
| 39V-V3071  | Motorized Alternating Valve (Add connectors) |
| 51-618P    | 1.5" x 18" Stainless Flex Line               |
| 51-624P    | 1.5" x 24" Stainless Flex Line               |
| 56-VAC150  | 1.5" Vacuum Breaker                          |



- On-board Ethernet connection for remote, real-time monitoring of system performance
- Supports Modbus TCP/IP communications
- System diagnostic and programming information spreadsheet may be uploaded to a standard USB drive
- Two fused Single Pole Double Throw (SPDT) relay outputs
- Single demand-based meter output signal
- Coin cell lithium battery backup for time of day with easy access cover
- Front panel LED status indicators for Online,

| Part #            | Description  |
|-------------------|--------------|
| System Controller | 39V-V3030    |
| Power Cable 15'   | 39V-V4276-15 |
| Power Cable 36'   | 39V-V4276-36 |
| Com Cable 8'      | 39V-V3474    |
| Com Cable 12'     | 39V-V3474-12 |
| Com Cable 24'     | 39V-V3474-24 |
| Com Cable 36'     | 39V-V3474-36 |



# i5 1.5" Brass Valve Backwash Systems

The 1.5" i5 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger houses or light commercial applications. i5 series backwashing units offer an optional high flow totalizing meter, No Hard Water Bypass and a Motorized Alternating Valve.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalomethanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

| i5 1.5" 12x40 Non Catalytic GAC |           |                          |          |                     |           |         |                  |
|---------------------------------|-----------|--------------------------|----------|---------------------|-----------|---------|------------------|
| Model #                         | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| BW-i15C-1465-1C1                | 14x65-4   | 3                        | 10       | Cl 3-11             | 22        | 78      | 190              |
| BW-i15C-1652-1C1                | 16x52-4   | 3                        | 13       | Cl 3-14             | 28        | 65      | 200              |
| BW-i15C-1665-1C1                | 16x65-4   | 4                        | 13       | Cl 4-14             | 36        | 78      | 240              |
| BW-i15C-1865-1C1                | 18x65-4   | 5                        | 17       | Cl 5-18             | 48        | 79      | 320              |
| BW-i15C-2162-1C1                | 21x62-4   | 7                        | 25       | Cl 7-24             | 60        | 79      | 420              |
| BW-i15C-2460-1C1                | 24x60-4   | 8                        | 30       | Cl 9-31             | 60        | 77      | 570              |
| BW-i15C-2472-1C1                | 24x72-4   | 10                       | 30       | Cl 9-31             | 60        | 87      | 650              |
| BW-i15C-3072-6C1                | 30x72-FL  | 15                       | 50       | Cl 15-49            | 60        | 94      | 1000             |

| i5 1.5" 12x40 Catalytic GAC |          |    |    |                          |    |    |      |
|-----------------------------|----------|----|----|--------------------------|----|----|------|
| BW-i15C-1465-1C2            | 14x65-4  | 3  | 10 | NH <sub>2</sub> Cl 3-6   | 22 | 78 | 190  |
| BW-i15C-1652-1C2            | 16x52-4  | 3  | 13 | NH <sub>2</sub> Cl 4-6   | 28 | 65 | 200  |
| BW-i15C-1665-1C2            | 16x65-4  | 4  | 13 | NH <sub>2</sub> Cl 4-8   | 36 | 78 | 240  |
| BW-i15C-1865-1C2            | 18x65-4  | 5  | 17 | NH <sub>2</sub> Cl 5-10  | 48 | 79 | 320  |
| BW-i15C-2162-1C2            | 21x62-4  | 7  | 25 | NH <sub>2</sub> Cl 7-14  | 60 | 79 | 420  |
| BW-i15C-2460-1C2            | 24x60-4  | 8  | 30 | NH <sub>2</sub> Cl 10-16 | 60 | 77 | 570  |
| BW-i15C-2472-1C2            | 24x72-4  | 10 | 30 | NH <sub>2</sub> Cl 10-20 | 60 | 87 | 650  |
| BW-i15C-3072-6C2            | 30x72-FL | 15 | 50 | NH <sub>2</sub> Cl 15-30 | 60 | 94 | 1000 |

| i5 1.5" Katalox Light (Also available with Filter-Ox) |         |    |    |      |    |    |      |
|-------------------------------------------------------|---------|----|----|------|----|----|------|
| BW-i15C-1465-1FL                                      | 14x65-4 | 3  | 13 | 3-13 | 16 | 78 | 310  |
| BW-i15C-1652-1FL                                      | 16x52-4 | 3  | 17 | 4-16 | 20 | 65 | 320  |
| BW-i15C-1665-1FL                                      | 16x65-4 | 4  | 17 | 4-16 | 20 | 78 | 400  |
| BW-i15C-1865-1FL                                      | 18x65-4 | 5  | 20 | 5-21 | 27 | 79 | 520  |
| BW-i15C-2162-1FL                                      | 21x62-4 | 7  | 30 | 7-28 | 36 | 79 | 650  |
| BW-i15C-2460-1FL                                      | 24x60-4 | 8  | 40 | 9-37 | 47 | 77 | 890  |
| BW-i15C-2472-1FL                                      | 24x72-4 | 10 | 40 | 9-37 | 47 | 87 | 1050 |

| i5 1.5" Clinoptilolite (AKA Filter-Ag+) |         |    |    |      |    |    |     |
|-----------------------------------------|---------|----|----|------|----|----|-----|
| BW-i15C-1465-1CL                        | 14x65-4 | 3  | 15 | 3-13 | 22 | 78 | 290 |
| BW-i15C-1652-1CL                        | 16x52-4 | 3  | 20 | 4-16 | 27 | 65 | 300 |
| BW-i15C-1665-1CL                        | 16x65-4 | 4  | 20 | 4-16 | 27 | 78 | 360 |
| BW-i15C-1865-1CL                        | 18x65-4 | 5  | 25 | 5-21 | 36 | 79 | 470 |
| BW-i15C-2162-1CL                        | 21x62-4 | 7  | 35 | 7-28 | 48 | 79 | 590 |
| BW-i15C-2460-1CL                        | 24x60-4 | 8  | 45 | 9-37 | 60 | 77 | 770 |
| BW-i15C-2472-1CL                        | 24x72-4 | 10 | 45 | 9-37 | 60 | 87 | 890 |



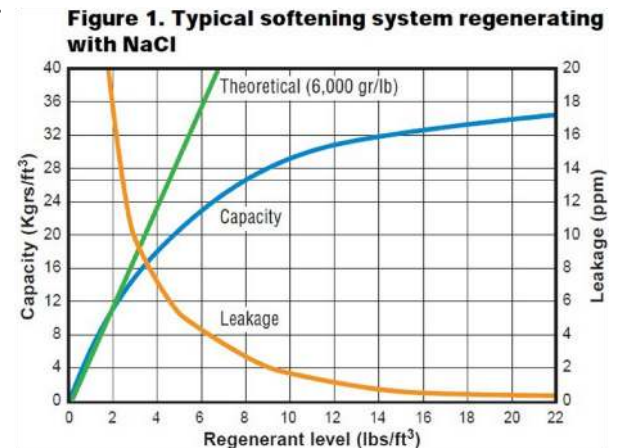
| Item #     | Install Parts for i15 Brass Valve        |
|------------|------------------------------------------|
| 39V-V3097  | No Hard Water Bypass                     |
| 39V-V3071  | Motorized Alternating Valve              |
| 51-618P    | 1.5" x 18" Stainless Flex Line w/ Nipple |
| 51-624P    | 1.5" x 24" Stainless Flex Line w/ Nipple |
| 39V-V3666W | Outdoor Cover                            |
| 56-VAC150  | 1.5" Vacuum Breaker                      |



# Softening Efficiency, Capacity & Leakage

Softener efficiency, capacity, and hardness leakage are all linked. A highly efficient softener will typically produce a lower quality of softened water. Lower quality softened water is adequate for most residential and commercial applications and is important for minimizing the negative environmental impact of softeners. Some applications may require very high quality softened water and efficiency will be sacrificed. The lower efficiency setting can be minimized by a simple staged softening system design. The first softener is set for the highest possible efficiency, a second polishing softener is regenerated infrequently with a high salt setting. The chart below shows typical softening system curves for these three important factors. For most applications, softeners should be set to use 6 pounds or less per cubic foot to ensure highly efficient operation and 10 pounds or more for the lowest hardness leakage.

| Lbs. per Ft <sup>3</sup> | 3      | 4      | 6      | 8         | 10     | 15      |
|--------------------------|--------|--------|--------|-----------|--------|---------|
| ≈Capacity (gr/cu ft)     | 12,800 | 15,200 | 20,000 | 24,000    | 27,000 | 30,000  |
| ≈Efficiency (gr/lb salt) | 4267   | 3800   | 3333   | 3000      | 2700   | 2000    |
| Soft Water Quality       | Fair   | Fair   | Good   | Very Good | High   | Highest |

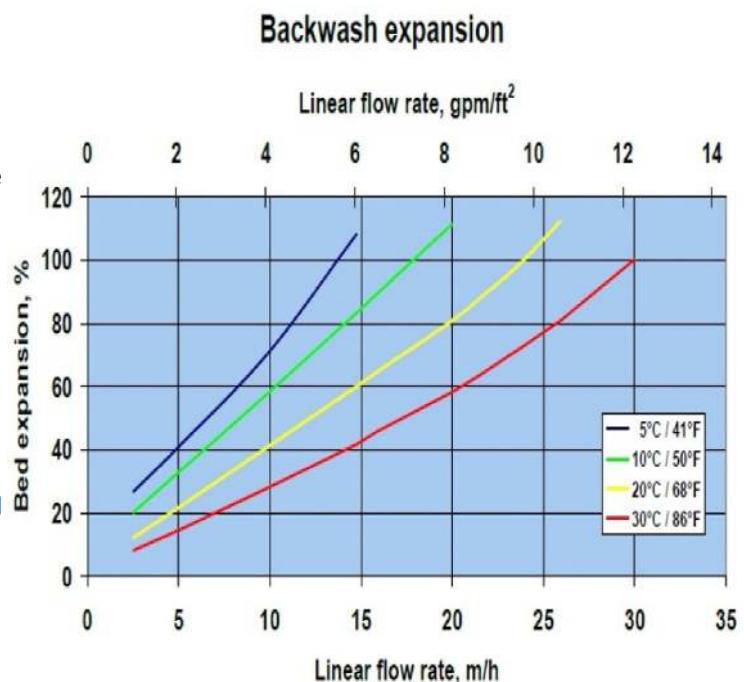
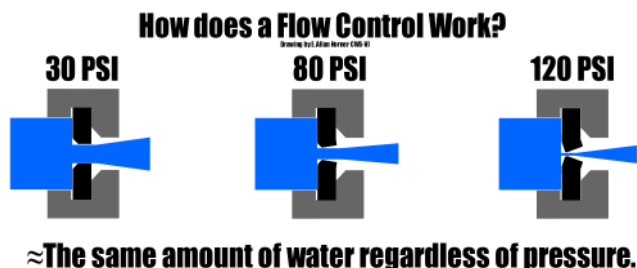


## Backwash Rates & Water Temperature

Water temperature plays a critical role in properly installing a water treatment system. Water temperature affects flow rates, backwash rates, and even systems capacities. The most critical of these is the backwash rate. Colder water is more dense and requires considerably less water to properly backwash a system. Hot water requires much more. The chart below shows standard cation water softening resin backwash expansion at varying temperatures. A 50% bed expansion is achieved with only 2.5 gpm/ft² at 40°F. At 86°F, it requires 7 gpm/ft² or nearly three times more water to achieve the same bed expansion. Common backwash rate charts assume a water temperature of 68°F. It is important to consult with each media manufacturers temperature charts to ensure your system is properly applied.

### Variable Pressure Flow Controllers Theory of Operation and Service

Flow controls are commonly used in water treatment to regulate the backwash required to expand and agitate the media in a tank (DLFC), control the amount of water going into the brine tank (BLFC) or to regulate the maximum flow going through a UV chamber. The variable pressure flow control principle is accurate among a wide range of pressures unlike a fixed orifice flow control. The specified rate of flow will be very close to the design parameters regardless of inlet pressure variations. This is accomplished by the changing orifice size of the flow washer as inlet pressure varies as shown in the drawing below.



# i5 2" Composite Control Valve Specifications

## Specifications

Inlet/Outlet ..... 2" QC  
 Cycles ..... Up to 6  
 Valve Material..... Glass filled composite  
 Regeneration.....Upflow or Downflow

## Control valve Flow Rates

Service @15 psi drop (includes meter).....95 gpm  
 Backwash @ 25 psi drop..... 85 gpm  
 Cv Service..... 24.5  
 Cv Backwash..... 17.0

## Operating Pressure

Minimum/Maximum..... 20 psi – 125 psi

## Operating Temperatures

Minimum/Maximum..... 40° – 110° F

## Meter specifications

Accuracy..... ± 5%  
 Flow Rate Range..... 1.5 – 150 GPM  
 Gallon Range..... 20 – 1,500,000 gallons  
 Totalizer..... 1 – 9,999,000 gallons

## Dimensions & Weight / Distributor Pilot

Valve bodies with 2" Female NPT Inlet & Outlet..... 1.90" OD (1.5" NPS)  
 Drain: .....2" QC  
 Brine Line Connection..... 1" Male NPT

## Mounting

Tank Adapter..... 4" – 8 UN  
 Height From Top Of Tank.....12.5"  
 Shipping Weight With Meter..... 11 lbs.

## Electrical Specifications

|                       | AC Adapter | U.S.    | International |
|-----------------------|------------|---------|---------------|
| Supply Voltage.....   | 120V AC    | 230V AC | 230V AC       |
| Supply Frequency..... | 60 Hz      | 50 Hz   | 50 Hz         |
| Output Voltage.....   | 15V DC     | 15V DC  | 15V DC        |
| Output Current.....   | 750 mA     | 750 mA  | 750 mA        |

## Tank Applications

Water Softener..... 12" – 36" diameter  
 Filter: @ 10 gpm of backwash per ft<sup>2</sup> of bed area.....12" – 36" diameter

## Cycle Range of time in minutes

1. Backwash 1st (upflow)..... 1-95  
 2. Regenerate Draw/Slow Rinse (downflow).....1-180  
 3. Backwash 2nd (upflow).....1-95  
 4. Fast Rinse (downflow).....1-95  
 5. Regenerant Refill (in service with treated water)..... 0.1-99.0 or off  
 6. Service (downflow)



- 2" Top mount control valve suited for commercial/industrial applications
- Glass filled composite valve body
- Economical glass filled composite optional meter assembly
- Service flow rate of 95 gpm, backwash 85 gpm
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with an 8 hour carry over
- 15-volt output DC Adapter provides safe and easy installation
- Post treated water regenerant refill
- Reliable and proven DC drive
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127



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# i5 2" Composite Commercial Softener

i5 2" composite softeners systems are easily configured for most applications. The dual MAV/ NHWBP driver allows for separate source backwashing and/or no hard water bypass at the same time. Progressive flow up to four tanks without a System Controller.

| i5 2" Composite Metered Softeners |           |                          |          |                     |           |                |                      |                  |
|-----------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                           | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i20PM-1465-1A96                | 14"x65"   | 3                        | 5.3      | 3-21                | 41        | 82             | 24"x40"              | 245              |
| WS-i20PM-1665-1A96                | 16"x65"   | 4                        | 6.5      | 4-28                | 48        | 82             | 24"x40"              | 315              |
| WS-i20PM-1865-1A96                | 18"x65"   | 5                        | 7.5      | 5-35                | 56        | 83             | 24"x40"              | 415              |
| WS-i20PM-2162-1A96                | 21"x62"   | 7                        | 11       | 7-48                | 74        | 83             | 24"x50"              | 575              |
| WS-i20PM-2460-1A96                | 24"x60"   | 8                        | 15       | 9-62                | 80        | 81             | 24"x60"              | 725              |
| WS-i20PM-2472-1A96                | 24"x72"   | 10                       | 15       | 9-62                | 78        | 91             | 24"x60"              | 895              |
| WS-i20PM-3072-6A96                | 30"x72"   | 15                       | 20       | 15-89               | 89        | 102            | 30"x60"              | 1365             |
| WS-i20PM-3672-6A96                | 36"x72"   | 20                       | 30       | 21-97               | 97        | 102            | 39"x48"              | 2125             |

| i5 2" Composite Twin Alternating Metered Softeners |             |                          |          |                     |           |                |                      |                  |
|----------------------------------------------------|-------------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                                            | Tank Size   | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i20PA-1465-1A96                                 | (2) 14"x65" | 6                        | 5.3      | 3-21                | 41        | 82             | 24"x40"              | 490              |
| WS-i20PA-1665-1A96                                 | (2) 16"x65" | 8                        | 6.5      | 4-28                | 48        | 82             | 24"x40"              | 630              |
| WS-i20PA-1865-1A96                                 | (2) 18"x65" | 10                       | 7.5      | 5-35                | 56        | 83             | 24"x40"              | 830              |
| WS-i20PA-2162-1A96                                 | (2) 21"x62" | 14                       | 11       | 7-48                | 74        | 83             | 24"x50"              | 1150             |
| WS-i20PA-2460-1A96                                 | (2) 24"x60" | 16                       | 15       | 9-62                | 80        | 81             | 24"x60"              | 1450             |
| WS-i20PA-2472-1A96                                 | (2) 24"x72" | 20                       | 15       | 9-62                | 78        | 91             | 24"x60"              | 1790             |
| WS-i20PA-3072-6A96                                 | (2) 30"x72" | 30                       | 20       | 15-98               | 89        | 102            | 30"x60"              | 2730             |
| WS-i20PA-3672-6A96                                 | (2) 36"x72" | 40                       | 30       | 21-107              | 97        | 102            | 39"x48"              | 4250             |

| Item #        | Install Parts for i5 2" Composite Valve |
|---------------|-----------------------------------------|
| 39V-V4460-01  | QC x 2" NPT Straight                    |
| 39V-V4460-04  | QC x 2" NPT Elbow                       |
| 39V-V4460-13  | 2" PVC Solvent                          |
| 39V-V4460-03  | QC x QC Straight                        |
| 39V-V4460-06  | QC x QC Elbow                           |
| 39V-V3037     | No Hard Water Bypass                    |
| 39V-V3036     | Motorized Alternating Valve             |
| 51-818        | 2" x 18" Stainless Flex Line            |
| 51-824        | 2" x 24" Stainless Flex Line            |
| 39V-V3783WC-W | Outdoor Cover                           |
| 56-VAC150     | 1.5" Vacuum Breaker                     |



# i5 2" Composite Progressive Flow

Up to (4) "i5" units are controlled without a System Controller allowing for high efficiencies and flow rates. Simple programming and exceptionally functional. Soft water or standard regeneration available. Installing the NHWBP on the inlet creates a Soft Water Regeneration configuration.



## i5 2" Progressive Flow Softener Specifications and Ordering Guide

| Type         | Order Softener (2-4)  | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|-----------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 16x65 Twin   | (2) WS-i20PM-1665-AA6 | WS-i20PX2             | (2) 16x65  | 8                     | (2) 24x50              | 6.5            | 4-28             | 48            | 78            | 660        |
| 16x65 Triple | (3) WS-i20PM-1665-AA6 | WS-i20PX3             | (3) 16x65  | 12                    | (3) 24x50              | 6.5            | 4-56             | 96            | 78            | 990        |
| 16x65 Quad   | (4) WS-i20PM-1665-AA6 | WS-i20PX4             | (4) 16x65  | 16                    | (4) 24x50              | 6.5            | 4-84             | 144           | 78            | 1320       |
| 18x65 Twin   | (2) WS-i20PM-1865-AA6 | WS-i20PX2             | (2) 18x65  | 10                    | (2) 24x50              | 7.5            | 5-35             | 56            | 79            | 860        |
| 18x65 Triple | (3) WS-i20PM-1865-AA6 | WS-i20PX3             | (3) 18x65  | 15                    | (3) 24x50              | 7.5            | 5-70             | 112           | 79            | 1290       |
| 18x65 Quad   | (4) WS-i20PM-1865-AA6 | WS-i20PX4             | (4) 18x65  | 20                    | (4) 24x50              | 7.5            | 5-105            | 168           | 79            | 1720       |
| 21x62 Twin   | (2) WS-i20PM-2162-AA6 | WS-i20PX2             | (2) 21x62  | 14                    | (2) 24x50              | 11             | 7-48             | 74            | 79            | 1180       |
| 21x62 Triple | (3) WS-i20PM-2162-AA6 | WS-i20PX3             | (3) 21x62  | 21                    | (3) 24x50              | 11             | 7-96             | 148           | 79            | 1770       |
| 21x62 Quad   | (4) WS-i20PM-2162-AA6 | WS-i20PX4             | (4) 21x62  | 28                    | (4) 24x50              | 11             | 7-144            | 222           | 79            | 2360       |
| 24x60 Twin   | (2) WS-i20PM-2460-AA6 | WS-i20PX2             | (2) 24x60  | 16                    | (2) 24x60              | 15             | 9-62             | 80            | 77            | 1480       |
| 24x60 Triple | (3) WS-i20PM-2460-AA6 | WS-i20PX3             | (3) 24x60  | 24                    | (3) 24x60              | 15             | 9-124            | 160           | 77            | 2220       |
| 24x60 Quad   | (4) WS-i20PM-2460-AA6 | WS-i20PX4             | (4) 24x60  | 32                    | (4) 24x60              | 15             | 9-186            | 240           | 77            | 2960       |
| 24x72Twin    | (2) WS-i20PM-2472-AA6 | WS-i20PX2             | (2) 24x72  | 20                    | (2) 30x48              | 15             | 9-62             | 78            | 87            | 1820       |
| 24x72 Triple | (3) WS-i20PM-2472-AA6 | WS-i20PX3             | (3) 24x72  | 30                    | (3) 30x48              | 15             | 9-124            | 156           | 87            | 2730       |
| 24x72 Quad   | (4) WS-i20PM-2472-AA6 | WS-i20PX4             | (4) 24x72  | 40                    | (4) 30x48              | 15             | 9-186            | 234           | 87            | 3640       |
| 30x72 Twin   | (2) WS-i20PM-3072-AA6 | WS-i20PX2             | (2) 30x72  | 30                    | (2) 39x48              | 20             | 15-89            | 89            | 94            | 2760       |
| 30x72 Triple | (3) WS-i20PM-3072-AA6 | WS-i20PX3             | (3) 30x72  | 45                    | (3) 39x48              | 20             | 15-188           | 188           | 94            | 4140       |
| 30x72 Quad   | (4) WS-i20PM-3072-AA6 | WS-i20PX4             | (4) 30x72  | 60                    | (4) 39x48              | 20             | 15-267           | 267           | 94            | 5520       |
| 36x72 Twin   | (2) WS-i20PM-3672-AA6 | WS-i20PX2             | (2) 36x72  | 40                    | (2) 39x60              | 30             | 21-97            | 97            | 98            | 4280       |
| 36x72 Triple | (3) WS-i20PM-3672-AA6 | WS-i20PX3             | (3) 36x72  | 60                    | (3) 39x60              | 30             | 21-194           | 194           | 98            | 6420       |
| 36x72 Quad   | (4) WS-i20PM-3672-AA6 | WS-i20PX4             | (4) 36x72  | 80                    | (4) 39x60              | 30             | 21-291           | 291           | 98            | 8560       |



## Upgrade to the Optional System Controller?

- Need more than four? The optional **System Controller** operates 2 – 8 units on 1 or 2 independent systems, or operates as a water monitor only
- Monochrome Graphics Display with blue backlight on front panel for time of day, day of week, days until next regeneration, current system flow rate, and total system volume used (Totalizer)
- Two input connections that can either be used for meters or other auxiliary inputs
- On-board Ethernet connection for remote, real-time monitoring of system performance
- Supports Modbus TCP/IP communications
- System diagnostic and programming information spreadsheet may be uploaded to a standard USB drive

| Item #        | Install Parts for i15 Composite              |
|---------------|----------------------------------------------|
| 39V-V4460-04  | QC x @" NPT Elbow Adapter (2 Pcs.)           |
| 39V-V4460-01  | QC x 2" NPT Straight Adapter (2 Pcs.)        |
| 39V-V4460-13  | QC x 2" PVC Socket Adapter (2 Pcs.)          |
| 39V-V3783WC-W | White Outdoor Cover                          |
| 39V-V3036     | Motorized Alternating Valve (Add connectors) |
| 51-818        | 2" x 18" Stainless Flex Line                 |
| 51-824        | 2" x 24" Stainless Flex Line                 |
| 56-VAC150     | 1.5" Vacuum Breaker                          |



- Two fused Single Pole Double Throw (SPDT) relay outputs
- Single demand-based meter output signal
- Coin cell lithium battery backup for time of day with easy access cover
- Front panel LED status indicators for Online, Standby, Regeneration, and Lead Unit Position
- Language options include: English, Spanish, French, German, Italian, Dutch, and Polish

| Part #            | Description  |
|-------------------|--------------|
| System Controller | 39V-V3030    |
| Power Cable 15'   | 39V-V4276-15 |
| Power Cable 36'   | 39V-V4276-36 |
| Com Cable 8'      | 39V-V3474    |
| Com Cable 12'     | 39V-V3474-12 |
| Com Cable 24'     | 39V-V3474-24 |
| Com Cable 36'     | 39V-V3474-36 |



# i5 2" Composite Valve Backwash Systems

The 1.5" i5 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger houses or light commercial applications. i5 series backwashing units offer an optional high flow totalizing meter, No Hard Water Bypass and a Motorized Alternating Valve.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

| i5 2" Composite 12x40 Non Catalytic GAC |           |                          |          |                     |           |         |                  |
|-----------------------------------------|-----------|--------------------------|----------|---------------------|-----------|---------|------------------|
| Model #                                 | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| BW-i20PC-1665-1C1                       | 16x65     | 4                        | 13       | Cl 4-14             | 28        | 82      | 235              |
| BW-i20PC-1865-1C1                       | 18x65     | 5                        | 17       | Cl 5-18             | 36        | 83      | 305              |
| BW-i20PC-2162-1C1                       | 21x62     | 7                        | 25       | Cl 7-24             | 48        | 83      | 495              |
| BW-i20PC-2460-1C1                       | 24x60     | 8                        | 30       | Cl 9-31             | 50        | 81      | 555              |
| BW-i20PC-2472-1C1                       | 24x72     | 10                       | 30       | Cl 9-31             | 50        | 91      | 635              |
| BW-i20PC-3072-6C1                       | 30x72     | 15                       | 50       | Cl 15-49            | 78        | 98      | 985              |
| BW-i20PC-3672-6C1                       | 36x72     | 20                       | 70       | Cl 21-71            | 96        | 98      | 1435             |

| i5 2" Composite 12x40 Catalytic GAC 12x40 Mesh |       |    |    |                          |    |    |      |
|------------------------------------------------|-------|----|----|--------------------------|----|----|------|
| BW-i20PC-1665-1C2                              | 16x65 | 4  | 13 | NH <sub>2</sub> Cl 4-8   | 28 | 82 | 235  |
| BW-i20PC-1865-1C2                              | 18x65 | 5  | 17 | NH <sub>2</sub> Cl 5-10  | 36 | 83 | 305  |
| BW-i20PC-2162-1C2                              | 21x62 | 7  | 25 | NH <sub>2</sub> Cl 7-14  | 48 | 83 | 495  |
| BW-i20PC-2460-1C2                              | 24x60 | 8  | 30 | NH <sub>2</sub> Cl 9-16  | 50 | 81 | 555  |
| BW-i20PC-2472-1C2                              | 24x72 | 10 | 30 | NH <sub>2</sub> Cl 9-20  | 50 | 91 | 635  |
| BW-i20PC-3072-6C2                              | 30x72 | 15 | 50 | NH <sub>2</sub> Cl 15-30 | 78 | 98 | 985  |
| BW-i20PC-3672-6C2                              | 36x72 | 20 | 70 | NH <sub>2</sub> Cl 20-40 | 96 | 98 | 1435 |

| i5 2" Composite Katalox Light (Also available with Filter-Ox) |       |    |    |       |    |    |      |
|---------------------------------------------------------------|-------|----|----|-------|----|----|------|
| BW-i20PC-1665-1FL                                             | 16x65 | 4  | 17 | 4-16  | 20 | 81 | 395  |
| BW-i20PC-1865-1FL                                             | 18x65 | 5  | 20 | 5-21  | 27 | 82 | 505  |
| BW-i20PC-2162-1FL                                             | 21x62 | 7  | 30 | 7-28  | 30 | 82 | 635  |
| BW-i20PC-2460-1FL                                             | 24x60 | 8  | 40 | 9-37  | 40 | 80 | 885  |
| BW-i20PC-2472-1FL                                             | 24x72 | 10 | 40 | 9-37  | 40 | 90 | 1035 |
| BW-i20PC-3072-1FL                                             | 30x72 | 15 | 65 | 15-58 | 65 | 98 | 1585 |

| i5 2" Composite Clinoptilolite (AKA Filter-Ag+) |       |    |    |       |    |    |      |
|-------------------------------------------------|-------|----|----|-------|----|----|------|
| BW-i20PC-1665-1CL                               | 16x65 | 4  | 20 | 4-16  | 27 | 81 | 355  |
| BW-i20PC-1865-1CL                               | 18x65 | 5  | 25 | 5-21  | 36 | 82 | 455  |
| BW-i20PC-2162-1CL                               | 21x62 | 7  | 35 | 7-28  | 48 | 82 | 575  |
| BW-i20PC-2460-1CL                               | 24x60 | 8  | 45 | 9-37  | 62 | 80 | 815  |
| BW-i20PC-2472-1CL                               | 24x72 | 10 | 45 | 9-37  | 62 | 90 | 935  |
| BW-i20PC-3072-6CL                               | 30x72 | 15 | 75 | 15-58 | 90 | 98 | 1435 |



| Item #        | Install Parts for i5 2" Composite Valve |
|---------------|-----------------------------------------|
| 39V-V4460-01  | QC x 2" NPT Straight                    |
| 39V-V4460-04  | QC x 2" NPT Elbow                       |
| 39V-V4460-13  | 2" PVC Solvent                          |
| 39V-V4460-03  | QC x QC Straight                        |
| 39V-V4460-06  | QC x QC Elbow                           |
| 39V-V3037     | No Hard Water Bypass                    |
| 39V-V3036     | Motorized Alternating Valve             |
| 51-818        | 2" x 18" Stainless Flex Line            |
| 51-824        | 2" x 24" Stainless Flex Line            |
| 39V-V3783WC-W | Outdoor Cover                           |
| 56-VAC150     | 1.5" Vacuum Breaker                     |





# Iron, Manganese, H<sub>2</sub>S Reduction

Next to hardness, iron is probably the most common water problem. The secondary (aesthetic) maximum contaminant level (MCL) for iron is 0.3 ppm and 0.05 ppm for manganese. Discolored water, laundry, and plumbing fixtures are the inevitable results. Iron is common in water due to the large amount of naturally occurring iron present in the soil and because corrosive water can pick up iron from pipes and well casings. Iron in water is usually dissolved (ferrous Fe<sup>2+</sup>) clear and colorless. When this water contacts air, the iron precipitates to a solid (ferric or rust Fe<sup>3+</sup>) which will stain bathtubs, sinks, laundry, sidewalks etc., a reddish brown color. Manganese will cause a darker brown to black stain. These impurities impart a metallic taste to water and food. The stains are not removed by soaps or detergents, and bleach will only make the staining worse. Iron can build up in plumbing, fixtures, water heaters and pipes reducing water pressure and quality even further. The pH of water should be above 6.5 and levels as high as 8.5 are preferred when using oxidizing media. Increasing the pH is usually done with a simple calcium carbonate or magnesium oxide filtration system. Sodium carbonate (soda ash Na<sub>2</sub>CO<sub>3</sub>) or sodium hydroxide (caustic soda NaOH) injection can also be considered.

## Types of Iron

**Bacterial Iron** - A dark slime in toilet tanks, water filters or softeners can indicate the presence of bacterial Iron.

**Ferric** - "Red water iron." When Ferrous iron is exposed to air or other oxidant (bleach, ozone, potassium permanganate, or hydrogen peroxide) oxygen combines with the iron to form ferric iron (Fe<sup>+++</sup>).

**Ferrous** - "Clear water Iron" is found in water which contains low oxygen levels. Carbon dioxide reacts with iron in the ground to form water-soluble ferrous bicarbonate (Fe<sup>++</sup>).

## Treatment Methods

**Iron Bacteria** - Iron bacteria should be controlled by continuous injection of chlorine with a contact tank and a carbon tank for dechlorination. Do not use aeration or hydrogen peroxide. pH must be considered as higher pH negatively affects the effectiveness of chlorine.

**Ferric Iron** - Simple sediment filtration can be used, but some ferrous iron is usually present so some additional oxidizing filtration (Filter-Ox or similar) should be used.

**Ferrous Iron** - Treating water with ferrous iron is simple. Several methods should be considered depending on the application and other water factors. Oxidation/filtration and ion exchange are the two most common methods for removing ferrous iron. pH must be taken into consideration as levels below 7.5 make oxidation increasingly difficult.

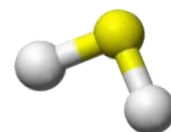
**Ion Exchange (Water Softener)** - Water softening is used by many companies due to its low cost. This method is highly inefficient and should be avoided. 1 ppm of iron or manganese use the same "compensated" capacity as 88 ppm of hardness. Only very low levels of iron or manganese should be removed with traditional softening. Many companies will treat up to 5 ppm of iron with softening but special resins, chemical feeders, expensive salts, and periodic acid cleaning of the resin should be considered. Softening does not remove Ferric iron. Softeners prefer a lower pH as higher pH levels can cause excessive resin fouling.

**Oxidation/Filtration** - Ferrous iron needs to be converted to a ferric iron (rust particle) which is then easily filtered. Oxidizers or oxidizing filter media are commonly used for this process. Aeration is effective at lower iron and manganese levels. Hydrogen peroxide or other oxidants may be needed when higher levels of iron or manganese are present. A simple ORP test can help you determine the likelihood of oxidation-reduction media's working effectively. ORP should be above -170MV otherwise an oxidizer should be used.

**Oxidizing Filtration Media** - Impact Water Products is a distributor of Filter-Ox, a lightweight manganese dioxide media that is impregnated and coated onto a basemedium. This hybrid media has proven to be an effective iron reduction media for most residential, commercial and municipal applications.

**Hydrogen Sulfide** - Treatment methods for the rotten egg odor produced by the dissolved gas Hydrogen Sulfide (H<sub>2</sub>S) are similar to those used to combat iron and manganese. However, the use of a softener will be insufficient in nearly all H<sub>2</sub>S applications. The other methods described herein will generally work for H<sub>2</sub>S, though longer contact times and more stringent adherence to method may be required. In many low level H<sub>2</sub>S applications, catalytic carbon has proven to be an excellent solution, but contact time must be significant and media replacement will be more frequent than normally expected.

| Contaminant      | Hydrogen Peroxide                                              | Chlorine                                                     |
|------------------|----------------------------------------------------------------|--------------------------------------------------------------|
| Iron             | 1 ppm iron = .5 ppm H <sub>2</sub> O <sub>2</sub>              | 1 ppm iron = 1 ppm H <sub>2</sub> O <sub>2</sub>             |
| Manganese        | 1 ppm manganese = 1 ppm H <sub>2</sub> O <sub>2</sub>          | 1 ppm manganese = 2 ppm H <sub>2</sub> O <sub>2</sub>        |
| Hydrogen Sulfide | 1 ppm hydrogen sulfide = 1.5 ppm H <sub>2</sub> O <sub>2</sub> | 1 ppm hydrogen sulfide = 3 ppm H <sub>2</sub> O <sub>2</sub> |



## H<sub>2</sub>O<sub>2</sub> & Chlorine Dosage for H<sub>2</sub>S, Iron, Manganese

To achieve efficient filtration some water conditions may require Hydrogen Peroxide or Sodium Hypochlorite injection. Hydrogen sulfide (H<sub>2</sub>S), clear water iron, and manganese can all benefit from proper H<sub>2</sub>O<sub>2</sub>/Chlorine injection. Bacterial iron should use only sodium hypochlorite injection. Non variable peristaltic pumps require knowing the well output rate. Water driven pumps automatically adjust to the flow rate and require no electricity. Tablet chlorinators have the lowest initial cost and have no moving parts. Solution strength: Common 5.25% (by weight) household bleach is 50,000 ppm of chlorine. A 100-1 dilution ratio pump would reduce the chlorine to ≈500 ppm. Further dilution in the chemical storage tank is then used to reach a proper chlorine level. Tablet chlorinators are adjustable but they are not accurate enough to use without dechlorination. Retention tanks allow the water to be in contact with the chlorine or other oxidant allowing it enough time to properly react. Twenty minutes is the minimum recommended amount of time for effective oxidation and sanitization. Chlorine can be an effective means of reducing contaminants in water but extreme caution and a working knowledge of the dangers of chlorine must be understood. Safety measures must always be observed and followed. When using chlorine for water that has biological issues, a properly designed redundant system must be monitored and maintained.

# i5 2" Brass Control Valve Specifications

## Specifications

Inlet/Outlet ..... 2" Female NPT  
Cycles ..... Up to 6  
Valve Material..... Epoxy coated brass  
Regeneration..... Downflow

## Control valve Flow Rates

Service @15 psi drop (includes meter).....115 gpm  
Backwash @ 25 psi drop..... 80 gpm  
Cv Service..... 29.7  
Cv Backwash..... 16.0

## Operating Pressure

Minimum/Maximum..... 20 psi – 125 psi

## Operating Temperatures

Minimum/Maximum..... 40° – 110° F

## Meter specifications

Accuracy..... ± 5%  
Flow Rate Range..... 1.5 – 150 GPM  
Gallon Range..... 20 – 1,500,000 gallons  
Totalizer..... 1 – 9,999,000 gallons

## Dimensions & Weight / Distributor Pilot

Valve bodies with 2" Female NPT Inlet & Outlet..... 1.90" OD (1.5" NPS)  
Drain: ..... 1.5" Female NPT  
Brine Line Connection..... 1" Male NPT

## Mounting

Tank Adapter..... 4" – 8 UN  
Height From Top Of Tank..... 8.5"  
Shipping Weight With Meter..... 29 lbs.

| Electrical Specifications | AC Adapter   | U.S.    | International |
|---------------------------|--------------|---------|---------------|
| Supply Voltage.....       | 120V AC..... | 230V AC |               |
| Supply Frequency.....     | 60 Hz.....   | 50 Hz   |               |
| Output Voltage.....       | 15V DC.....  | 15V DC  |               |
| Output Current.....       | 750 mA.....  | 750 mA  |               |

## Tank Applications

Water Softener..... 12" – 48" diameter  
Filter: @ 10 gpm of backwash per ft<sup>2</sup> of bed area.....12" – 36" diameter

## Cycle Range of time in minutes

1. Backwash 1st (upflow)..... 1-95  
2. Regenerate Draw/Slow Rinse (downflow).....1-180  
3. Backwash 2nd (upflow).....1-95  
4. Fast Rinse (downflow).....1-95  
5. Regenerant Refill (in service with treated water)..... 0.1-99.0 or off  
6. Service (downflow)



- 2" Top mount control valve suited for commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 115 gpm, backwash 80 gpm
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with an 8 hour carry over
- 15-volt output DC Adapter provides safe and easy installation
- Post treated water regenerant refill
- Reliable and proven DC drive
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127

24" tanks and below use a 4" threaded valve



Shown with optional  
NHWP

Tanks 30" and above include the "QC"  
Series i5 2" Valve with a 6" tank flange



Shown with optional  
NHWP



Certified to NSF/  
ANSI 61 and 372\*





# i5 2" Brass Commercial Softener

i5 2" brass softeners systems are easily configured for most applications. The dual MAV/NHWBP driver allows for separate source backwashing and/or no hard water bypass at the same time. Progressive flow up to four tanks without a System Controller.

| i5 2" Brass Metered Softeners |           |                          |          |                     |           |                |                      |                  |
|-------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                       | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i20M-1465-1A96             | 14"x65"   | 3                        | 5.3      | 3-21                | 50        | 78"            | 24"x40"              | 260              |
| WS-i20M-1665-1A96             | 16"x65"   | 4                        | 6.5      | 4-28                | 60        | 78"            | 24"x40"              | 330              |
| WS-i20M-1865-1A96             | 18"x65"   | 5                        | 7.5      | 5-35                | 69        | 79"            | 24"x40"              | 430              |
| WS-i20M-2162-1A96             | 21"x62"   | 7                        | 11       | 7-48                | 91        | 79"            | 24"x50"              | 590              |
| WS-i20M-2460-1A96             | 24"x60"   | 8                        | 15       | 9-62                | 98        | 77"            | 24"x60"              | 740              |
| WS-i20M-2472-1A96             | 24"x72"   | 10                       | 15       | 9-62                | 96        | 87"            | 24"x60"              | 910              |
| WS-i20MQ-3072-6A96            | 30"x72"   | 15                       | 20       | 15-98               | 109       | 98"            | 30"x60"              | 1380             |
| WS-i20MQ-3672-6A96            | 36"x72"   | 20                       | 30       | 21-107              | 119       | 98"            | 39"x48"              | 2140             |
| WS-i20MQ-4272-7A96            | 42"x72"   | 30                       | 45       | 28-114              | 127       | 106"           | 39"x60"              | 2650             |
| WS-i20MQ-4872-7A96            | 48"x72"   | 35                       | 55       | 38-114              | 127       | 108"           | 50"x60"              | 3350             |



| i5 2" Brass Metered Twin Alternating Softeners |             |                          |          |                     |           |                |                      |                  |
|------------------------------------------------|-------------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Softener Meter                                 | Tank Size   | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-i20A-1465-1A96                              | (2) 14"x65" | 6                        | 5.3      | 3-21                | 50        | 78"            | 24"x40"              | 520              |
| WS-i20A-1665-1A96                              | (2) 16"x65" | 8                        | 6.5      | 4-28                | 60        | 78"            | 24"x40"              | 660              |
| WS-i20A-1865-1A96                              | (2) 18"x65" | 10                       | 7.5      | 5-35                | 69        | 79"            | 24"x40"              | 840              |
| WS-i20A-2162-1A96                              | (2) 21"x62" | 14                       | 11       | 7-48                | 91        | 79"            | 24"x50"              | 1160             |
| WS-i20A-2460-1A96                              | (2) 24"x60" | 16                       | 15       | 9-62                | 98        | 77"            | 24"x60"              | 1500             |
| WS-i20A-2472-1A96                              | (2) 24"x72" | 20                       | 15       | 9-62                | 96        | 87"            | 24"x60"              | 1820             |
| WS-i20AQ-3072-6A96                             | (2) 30"x72" | 30                       | 20       | 15-98               | 109       | 98"            | 30"x60"              | 2740             |
| WS-i20AQ-3672-6A96                             | (2) 36"x72" | 40                       | 30       | 21-107              | 119       | 98"            | 39"x48"              | 4280             |
| WS-i20AQ-4272-7A96                             | (2) 42"x72" | 60                       | 45       | 28-114              | 127       | 106"           | 39"x60"              | 5300             |
| WS-i20AQ-4872-7A96                             | (2) 48"x72" | 70                       | 55       | 38-114              | 127       | 108"           | 50"x60"              | 6700             |

| Item #        | Install Parts for i1 2" Brass Valve    |
|---------------|----------------------------------------|
| 39V-V3098     | No Hard Water Bypass                   |
| 39V-V3076     | Motorized Alternating Valve            |
| 51-818P       | 2" x 18" Stainless Flex Line w/ Nipple |
| 51-824P       | 2" x 24" Stainless Flex Line w/ Nipple |
| 39V-V3783WC-W | Outdoor Cover                          |
| 56-VAC150     | 1.5" Vacuum Breaker                    |

# i5 Brass 2" Progressive Flow Softener Systems

Up to (4) "i5" units are controlled without a System Controller allowing for high efficiencies and flow rates. Simple programming and exceptionally functional. Ideal for most commercial applications where high flow rates and consistent soft water are required.



# i5 2" Progressive Flow Softener Specifications and Ordering Guide

| Type         | Order Softener (2-4) | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|----------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 16x65 Twin   | (2) WS-i20M-1665-AA6 | WS-i20X2              | (2) 16x65  | 8                     | (2) 24x50              | 6.5            | 4-28             | 60            | 78            | 660        |
| 16x65 Triple | (3) WS-i20M-1665-AA6 | WS-i20X3              | (3) 16x65  | 12                    | (3) 24x50              | 6.5            | 4-56             | 120           | 78            | 990        |
| 16x65 Quad   | (4) WS-i20M-1665-AA6 | WS-i20X4              | (4) 16x65  | 16                    | (4) 24x50              | 6.5            | 4-84             | 180           | 78            | 1320       |
| 18x65 Twin   | (2) WS-i20M-1865-AA6 | WS-i20X2              | (2) 18x65  | 10                    | (2) 24x50              | 7.5            | 5-35             | 69            | 79            | 860        |
| 18x65 Triple | (3) WS-i20M-1865-AA6 | WS-i20X3              | (3) 18x65  | 15                    | (3) 24x50              | 7.5            | 5-70             | 138           | 79            | 1290       |
| 18x65 Quad   | (4) WS-i20M-1865-AA6 | WS-i20X4              | (4) 18x65  | 20                    | (4) 24x50              | 7.5            | 5-105            | 207           | 79            | 1720       |
| 21x62 Twin   | (2) WS-i20M-2162-AA6 | WS-i20X2              | (2) 21x62  | 14                    | (2) 24x50              | 11             | 7-48             | 91            | 79            | 1180       |
| 21x62 Triple | (3) WS-i20M-2162-AA6 | WS-i20X3              | (3) 21x62  | 21                    | (3) 24x50              | 11             | 7-96             | 182           | 79            | 1770       |
| 21x62 Quad   | (4) WS-i20M-2162-AA6 | WS-i20X4              | (4) 21x62  | 28                    | (4) 24x50              | 11             | 7-144            | 273           | 79            | 2360       |
| 24x60 Twin   | (2) WS-i20M-2460-AA6 | WS-i20X2              | (2) 24x60  | 16                    | (2) 24x60              | 15             | 9-62             | 98            | 77            | 1480       |
| 24x60 Triple | (3) WS-i20M-2460-AA6 | WS-i20X3              | (3) 24x60  | 24                    | (3) 24x60              | 15             | 9-124            | 182           | 77            | 2220       |
| 24x60 Quad   | (4) WS-i20M-2460-AA6 | WS-i20X4              | (4) 24x60  | 32                    | (4) 24x60              | 15             | 9-186            | 273           | 77            | 2960       |
| 24x72Twin    | (2) WS-i20M-2472-AA6 | WS-i20X2              | (2) 24x72  | 20                    | (2) 30x48              | 15             | 9-62             | 96            | 87            | 1820       |
| 24x72 Triple | (3) WS-i20M-2472-AA6 | WS-i20X3              | (3) 24x72  | 30                    | (3) 30x48              | 15             | 9-124            | 192           | 87            | 2730       |
| 24x72 Quad   | (4) WS-i20M-2472-AA6 | WS-i20X4              | (4) 24x72  | 40                    | (4) 30x48              | 15             | 9-186            | 288           | 87            | 3640       |
| 30x72 Twin   | (2) WS-i20M-3072-AA6 | WS-i20X2              | (2) 30x72  | 30                    | (2) 39x48              | 20             | 15-98            | 109           | 94            | 2760       |
| 30x72 Triple | (3) WS-i20M-3072-AA6 | WS-i20X3              | (3) 30x72  | 45                    | (3) 39x48              | 20             | 15-196           | 218           | 94            | 4140       |
| 30x72 Quad   | (4) WS-i20M-3072-AA6 | WS-i20X4              | (4) 30x72  | 60                    | (4) 39x48              | 20             | 15-294           | 327           | 94            | 5520       |
| 36x72 Twin   | (2) WS-i20M-3672-AA6 | WS-i20X2              | (2) 36x72  | 40                    | (2) 39x60              | 30             | 21-107           | 119           | 98            | 4280       |
| 36x72 Triple | (3) WS-i20M-3672-AA6 | WS-i20X3              | (3) 36x72  | 60                    | (3) 39x60              | 30             | 21-214           | 238           | 98            | 6420       |
| 36x72 Quad   | (4) WS-i20M-3672-AA6 | WS-i20X4              | (4) 36x72  | 80                    | (4) 39x60              | 30             | 21-321           | 357           | 98            | 8560       |
| 42x72 Twin   | (2) WS-i20M-4272-AA6 | WS-i20X2              | (2) 42x72  | 60                    | (2) 42x60              | 45             | 28-114           | 127           | 106           | 10,600     |
| 42x72 Triple | (3) WS-i20M-4272-AA6 | WS-i20X3              | (3) 42x72  | 90                    | (3) 42x60              | 45             | 28-228           | 254           | 106           | 15,900     |
| 42x72 Quad   | (4) WS-i20M-4272-AA6 | WS-i20X4              | (4) 42x72  | 120                   | (4) 42x60              | 45             | 28-342           | 381           | 106           | 21,200     |
| 48x72 Twin   | (2) WS-i20M-4872-AA6 | WS-i20X2              | (2) 48x72  | 70                    | (2) 50x60              | 55             | 38-114           | 127           | 108           | 13,400     |
| 48x72 Triple | (3) WS-i20M-4872-AA6 | WS-i20X3              | (3) 48x72  | 105                   | (3) 50x60              | 55             | 38-228           | 254           | 108           | 20,100     |
| 48x72 Quad   | (4) WS-i20M-4872-AA6 | WS-i20X4              | (4) 48x72  | 140                   | (4) 50x60              | 55             | 38-342           | 381           | 108           | 26,800     |



## Upgrade to the Optional System Controller?

- ◆ Need more than four? The optional **System Controller** operates 2 – 8 units on 1 or 2 independent systems, or operates as a water monitor only
- ◆ Monochrome Graphics Display with blue backlight on front panel for time of day, day of week, days until next regeneration, current system flow rate, and total system volume used (Totalizer)
- ◆ Two input connections that can either be used for meters or other auxiliary inputs
- ◆ On-board Ethernet connection for remote, real-time monitoring of system performance

| Item #        | Install Parts for i15 Composite              |
|---------------|----------------------------------------------|
| 39V-V3783WC-W | White Outdoor Cover                          |
| 39V-V3076     | Motorized Alternating Valve (Add connectors) |
| 51-818P       | 2" x 18" Stainless Flex Line                 |
| 51-824P       | 2" x 24" Stainless Flex Line                 |
| 56-VAC150     | 1.5" Vacuum Breaker                          |



- ◆ Supports Modbus TCP/IP communications
- ◆ System diagnostic and programming information spreadsheet may be uploaded to a standard USB drive
- ◆ Two fused Single Pole Double Throw (SPDT) relay outputs
- ◆ Single demand-based meter output signal
- ◆ Coin cell lithium battery backup for time of day with easy access cover
- ◆ Front panel LED status indicators for Online, Standby, Regeneration, and Lead Unit Position
- ◆ Language options include: English, Spanish, French, German, Italian, Dutch, and Polish

| Part #            | Description  |
|-------------------|--------------|
| System Controller | 39V-V3030    |
| Power Cable 15'   | 39V-V4276-15 |
| Power Cable 36'   | 39V-V4276-36 |
| Com Cable 8'      | 39V-V3474    |
| Com Cable 12'     | 39V-V3474-12 |
| Com Cable 24'     | 39V-V3474-24 |
| Com Cable 36'     | 39V-V3474-36 |



# i5 2" Brass Valve Backwash Systems

The i5 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger houses or light commercial applications. i5 series carbon backwashing units include a high flow totalizing meter, bypass and 1" plastic 90° MPT plumbing connectors. Many more connection options available.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

| i5 2" Brass 12x40 Non Catalytic GAC |           |                          |          |                     |           |         |                  |
|-------------------------------------|-----------|--------------------------|----------|---------------------|-----------|---------|------------------|
| Model #                             | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| BW-i20C-1665-1C1                    | 16x65     | 4                        | 13       | Cl 4-14             | 28        | 82      | 250              |
| BW-i20C-1865-1C1                    | 18x65     | 5                        | 17       | Cl 5-18             | 36        | 83      | 320              |
| BW-i20C-2162-1C1                    | 21x62     | 7                        | 25       | Cl 7-24             | 48        | 83      | 410              |
| BW-i20C-2460-1C1                    | 24x60     | 8                        | 30       | Cl 9-31             | 62        | 81      | 570              |
| BW-i20C-2472-1C1                    | 24x72     | 10                       | 30       | Cl 9-31             | 62        | 91      | 650              |
| BW-i20CQ-3072-6C1                   | 30x72     | 15                       | 50       | Cl 15-49            | 98        | 98      | 1000             |
| BW-i20CQ-3672-6C1                   | 36x72     | 20                       | 70       | Cl 21-71            | 120       | 98      | 1450             |

| i5 2" Brass 12x40 Catalytic GAC 12x40 Mesh |       |    |    |                          |     |    |      |
|--------------------------------------------|-------|----|----|--------------------------|-----|----|------|
| BW-i20C-1665-1C2                           | 16x65 | 4  | 13 | NH <sub>2</sub> Cl 4-8   | 28  | 82 | 250  |
| BW-i20C-1865-1C2                           | 18x65 | 5  | 17 | NH <sub>2</sub> Cl 5-10  | 36  | 83 | 320  |
| BW-i20C-2162-1C2                           | 21x62 | 7  | 25 | NH <sub>2</sub> Cl 7-14  | 48  | 83 | 410  |
| BW-i20C-2460-1C2                           | 24x60 | 8  | 30 | NH <sub>2</sub> Cl 9-16  | 62  | 81 | 570  |
| BW-i20C-2472-1C2                           | 24x72 | 10 | 30 | NH <sub>2</sub> Cl 9-20  | 62  | 91 | 650  |
| BW-i20CQ-3072-6C2                          | 30x72 | 15 | 50 | NH <sub>2</sub> Cl 15-30 | 98  | 98 | 1000 |
| BW-i20CQ-3672-6C2                          | 36x72 | 20 | 70 | NH <sub>2</sub> Cl 20-40 | 120 | 98 | 1450 |

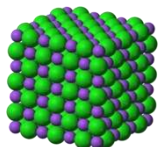
| i5 2" Brass Katalox Light (Also available with Filter-Ox) |       |    |    |       |    |    |      |
|-----------------------------------------------------------|-------|----|----|-------|----|----|------|
| BW-i20C-1665-1FL                                          | 16x65 | 4  | 17 | 4-16  | 20 | 81 | 410  |
| BW-i20C-1865-1FL                                          | 18x65 | 5  | 20 | 5-21  | 27 | 82 | 520  |
| BW-i20C-2162-1FL                                          | 21x62 | 7  | 30 | 7-28  | 36 | 82 | 650  |
| BW-i20C-2460-1FL                                          | 24x60 | 8  | 40 | 9-37  | 47 | 80 | 900  |
| BW-i20C-2472-1FL                                          | 24x72 | 10 | 40 | 9-37  | 47 | 90 | 1050 |
| BW-i20CQ-3072-1FL                                         | 30x72 | 15 | 65 | 15-58 | 73 | 98 | 1600 |

| i5 2" Brass Clinoptilolite (AKA Filter-Ag+) |       |    |    |       |    |    |      |
|---------------------------------------------|-------|----|----|-------|----|----|------|
| BW-i20C-1665-1CL                            | 16x65 | 4  | 20 | 4-16  | 27 | 81 | 370  |
| BW-i20C-1865-1CL                            | 18x65 | 5  | 25 | 5-21  | 36 | 82 | 470  |
| BW-i20C-2162-1CL                            | 21x62 | 7  | 35 | 7-28  | 48 | 82 | 590  |
| BW-i20C-2460-1CL                            | 24x60 | 8  | 45 | 9-37  | 62 | 80 | 830  |
| BW-i20C-2472-1CL                            | 24x72 | 10 | 45 | 9-37  | 62 | 90 | 950  |
| BW-i20CQ-3072-6CL                           | 30x72 | 15 | 75 | 15-58 | 90 | 98 | 1450 |



| Item #        | Install Parts for i5 2" Brass Valve    |
|---------------|----------------------------------------|
| 39V-V3098     | No Hard Water Bypass                   |
| 39V-V3076     | Motorized Alternating Valve            |
| 51-818P       | 2" x 18" Stainless Flex Line w/ Nipple |
| 51-824P       | 2" x 24" Stainless Flex Line w/ Nipple |
| 39V-V3783WC-W | Outdoor Cover                          |
| 56-VAC150     | 1.5" Vacuum Breaker                    |

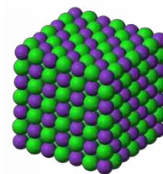




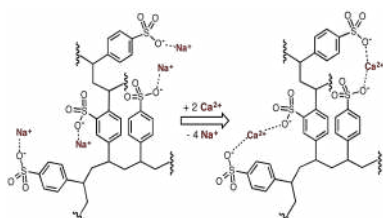
# Sodium Chloride NaCl

## VS.

# Potassium Chloride KCl

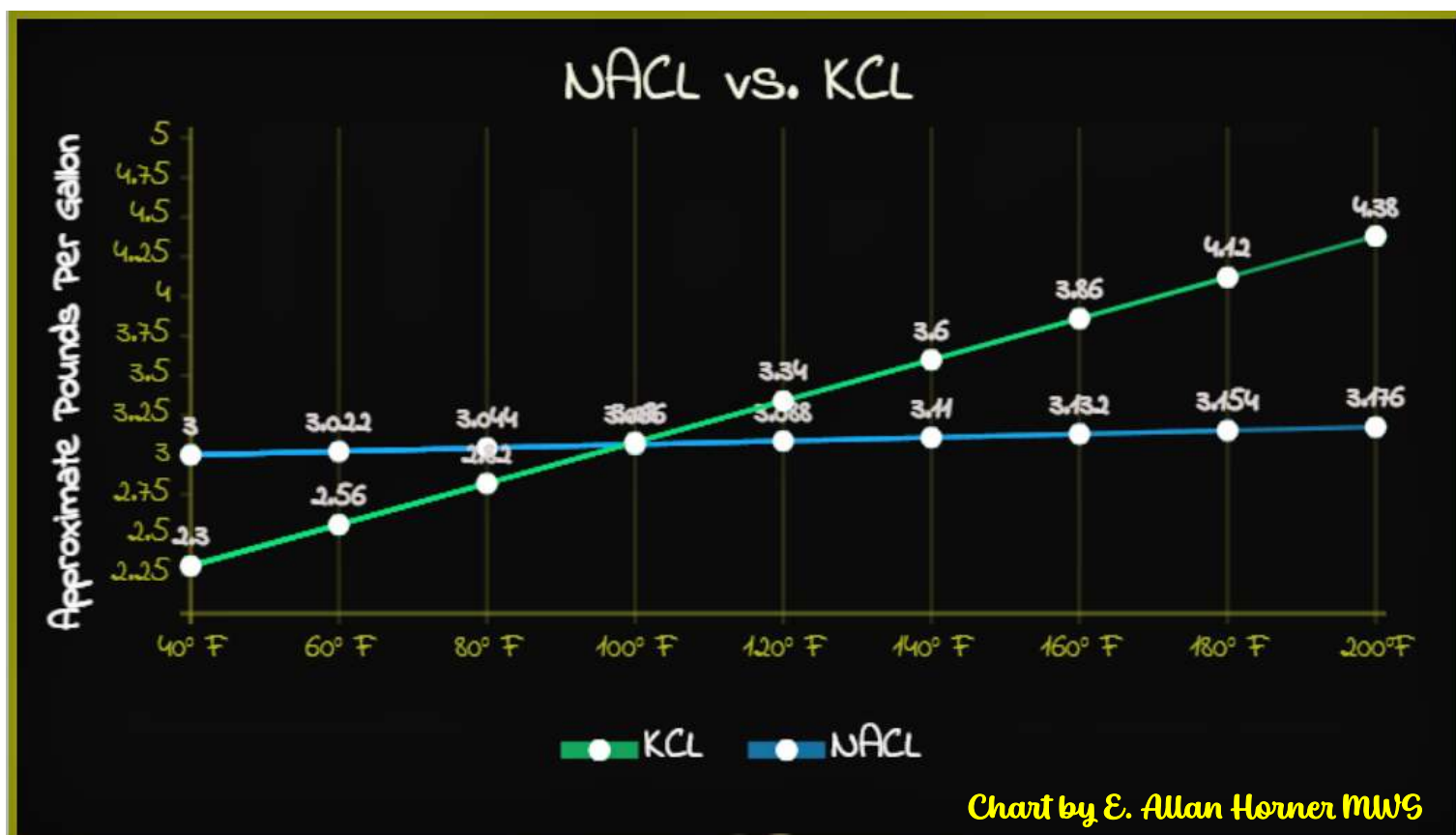


Sodium chloride and potassium chloride are the two most common regenerants used for water softening. Sodium Chloride requires little thought or planning. Potassium chloride requires considerable knowledge and a good understanding of water solubility based on varying water temperatures. The chart below shows the amount of NaCl and KCl that a gallon of water will dissolve at varying temperatures. When using KCl as a regenerant, the brine tank should be located in an environmentally



controlled location. If the brine tank can not be installed in such a location, caking, bridging, fouling, and other problems may occur. Outdoor and garage installations will commonly experience ambient temperature fluctuations in excess of 50°F. When the water temperature changes, recrystallization of the potassium chloride occurs causing a mush. This is due to potassium chloride's solubility based on water temperature. The

solubility increase is approximately 11% per 10 degrees of water temperature change. Controlling the temperature of the brine tank or programming the valve as a "brine fill first" will mitigate the problems common with KCl regeneration. More water in the brine tank will also be needed to achieve the same amount of capacity. Below 80°F you will need more water in the brine tank to achieve the same capacity. Larger brine tanks may also be needed if higher dosing rates are used.



# Clack WS2HF



## Specifications

|                                                                       |                                    |
|-----------------------------------------------------------------------|------------------------------------|
| Inlet/Outlet .....                                                    | 2" Female NPT or BSPT              |
| Cycles .....                                                          | Up to 9                            |
| Valve Material.....                                                   | Epoxy coated brass                 |
| Regeneration.....                                                     | Downflow                           |
| Control valve Flow Rates                                              |                                    |
| Service @ 15 psi drop (includes meter).....                           | 165 gpm                            |
| Backwash @ 25 psi drop.....                                           | 175 gpm                            |
| Cv Service.....                                                       | 42.6                               |
| Cv Backwash.....                                                      | 35.0                               |
| Operating Pressures                                                   |                                    |
| Minimum/Maximum.....                                                  | 20 psi – 125 psi                   |
| Operating Temperatures                                                |                                    |
| Minimum/Maximum.....                                                  | 40° – 110° F                       |
| Meter specifications                                                  |                                    |
| Accuracy.....                                                         | ± 5%                               |
| Flow Rate Range.....                                                  | 1.5 – 125 GPM                      |
| Gallon Range.....                                                     | 10 – 999,000 gallons               |
| Totalizer.....                                                        | 1000– 999,999,000 gallons          |
| Dimensions & Weight / Distributor Pilot                               |                                    |
| Valve bodies with 2" Female NPT Inlet & Outlet.....                   | 2.375" OD (2" NPS)                 |
| Valve bodies with 2" Female BSPT Inlet & Outlet.....                  | 63mm OD                            |
| Drain: .....                                                          | 2" Female NPT/BSPT                 |
| Brine Line Connection.....                                            | 1" Male NPT elbow                  |
| Mounting Base.....                                                    | 4" - 8 UN, 6" Flange or Side Mount |
| Height From Top Of Tank.....                                          | 11.4"                              |
| Shipping Weight With Meter.....                                       | 48 lbs.                            |
| Electrical Specifications                                             | AC Adapter U.S. International      |
| Supply Voltage.....                                                   | 120V AC..... 230V AC               |
| Supply Frequency.....                                                 | 60 Hz..... 60 Hz                   |
| Output Voltage.....                                                   | 24V DC..... 20V DC                 |
| Output Current.....                                                   | 800 mA..... 800 mA                 |
| Tank Applications                                                     |                                    |
| Water Softener.....                                                   | 18" – 63" diameter                 |
| Filter: @ 10 gpm of backwash per ft <sup>2</sup> of bed area.....     | 18" – 54" diameter                 |
| Cycles of Operation                                                   |                                    |
| Cycle Range of time in minutes: Choose up to nine cycles in any order |                                    |
| 1. Backwash 1st (upflow).....                                         | 1-95                               |
| 2. Regenerate Draw/Slow Rinse (downflow).....                         | 1-180                              |
| 3. Slow Rinse.....                                                    | 1-95                               |
| 4. Fast Rinse (downflow).....                                         | 1-95                               |
| 5. Regenerant Refill (in service with treated water).....             | 0.1-99                             |
| 6. Hold (service).....                                                | 1-480 minutes                      |

- 2" top mount or side mount control valve suited for commercial and industrial applications
- Modbus RS485 duplex to communicate with BMS
- Network up to 16 systems using Cat5 cables
- Programmable for Single, Alternating, Progressive Flow or Series
- Epoxy coated lead free brass valve body
- Built-in Internal Flow Meter standard with all valves
- Service flow rate 165 gpm (624 lpm) (37 m3/h), Backwash flow rate 175 gpm (662 lpm) (39 m3/h)
- Solid state microprocessor with removable screen
- Backlit display shows: Time of Day, Current Flow Rate, Volume Used, Volume Remaining, Days Remaining
- Four methods to initiate the down flow regeneration; meter delayed, meter immediate, time clock delayed, or pressure differential
- Fully programmable regeneration cycle sequences (maximum 9)
- Fully programmable regeneration cycle times
- Pre or Post treated water regenerant refill
- Days override feature; 1-28 days or 7 day
- 24-volt DC adapter provides a safe and easy installation
- Reliable and proven DC drive
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127

In March of 2020, Clack released a new electronics package for the WS2H and WS3 series control valves. If any electronic component needs replacing the entire kit must be replaced on all connected units.

| ORDER NUMBER | DESCRIPTION                     |
|--------------|---------------------------------|
| V4428        | WS2H/3 PCB W/MODBUS UPGRADE KIT |

## NEW Monochrome Graphics



## OLD DESIGN:



## NEW Main Board



## NEW Drive Bracket



## NEW DC Power Supply





# WS2HF 2" Commercial Softener



| WS2HF 2" Brass Metered Softeners |           |                          |          |                     |           |                |                      |                  |
|----------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                          | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-2HFM-2472-1A96                | 24"x72"   | 10                       | 15       | 9-62                | 120       | 93             | 24"x60"              | 910              |
| WS-2HFM-3072-6A96                | 30"x72"   | 15                       | 20       | 15-98               | 140       | 101            | 30"x60"              | 1380             |
| WS-2HFM-3672-6A96                | 36"x72"   | 20                       | 30       | 21-113              | 150       | 101            | 39"x48"              | 2040             |
| WS-2HFM-4272-7A96                | 42"x72"   | 30                       | 45       | 28-123              | 150       | 109            | 39"x60"              | 2650             |
| WS-2HFM-4872-7A96                | 48"x72"   | 35                       | 55       | 38-123              | 150       | 111            | 50"x60"              | 3350             |



| WS2HF 2" Brass Twin Alternating Metered Softeners |             |                          |          |                     |           |                |                      |                  |
|---------------------------------------------------|-------------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                                           | Tank Size   | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-2HFA-2472-1A96                                 | (2) 24"x72" | 20                       | 15       | 9-62                | 120       | 93             | 24"x60"              | 1820             |
| WS-2HFA-3072-6A96                                 | (2) 30"x72" | 30                       | 20       | 15-98               | 140       | 101            | 30"x60"              | 2760             |
| WS-2HFA-3672-6A96                                 | (2) 36"x72" | 40                       | 30       | 21-113              | 150       | 101            | 39"x48"              | 4080             |
| WS-2HFA-4272-7A96                                 | (2) 42"x72" | 60                       | 45       | 28-123              | 150       | 109            | 39"x60"              | 5300             |
| WS-2HFA-4872-7A96                                 | (2) 48"x72" | 70                       | 55       | 38-123              | 150       | 111            | 50"x60"              | 6700             |



| Item #        | Install Parts for WS2HF" Brass Valve   |
|---------------|----------------------------------------|
| 39V-V3098     | No Hard Water Bypass                   |
| 39V-V3076     | Motorized Alternating Valve            |
| 51-818P       | 2" x 18" Stainless Flex Line w/ Nipple |
| 51-824P       | 2" x 24" Stainless Flex Line w/ Nipple |
| 39V-V3783WC-W | Outdoor Cover                          |
| 56-VAC150     | 1.5" Vacuum Breaker                    |

# WS2HF 2" Progressive Flow Softener Systems

Up to (16) "WS2HF" units are controlled without a System Controller allowing for high efficiencies and flow rates. Powerful programming make the WS2HF ideal for the most demanding commercial applications.

## WS2HF 2" Progressive Flow Softener Specifications and Ordering

| Type         | Order Softener (2-4) | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|----------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 24x72Twin    | (2) WS-2HFM-2472-AA6 | WS-2HX2               | (2) 24x72  | 20                    | (2) 30x48              | 15             | 9-62             | 120           | 93            | 1820       |
| 24x72 Triple | (3) WS-2HFM-2472-AA6 | WS-2HX3               | (3) 24x72  | 30                    | (3) 30x48              | 15             | 9-124            | 240           | 93            | 2730       |
| 24x72 Quad   | (4) WS-2HFM-2472-AA6 | WS-2HX4               | (4) 24x72  | 40                    | (4) 30x48              | 15             | 9-186            | 360           | 93            | 3640       |
| 30x72 Twin   | (2) WS-2HFM-3072-AA6 | WS-2HX2               | (2) 30x72  | 30                    | (2) 39x48              | 20             | 15-98            | 140           | 101           | 2760       |
| 30x72 Triple | (3) WS-2HFM-3072-AA6 | WS-2HX3               | (3) 30x72  | 45                    | (3) 39x48              | 20             | 15-196           | 280           | 101           | 4140       |
| 30x72 Quad   | (4) WS-2HFM-3072-AA6 | WS-2HX4               | (4) 30x72  | 60                    | (4) 39x48              | 20             | 15-294           | 420           | 101           | 5520       |
| 36x72 Twin   | (2) WS-2HFM-3672-AA6 | WS-2HX2               | (2) 36x72  | 40                    | (2) 39x60              | 30             | 21-113           | 150           | 101           | 4280       |
| 36x72 Triple | (3) WS-2HFM-3672-AA6 | WS-2HX3               | (3) 36x72  | 60                    | (3) 39x60              | 30             | 21-226           | 300           | 101           | 6420       |
| 36x72 Quad   | (4) WS-2HFM-3672-AA6 | WS-2HX4               | (4) 36x72  | 80                    | (4) 39x60              | 30             | 21-339           | 450           | 101           | 8560       |
| 42x72 Twin   | (2) WS-2HFM-4272-AA6 | WS-2HX2               | (2) 42x72  | 60                    | (2) 42x60              | 45             | 28-123           | 150           | 109           | 10,600     |
| 42x72 Triple | (3) WS-2HFM-4272-AA6 | WS-2HX3               | (3) 42x72  | 90                    | (3) 42x60              | 45             | 28-246           | 300           | 109           | 15,900     |
| 42x72 Quad   | (4) WS-2HFM-4272-AA6 | WS-2HX4               | (4) 42x72  | 120                   | (4) 42x60              | 45             | 28-369           | 450           | 109           | 21,200     |
| 48x72 Twin   | (2) WS-2HFM-4872-AA6 | WS-2HX2               | (2) 48x72  | 70                    | (2) 50x60              | 55             | 38-123           | 150           | 111           | 13,400     |
| 48x72 Triple | (3) WS-2HFM-4872-AA6 | WS-2HX3               | (3) 48x72  | 105                   | (3) 50x60              | 55             | 38-246           | 300           | 111           | 20,100     |
| 48x72 Quad   | (4) WS-2HFM-4872-AA6 | WS-2HX4               | (4) 48x72  | 140                   | (4) 50x60              | 55             | 38-369           | 450           | 111           | 26,800     |



| Item #      | Install Parts for WS2HF Valve          |
|-------------|----------------------------------------|
| 39V-V3098   | No Hard Water Bypass                   |
| 39V-V3076   | Motorized Alternating Valve            |
| 51-818P     | 2" x 18" Stainless Flex Line w/ Nipple |
| 51-824P     | 2" x 24" Stainless Flex Line w/ Nipple |
| 39V-V4051WC | Outdoor Cover                          |
| 56-VAC150   | 1.5" Vacuum Breaker                    |



# WS2HF 2" Valve Backwash Systems

The WS2HF Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger commercial applications. The WS2HF backwashing units include Modbus connectivity and a highly programmable controller to meet the most demanding commercial and industrial needs.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalomethanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

| WS2HF 2" 12x40 Non Catalytic GAC                       |           |                          |          |                          |           |         |                  |
|--------------------------------------------------------|-----------|--------------------------|----------|--------------------------|-----------|---------|------------------|
| Model #                                                | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM      | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| BW-2HFC-2472-1C1                                       | 24x72     | 10                       | 30       | CI 9-31                  | 62        | 93      | 650              |
| BW-2HFC-3072-6C1                                       | 30x72     | 15                       | 50       | CI 15-49                 | 98        | 101     | 1000             |
| BW-2HFC-3672-6C1                                       | 36x72     | 20                       | 70       | CI 21-71                 | 142       | 101     | 1450             |
| BW-2HFC-4272-7C1                                       | 42x72     | 30                       | 95       | CI 29-96                 | 150       | 109     | 2050             |
| BW-2HFC-4872-7C1                                       | 48x72     | 35                       | 125      | CI 38-126                | 150       | 111     | 2625             |
| WS2HF 2" 12x40 Catalytic GAC 12x40 Mesh                |           |                          |          |                          |           |         |                  |
| BW-2HFC-2472-1C2                                       | 24x72     | 10                       | 30       | NH <sub>2</sub> Cl 9-20  | 62        | 93      | 650              |
| BW-2HFC-3072-6C2                                       | 30x72     | 15                       | 50       | NH <sub>2</sub> Cl 15-30 | 98        | 101     | 1000             |
| BW-2HFC-3672-6C2                                       | 36x72     | 20                       | 70       | NH <sub>2</sub> Cl 20-40 | 142       | 101     | 1450             |
| BW-2HFC-4272-7C2                                       | 42x72     | 30                       | 95       | NH <sub>2</sub> Cl 29-50 | 150       | 109     | 2050             |
| BW-2HFC-4872-7C2                                       | 48x72     | 35                       | 125      | NH <sub>2</sub> Cl 38-60 | 150       | 111     | 2625             |
| WS2HF 2" Katalox Light (Also available with Filter-Ox) |           |                          |          |                          |           |         |                  |
| BW-2HFC-2472-1FL                                       | 24x72     | 10                       | 40       | 9-47                     | 62        | 93      | 1050             |
| BW-2HFC-3072-6FL                                       | 30x72     | 15                       | 65       | 15-73                    | 98        | 101     | 1600             |
| BW-2HFC-3672-6FL                                       | 36x72     | 20                       | 90       | 21-105                   | 140       | 101     | 2250             |
| BW-2HFC-4272-7FL                                       | 42x72     | 30                       | 120      | 28-135                   | 150       | 109     | 3200             |
| WS2HF 2" Clinoptilolite (AKA Filter-Ag+)               |           |                          |          |                          |           |         |                  |
| BW-2HFC-2472-1CL                                       | 24x72     | 10                       | 45       | 9-47                     | 62        | 93      | 950              |
| BW-2HFC-3072-6CL                                       | 30x72     | 15                       | 75       | 15-73                    | 98        | 101     | 1450             |
| BW-2HFC-3672-6CL                                       | 36x72     | 20                       | 100      | 21-105                   | 140       | 101     | 2000             |
| BW-2HFC-4272-7CL                                       | 42x72     | 30                       | 145      | 28-115                   | 150       | 109     | 2750             |



| Item #        | Install Parts for i1 2" Brass Valve    |
|---------------|----------------------------------------|
| 39V-V3098     | No Hard Water Bypass                   |
| 39V-V3076     | Motorized Alternating Valve            |
| 51-818P       | 2" x 18" Stainless Flex Line w/ Nipple |
| 51-824P       | 2" x 24" Stainless Flex Line w/ Nipple |
| 39V-V3783WC-W | Outdoor Cover                          |
| 56-VAC150     | 1.5" Vacuum Breaker                    |
| 39V-V3094-15  | 2" Stainless Meter MxF                 |



# Clack WS3



- 3" top mount or side mount control valve suited for commercial and industrial applications
- Epoxy coated lead free brass valve body
- Economical stainless steel optional meter assembly
- Service flow rate 250 gpm (946 lpm) (56.8 m3/h), Backwash flow rate 220 gpm (833 lpm) (50.0 m3/h)
- Solid state microprocessor with easy access front removable POD
- Front panel display for Time of Day, Current Flow Rate, Totalizer and Volume/Days until Regeneration
- Four methods to initiate the down flow regeneration; meter delayed, meter immediate, time clock delayed, or pressure differential
- Fully programmable regeneration cycle sequences (maximum 9)
- Fully programmable regeneration cycle times
- Pre or Post treated water regenerant refill
- Days override feature; 1-28 days available
- Capacitor back-up with up to 24 hour carry over
- 24-volt output DC adapter provides safe and easy installation
- Reliable and proven DC drive
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127

## Specifications

Inlet/Outlet .....3" Female NPT or BSPT  
Cycles .....Up to 9  
Valve Material..... Epoxy coated brass  
Regeneration.....Downflow

## Control valve Flow Rates

Service @15 psi drop (includes meter)..... 250 gpm  
Backwash @ 25 psi drop.....220 gpm  
Cv Service..... 64.6  
Cv Backwash..... 44.0

## Operating Pressures

Minimum/Maximum..... 20 psi – 125 psi

## Operating Temperatures

Minimum/Maximum..... 40° – 110° F

## Meter specifications

Accuracy..... ± 5%  
Flow Rate Range..... 3.5 – 350 GPM  
Gallon Range..... 10 – 999,000 gallons  
Totalizer..... 1000– 999,999,000 gallons

## Dimensions & Weight / Distributor Pilot

Valve bodies with 3" Female NPT Inlet & Outlet..... 3.5" OD (3" NPS)  
Valve bodies with 3" Female BSPT Inlet & Outlet..... 90mm OD  
Drain: ..... 3" Female NPT/BSPT  
Brine Line Connection..... 1" Male NPT elbow  
Adapter Included..... 3/4" x 1" solvent weld elbow  
Mounting Base..... 6" Flange or Side Mount  
Height From Top Of Tank..... 12.5"  
Shipping Weight With Meter..... 57 lbs.

| Electrical Specifications | AC Adapter   | U.S.    | International |
|---------------------------|--------------|---------|---------------|
| Supply Voltage.....       | 120V AC..... | 230V AC |               |
| Supply Frequency.....     | 60 Hz.....   | 50 Hz   |               |
| Output Voltage.....       | 24V DC.....  | 24V DC  |               |
| Output Current.....       | 750 mA.....  | 750 mA  |               |

## Tank Applications

Water Softener..... 18" – 63" diameter  
Filter: @ 10 gpm of backwash per ft² of bed area.....18" – 63" diameter

## Cycles of Operation

Cycle Range of time in minutes: Choose up to nine cycles in any order

1. Backwash 1st (upflow)..... 1-95
2. Regenerate Draw/Slow Rinse (downflow).....1-180
3. Slow Rinse.....1-95
4. Fast Rinse (downflow).....1-95
5. Regenerant Refill (in service with treated water).....0.1-99.0
6. Hold (service).....1-480 minutes

In March of 2020, Clack released a new electronics package for the WS2H and WS3 series control valves. If any electronic component needs replacing the entire kit must be replaced on all connected units.

| ORDER NUMBER | DESCRIPTION                     |
|--------------|---------------------------------|
| V4428        | WS2H/3 PCB W/MODBUS UPGRADE KIT |

## NEW Monochrome Graphics



## NEW Main Board



## NEW Drive Bracket



## OLD DESIGN:



## NEW DC Power Supply



# WS3 3" Commercial Softener

The WS3 softener series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for the highest flow applications. The WS3 softening systems include Modbus connectivity and a highly programmable controller to meet the most demanding commercial and industrial needs. Up to 16 units can be connected together for the highest flow rates! Separate brine draw and slow rinse is ideal for salt silos. Available with a side mount option!

| WS3 3" Brass Metered Softeners |           |                          |          |                     |           |                |                      |                  |
|--------------------------------|-----------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                        | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-30C-2472-1A96               | 24"x72"   | 10                       | 15       | 9-62                | 134       | 100            | 24"x60"              | 930              |
| WS-30C-3072-6A96               | 30"x72"   | 15                       | 20       | 15-98               | 186       | 108            | 30"x60"              | 1400             |
| WS-30C-3672-6A96               | 36"x72"   | 20                       | 30       | 21-141              | 222       | 108            | 39"x48"              | 2060             |
| WS-30C-4272-7A96               | 42"x72"   | 30                       | 45       | 28-185              | 244       | 118            | 39"x60"              | 2670             |
| WS-30C-4872-7A96               | 48"x72"   | 35                       | 55       | 38-200              | 251       | 120            | 50"x60"              | 3370             |
| WS-30C-6386-7A96               | 63"x86"   | 50                       | 100      | 65-248              | 275       | 125            | 50x50*               | 6000             |

\*Requires Brine Cube



| WS3 3" Brass Twin Alternating Metered Softeners |             |                          |          |                     |           |                |                      |                  |
|-------------------------------------------------|-------------|--------------------------|----------|---------------------|-----------|----------------|----------------------|------------------|
| Model #                                         | Tank Size   | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height Inches | Min. Rec. Brine Tank | ≈Weight Lbs. Dry |
| WS-30A-2472-1A96                                | (2) 24"x72" | 20                       | 15       | 9-62                | 120       | 93             | 24"x60"              | 1860             |
| WS-30A-3072-6A96                                | (2) 30"x72" | 30                       | 20       | 15-98               | 140       | 101            | 30"x60"              | 2800             |
| WS-30A-3672-6A96                                | (2) 36"x72" | 40                       | 30       | 21-113              | 150       | 101            | 39"x48"              | 4120             |
| WS-30A-4272-7A96                                | (2) 42"x72" | 60                       | 45       | 28-123              | 150       | 109            | 39"x60"              | 5340             |
| WS-30A-4872-7A96                                | (2) 48"x72" | 70                       | 55       | 38-123              | 150       | 111            | 50"x60"              | 6740             |
| WS-30A-6386-7A96                                | (2) 63"x86" | 50                       | 100      | 65-248              | 275       | 125            | 50x50*               | 12,000           |

\*Requires Brine Cube

| WS3 Accessories | Description                    |
|-----------------|--------------------------------|
| 39V-V3764       | 3" Side Mount Adapter          |
| 39V-V3083       | 3" Motorized Alternating Valve |
| 39V-V3099       | 3" No Hard Water Bypass        |
| 39V-V3783WC-W   | Weather Cover                  |
| 51-9315         | 3" x 15" Mx F Flex Line        |
| 56-VAC          | 1.5" MNPT Vacuum Breaker       |
| 44-i60G         | 24" x 24" Brine Cube           |

# WS3 3" Progressive Flow Softener Systems

Up to (16) "WS3" units are controlled without a System Controller allowing for high efficiencies and flow rates. Powerful programming make the WS3 ideal for the most demanding commercial applications.

## WS3 3" Progressive Flow Softener Specifications and Ordering Guide

| Type         | Order Softener (2-4) | Order Progressive Kit | Media Tank | Ft <sup>3</sup> Resin | Recommended Brine Tank | DLFC Flow Rate | Service Flow GPM | Peak Flow GPM | Height Inches | Dry Pounds |
|--------------|----------------------|-----------------------|------------|-----------------------|------------------------|----------------|------------------|---------------|---------------|------------|
| 24x72Twin    | (2) WS-30M-2472-AA6  | WS-30X2               | (2) 24x72  | 20                    | (2) 30x48              | 15             | 9-62             | 134           | 100           | 1860       |
| 24x72 Triple | (3) WS-30M-2472-AA6  | WS-30X3               | (3) 24x72  | 30                    | (3) 30x48              | 15             | 9-124            | 268           | 100           | 2790       |
| 24x72 Quad   | (4) WS-30M-2472-AA6  | WS-30X4               | (4) 24x72  | 40                    | (4) 30x48              | 15             | 9-186            | 402           | 100           | 3720       |
| 30x72 Twin   | (2) WS-30M-3072-AA6  | WS-30X2               | (2) 30x72  | 30                    | (2) 39x48              | 20             | 15-98            | 186           | 108           | 2800       |
| 30x72 Triple | (3) WS-30M-3072-AA6  | WS-30X3               | (3) 30x72  | 45                    | (3) 39x48              | 20             | 15-196           | 372           | 108           | 4200       |
| 30x72 Quad   | (4) WS-30M-3072-AA6  | WS-30X4               | (4) 30x72  | 60                    | (4) 39x48              | 20             | 15-294           | 558           | 108           | 5600       |
| 36x72 Twin   | (2) WS-30M-3672-AA6  | WS-30X2               | (2) 36x72  | 40                    | (2) 39x60              | 30             | 21-141           | 222           | 108           | 4120       |
| 36x72 Triple | (3) WS-30M-3672-AA6  | WS-30X3               | (3) 36x72  | 60                    | (3) 39x60              | 30             | 21-282           | 444           | 108           | 6180       |
| 36x72 Quad   | (4) WS-30M-3672-AA6  | WS-30X4               | (4) 36x72  | 80                    | (4) 39x60              | 30             | 21-423           | 666           | 108           | 8240       |
| 42x72 Twin   | (2) WS-30M-4272-AA6  | WS-30X2               | (2) 42x72  | 60                    | (2) 42x60              | 45             | 28-192           | 244           | 118           | 5340       |
| 42x72 Triple | (3) WS-30M-4272-AA6  | WS-30X3               | (3) 42x72  | 90                    | (3) 42x60              | 45             | 28-384           | 488           | 118           | 8010       |
| 42x72 Quad   | (4) WS-30M-4272-AA6  | WS-30X4               | (4) 42x72  | 120                   | (4) 42x60              | 45             | 28-576           | 732           | 118           | 10,680     |
| 48x72 Twin   | (2) WS-30M-4872-AA6  | WS-30X2               | (2) 48x72  | 70                    | (2) 50x60              | 55             | 38-248           | 251           | 120           | 6740       |
| 48x72 Triple | (3) WS-30M-4872-AA6  | WS-30X3               | (3) 48x72  | 105                   | (3) 50x60              | 55             | 38-496           | 502           | 120           | 10,110     |
| 48x72 Quad   | (4) WS-30M-4872-AA6  | WS-30X4               | (4) 48x72  | 140                   | (4) 50x60              | 55             | 38-744           | 753           | 120           | 13,480     |
| 63x86 Twin   | (2) WS-30M-6386-AA6  | WS-30X2               | (2) 63x86  | 100                   | (2) 50x60*             | 100            | 65-248           | 275           | 125           | 12,000     |
| 63x86 Triple | (3) WS-30M-6386-AA6  | WS-30X3               | (3) 63x86  | 150                   | (3) 50x60*             | 100            | 65-496           | 550           | 125           | 18,000     |
| 63x86 Quad   | (4) WS-30M-6386-AA6  | WS-30X4               | (4) 63x86  | 200                   | (4) 50x60*             | 100            | 65-744           | 825           | 125           | 24,000     |

\*Requires Brine Cube



| WS3 Accessories | Description                    |
|-----------------|--------------------------------|
| 39V-V3764       | 3" Side Mount Adapter          |
| 39V-V3083       | 3" Motorized Alternating Valve |
| 39V-V3099       | 3" No Hard Water Bypass        |
| 39V-V3783WC-W   | Weather Cover                  |
| 51-9315         | 3" x 15" Mx F Flex Line        |
| 56-VAC          | 1.5" MNPT Vacuum Breaker       |
| 44-i60G         | 24" x 24" Brine Cube           |





# WS3 3" Commercial Backwash Systems

The WS3 Backwashing series by IWP. Simple maintenance, highly adaptable and superb flow rates. Ideal for larger commercial applications. The WS3 backwashing units include Modbus connectivity and a highly programmable controller to meet the most demanding commercial and industrial needs.



Coconut shell carbon is used to reduce chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Catalytic carbon is used to reduce chloramine (NH<sub>2</sub>Cl) and chlorine, trihalo-methanes (THMs), VOCs, pesticides, and organic compounds while improving taste and reducing odors.

Katalox Light and Filter-Ox are commonly used for the reduction of iron, manganese and hydrogen sulfide.

Clinoptilolite has nearly replaced multimedia in the past 30 years. Finer filtration, lower backwash rates and higher capacity make this a popular choice for clarifying water.

| WS3 3" 12x40 Non Catalytic GAC |           |                          |          |                     |           |         |                  |
|--------------------------------|-----------|--------------------------|----------|---------------------|-----------|---------|------------------|
| Model #                        | Tank Size | Ft <sup>3</sup> of Media | DLFC GPM | ≈Design Service GPM | ≈Peak GPM | ≈Height | ≈Weight Lbs. Dry |
| BW-30C-3072-6C1                | 30x72     | 15                       | 50       | Cl 15-49            | 98        | 108     | 1000             |
| BW-30C-3672-6C1                | 36x72     | 20                       | 70       | Cl 21-71            | 142       | 108     | 1450             |
| BW-30C-4272-7C1                | 42x72     | 30                       | 95       | Cl 29-96            | 192       | 118     | 2050             |
| BW-30C-4872-7C1                | 48x72     | 35                       | 125      | Cl 38-126           | 200       | 120     | 2625             |
| BW-30C-6386-7C1                | 63x86     | 50                       | 200      | Cl 65-216           | 250       | 125     | 4800             |

| WS3 3" 12x40 Catalytic GAC 12x40 Mesh |       |    |     |                           |     |     |      |
|---------------------------------------|-------|----|-----|---------------------------|-----|-----|------|
| BW-30C-3072-6C2                       | 30x72 | 15 | 50  | NH <sub>2</sub> Cl 15-30  | 98  | 108 | 1000 |
| BW-30C-3672-6C2                       | 36x72 | 20 | 70  | NH <sub>2</sub> Cl 21-40  | 142 | 108 | 1450 |
| BW-30C-4272-7C2                       | 42x72 | 30 | 95  | NH <sub>2</sub> Cl 29-50  | 192 | 118 | 2050 |
| BW-30C-4872-7C2                       | 48x72 | 35 | 125 | NH <sub>2</sub> Cl 38-60  | 200 | 120 | 2625 |
| BW-30C-6386-7C2                       | 63x86 | 50 | 200 | NH <sub>2</sub> Cl 65-100 | 250 | 125 | 4800 |

| WS3 3" Katalox Light (Also available with Filter-Ox) |       |    |     |        |     |     |      |
|------------------------------------------------------|-------|----|-----|--------|-----|-----|------|
| BW-30C-3072-6FL                                      | 30x72 | 15 | 65  | 15-58  | 73  | 108 | 1600 |
| BW-30C-3672-6FL                                      | 36x72 | 20 | 90  | 21-85  | 106 | 108 | 2250 |
| BW-30C-4272-7FL                                      | 42x72 | 30 | 120 | 28-115 | 144 | 118 | 3200 |
| BW-30C-4872-7FL                                      | 48x72 | 35 | 165 | 38-151 | 189 | 120 | 3200 |

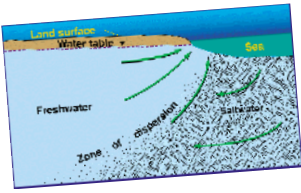
| WS3 3" Clinoptilolite (AKA Filter-Ag+) |       |    |     |        |     |     |      |
|----------------------------------------|-------|----|-----|--------|-----|-----|------|
| BW-30C-3072-6CL                        | 30x72 | 15 | 75  | 15-58  | 98  | 108 | 1450 |
| BW-30C-3672-6CL                        | 36x72 | 20 | 100 | 21-85  | 142 | 108 | 2000 |
| BW-30C-4272-7CL                        | 42x72 | 30 | 145 | 28-115 | 192 | 118 | 2750 |
| BW-30C-4872-7CL                        | 48x72 | 35 | 185 | 38-151 | 250 | 120 | 2750 |



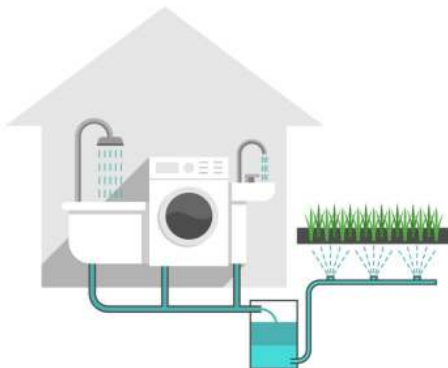
| WS3 Accessories | Description                    |
|-----------------|--------------------------------|
| 39V-V3083       | 3" Motorized Alternating Valve |
| 39V-V3099       | 3" No Hard Water Bypass        |
| 39V-V3783WC-W   | Weather Cover                  |
| 51-9315         | 3" x 15" Mx F Flex Line        |
| 56-VAC          | 1.5" MNPT Vacuum Breaker       |
| 39V-V3095-15    | 3" Meter                       |



# Grey Water Recycling & Brine Diversion



Water softeners use a small amount of water as a total of the treated water they provide. In locations where water is limited an IWP Grey Water Recycling/Brine Diversion system can greatly reduce the amount of water that is wasted. The high TDS water is diverted to the sewage and the lower TDS water is diverted to an irrigation system, French drain, or other locally allowed grey water reuse method. This high TDS load can negatively impact the sewage and reclamation plants that treat this waste water. Brine diversion and disposal is a viable alternative to this issue. Our Brine Diversion systems monitor the waste water TDS diverting the high TDS (brine) water to a storage tank where alternative forms of disposal can be completed. This system is also commonly used for grey water re-use where the sewer can accommodate high TDS but the low TDS backwash and rinse cycles are desired for reuse in irrigation, cooling towers, or other water recycling methods. Follow all local laws and regulations. Contact IWP for assistance in designing your Brine Diversion system. Standard units include a high quality 3 way ball valve, TDS monitoring with probe, and a simple plug and play design with an attached 110V cord. Systems are custom built specific to each application.



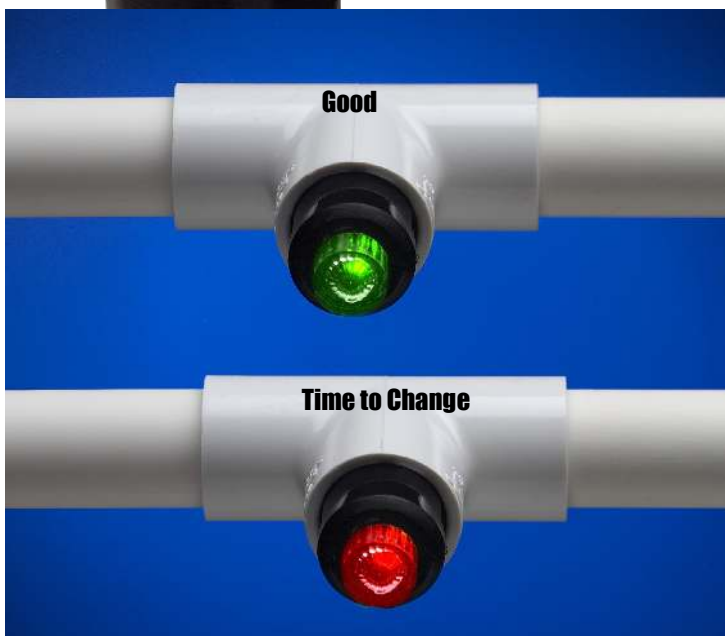
# DI Tanks



Deionization removes the majority of dissolved ions and is ideal for RO polishing, spot free rinses, or any application requiring the lowest dissolved solids. Custom builds available. Available with and without the Resilite 500K  $\Omega$  water quality monitor. Resilite monitors have an accuracy of + 15%. All Resilite systems include a 110V transformer with a 9' cord. DI tanks can be custom built with any size tank and In/Out head.



1 cubic foot of new mixed bed DI resin has approximately 100,000 ppm



## DI Systems w/500K Ohm Resilite

| Model #        | Tank Size | Resin Capacity Ft <sup>3</sup> |
|----------------|-----------|--------------------------------|
| IOD-89-1018-DX | 10x18     | 0.6                            |
| IOD-89-0844-DX | 8x44      | 1                              |
| IOD-89-0948-DX | 9x48      | 1.5                            |
| IOD-89-1018-DX | 10x18     | .65                            |
| IOD-89-1054-DX | 10x54     | 2.2                            |
| IOD-89-1235-DX | 12x35     | 2.3                            |
| IOD-89-1252-DX | 12x52     | 3                              |
| IOD-89-1354-DX | 13x54     | 3.8                            |
| IOD-89-1465-DX | 14x65     | 5                              |
| IOD-89-1653-DX | 16x53     | 5.3                            |
| IOD-89-1665-DX | 16x65     | 6.8                            |

Many other sizes available.



## DI Systems w/out Resilite

| Model #         | Tank Size | Resin Capacity Ft <sup>3</sup> |
|-----------------|-----------|--------------------------------|
| IOD-89-1018-DX3 | 10x18     | 0.6                            |
| IOD-89-0844-DX3 | 8x44      | 1                              |
| IOD-89-0948-DX3 | 9x48      | 1.5                            |
| IOD-89-1018-DX3 | 10x18     | .65                            |
| IOD-89-1054-DX3 | 10x54     | 2.2                            |
| IOD-89-1235-DX3 | 12x35     | 2.3                            |
| IOD-89-1252-DX3 | 12x52     | 3                              |
| IOD-89-1354-DX3 | 13x54     | 3.8                            |
| IOD-89-1465-DX3 | 14x65     | 5                              |
| IOD-89-1653-DX3 | 16x53     | 5.3                            |
| IOD-89-1665-DX3 | 16x65     | 6.8                            |

Many other sizes available.

## Water Quality Conversion Chart

| RESISTIVITY<br>(ohm-cm) $\Omega$ | CONDUCTIVITY<br>( $\mu$ S/cm) | $\approx$ TDS<br>$\pm 15\%$ (ppm) | EC<br>Electrical Conductivity | Max/<br>Min pH |
|----------------------------------|-------------------------------|-----------------------------------|-------------------------------|----------------|
| 18 MEG $\Omega$                  | 0.056                         | .028                              | .044                          | 7.8/6.2        |
| 14 MEG $\Omega$                  | 0.071                         | .036                              | .056                          | 7.9/6.1        |
| 10 MEG $\Omega$                  | 0.1                           | .05                               | .078                          | 8.1/5.9        |
| 6 MEG $\Omega$                   | .167                          | .083                              | .13                           | 8.3/5.7        |
| 2 MEG $\Omega$                   | 0.5                           | .25                               | .39                           | 8.8/5.2        |
| 1 MEG $\Omega$                   | 1                             | .50                               | .78                           | 9.1/4.9        |
| 500K $\Omega$                    | 2                             | 1                                 | 1.56                          | 9.4/4.6        |
| 200K $\Omega$                    | 5                             | 2.5                               | 3.9                           | 9.8/4.2        |
| 50K $\Omega$                     | 20                            | 10                                | 15.6                          | 10.4/3.6       |
| 20K $\Omega$                     | 50                            | 24                                | 37.5                          | 10.9/3.2       |
| 10K $\Omega$                     | 100                           | 48                                | 75                            | 11.2/2.9       |
| 5K $\Omega$                      | 200                           | 95                                | 148                           | 11.3/2.6       |
| 1K $\Omega$                      | 1000                          | 500                               | 781                           | 12.2/1.9       |





# i5 Composite Control Valves

i5 control valves with composite bodies! Clack has mastered using the same parts across the entire platform minimizing inventory and maintenance. All of the i5 controls use the same electronics, backplate, cover and drivetrain. Composite control valves are resistant to difficult water conditions.

1" valve shown with optional bypass



1" AIO3 valve shown with optional bypass and connectors



1.25" i5 valve shown with optional bypass.



1.5PB Shown with meter and NHWBP



1.5 Twin Shown with Bypass



| Item #                                 | Type             | Meter    | DLFC GPM | Typical tank | Tank Neck | Riser Size | Brine Size | Drain Size | In/Out         |
|----------------------------------------|------------------|----------|----------|--------------|-----------|------------|------------|------------|----------------|
| 1" i5 Control Valves                   |                  |          |          |              |           |            |            |            |                |
| 39i-10FC                               | Filter           | No       | 1-10     | 6"-13"       | 2.5"      | 1.05"      | NA         | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10FC25                             | Filter           | No       | 9-25     | 14"-21"      | 2.5"      | 1.05"      | NA         | 1" MPT     | 3/4" to 1-1/2" |
| 39i-10FM                               | Filter           | Yes      | 1-10     | 6"-13"       | 2.5"      | 1.05"      | NA         | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10FM25                             | Filter           | Yes      | 9-25     | 14"-21"      | 2.5"      | 1.05"      | NA         | 1" MPT     | 3/4" to 1-1/2" |
| 39i-10SM                               | Softener         | Yes      | 1-10     | 6"-18"       | 2.5"      | 1.05"      | 3/8"       | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10SM1                              | Softener         | Yes      | 9-25     | 18"-21"      | 2.5"      | 1.05"      | 3/8"       | 1" MPT     | 3/4" to 1-1/2" |
| 39i-10SMU                              | Upflow Softener  | Yes      | 1-10     | 6"-18"       | 2.5"      | 1.05"      | 3/8"       | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10SM2                              | AIO              | Yes      | 1-10     | 6"-18"       | 2.5"      | 1.05"      | NA         | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10SM2-25                           | AIO              | Yes      | 9-25     | 18"-21"      | 2.5"      | 1.05"      | NA         | 1" MPT     | 3/4" to 1-1/2" |
| 39i-10SM3                              | AIO3             | Yes      | 1-10     | 6"-18"       | 2.5"      | 1.05"      | NA         | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10SM3-25                           | AIO3             | Yes      | 9-25     | 18"-21"      | 2.5"      | 1.05"      | NA         | 1" MPT     | 3/4" to 1-1/2" |
| 1" i5 Twin Alternator Control Valves   |                  |          |          |              |           |            |            |            |                |
| 39i-10TSM10                            | Twin Alternator  | Yes      | 1-10     | 6"-10"       | 2.5"      | 1.05"      | 3/8"       | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10TSM16                            | Twin Alternator  | Yes      | 1-10     | 12"-16"      | 2.5"      | 1.05"      | 3/8"       | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-10TSM21                            | Twin Alternator  | Yes      | 1-10     | 18"-21"      | 2.5"      | 1.05"      | 3/8"       | 1" MPT     | 3/4" to 1-1/2" |
| 39i-TSM316                             | Twin Filter AIO3 | Yes      | 1-10     | 6"-13"       | 2.5"      | 1.05"      | NA         | 3/4" MPT   | 3/4" to 1-1/2" |
| 1.25" i5 Control Valves                |                  |          |          |              |           |            |            |            |                |
| 39i-12FM                               | Filter           | Yes      | 1-1      | 10"-13"      | 2.5"      | 1.32"      | NA         | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-12FM25                             | Filter           | Yes      | 9-25     | 14"-24"      | 2.5"      | 1.32"      | NA         | 1" MPT     | 3/4" to 1-1/2" |
| 39i-12FM30                             | Filter           | Yes      | 30       | 14"-24"      | 2.5"      | 1.32"      | NA         | 1.5" FPT   | 3/4" to 1-1/2" |
| 39i-12SM                               | Softener         | Yes      | 1-10     | 10"-18"      | 2.5"      | 1.32"      | 3/8"       | 3/4" MPT   | 3/4" to 1-1/2" |
| 39i-12SM21                             | Softener         | Yes      | 9-25     | 21"          | 2.5       | 1.32"      | 3/8"       | 1" MPT     | 3/4" to 1-1/2" |
| 39i-SM3-25                             | AIO3             | Yes      | 9-25     | 18"-21"      | 2.5       | 1.32"      | NA         | 1" MPT     | 3/4" to 1-1/2" |
| 1.5" i5 Control Valves                 |                  |          |          |              |           |            |            |            |                |
| 39i-15-PBFC                            | Filter           | Optional | 1-20     | 14"-24"      | 4"        | 1.9"       | NA         | 1" MPT     | 1.5"-2"        |
| 39i-15-PBFC25                          | Filter           | Optional | 20-40    | 24"-30"      | 4"        | 1.9"       | NA         | 1.5" MPT   | 1.5"-2"        |
| 39i-15-PBSC                            | Softener         | Optional | 1-25     | 14"-24"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 1.5"-2"        |
| 39i-15-PBSCM                           | Softener         | Yes      | 1-25     | 14"-24"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 1.5"-2"        |
| 39i-15PBFC3                            | AIO3             | Optional | 1-20     | 14"-16"      | 4"        | 1.9"       | NA         | 1" MPT     | 1.5"-2"        |
| 39i-15PBFC325                          | AIO3             | Optional | 20-40    | 18"-24"      | 4"        | 1.9"       | NA         | 1.5" MPT   | 1.5"-2"        |
| 1.5" i5 Twin Alternator Control Valves |                  |          |          |              |           |            |            |            |                |
| 39i-15PTASM                            | Twin Alternator  | Optional |          | 14"-24"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 1.5"-2"        |
| 2" i5 Control Valves                   |                  |          |          |              |           |            |            |            |                |
| 39i-20PFC                              | Filter           | No       | 0.7-75   | 14"-36"      | 4"        | 1.9"       | 1/2"-1"    | 2" MPT     | 2"             |
| 39i-20PSC                              | Softener         | No       | 0.7-30   | 14"-36"      | 4"        | 1.9"       | 1/2"-1"    | 2" MPT     | 2"             |
| 39i-20PSM                              | Softener         | No       | 0.7-30   | 14"-36"      | 4"        | 1.9"       | 1/2"-1"    | 2" MPT     | 2"             |

# i5 Brass/WS2HF/WS3 Control Valves

i5 control valves with epoxy coated brass bodies! Clack has mastered using the same parts across the entire platform minimizing inventory and maintenance. WS2HF and WS3 include full Modbus capabilities!

| Item #                                                                 | Type     | Meter | DLFC GPM | Typical Tank | Tank Neck | Riser Size | Brine Size | Drain Size | In/Out   |
|------------------------------------------------------------------------|----------|-------|----------|--------------|-----------|------------|------------|------------|----------|
| <b>1.5" i5 Brass Control Valves</b>                                    |          |       |          |              |           |            |            |            |          |
| 39i-15FC                                                               | Filter   | No    | 1-10     | 12"-13"      | 4"        | 1.9"       | NA         | 3/4" MPT   | 1.5" FPT |
| 39i-15FC25                                                             | Filter   | No    | 9-25     | 12"-24"      | 4"        | 1.9"       | NA         | 1" MPT     | 1.5" FPT |
| 39i-15FC50                                                             | Filter   | No    | 8-50     | 30"          | 4"        | 1.9"       | NA         | 1.5" FPT   | 1.5" FPT |
| 39ii-15SC                                                              | Softener | No    | 1-10     | 12"-18"      | 4"        | 1.9"       | 1/2"       | 3/4" MPT   | 1.5" FPT |
| 39i-15SC30                                                             | Softener | No    | 9-25     | 21"-30"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 1.5" FPT |
| 39ii-15SC                                                              | Softener | Yes   | 1-10     | 12"-18"      | 4"        | 1.9"       | 1/2"       | 3/4" MPT   | 1.5" FPT |
| 39i-15SC30                                                             | Softener | Yes   | 9-25     | 21"-30"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 1.5" FPT |
| <b>2" i5 Brass Control Valves (4" Threaded, 1.5" Riser)</b>            |          |       |          |              |           |            |            |            |          |
| 39i-20FC10                                                             | Filter   | No    | 1-10     | 14"          | 4"        | 1.9"       | NA         | 3/4" MPT   | 2" FPT   |
| 39i-20FC25                                                             | Filter   | No    | 9-25     | 14"-24"      | 4"        | 1.9"       | NA         | 1" MPT     | 2" FPT   |
| 39i-20FC85                                                             | Filter   | No    | 9-85     | 30"-42"      | 4"        | 1.9"       | NA         | 1.5" FPT   | 2" FPT   |
| 39i-20SC10                                                             | Softener | No    | 1-10     | 14"-18"      | 4"        | 1.9"       | 1/2"       | 3/4" MPT   | 2" FPT   |
| 39i-20SM10                                                             | Softener | Yes   | 1-10     | 14"-18"      | 4"        | 1.9"       | 1/2"       | 3/4" MPT   | 2" FPT   |
| 39i-20SC25                                                             | Softener | No    | 9-25     | 21"-30"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 2" FPT   |
| 39i-20SM25                                                             | Softener | Yes   | 9-25     | 21"-30"      | 4"        | 1.9"       | 1/2"       | 1" MPT     | 2" FPT   |
| <b>2" i5 Brass Control Valves (4" Threaded or 6" Flange, 2" Riser)</b> |          |       |          |              |           |            |            |            |          |
| 39i-2QFC85F                                                            | Filter   | No    | 9-85     | 30"-42"      | 6" Flange | 2.375"     | NA         | 1.5" FPT   | 2" FPT   |
| 39i-2QSC254                                                            | Softener | No    | 9-25     | 18"-24"      | 4"        | 2.375"     | 1/2"       | 1" MPT     | 2" FPT   |
| 39i-2QSM254                                                            | Softener | Yes   | 9-25     | 18"-24"      | 4"        | 2.375"     | 1/2"       | 1" MPT     | 2" FPT   |
| 39i-2QSC25F                                                            | Softener | No    | 9-25     | 24"-30"      | 6" Flange | 2.375"     | 1/2"-1"    | 1" MPT     | 2" FPT   |
| 39i-2QSM25F                                                            | Softener | Yes   | 9-25     | 24"-30"      | 6" Flange | 2.375"     | 1/2"-1"    | 1" MPT     | 2" FPT   |
| 39i-2QSC85F                                                            | Softener | No    | 9-25     | 36"-48"      | 6" Flange | 2.375"     | 1/2"-1"    | 1.5" FPT   | 2" FPT   |
| 39i-2QSM85F                                                            | Softener | Yes   | 9-25     | 36"-48"      | 6" Flange | 2.375"     | 1/2"-1"    | 1.5" FPT   | 2" FPT   |
| <b>WS2HF Brass Control Valves (4" Threaded or 6" Flange, 2" Riser)</b> |          |       |          |              |           |            |            |            |          |
| 39-WS2HFCF                                                             | Filter   | No    | 9-150    | 14"-63"      | Add       | 2.375"     | 1/2"-1"    | 2"         | 2" FPT   |
| 39-WS2HFCF-2F                                                          | Filter   | No    | 9-150    | 24"-63"      | 6" Flange | 2.375"     | 1/2"-1"    | 2"         | 2" FPT   |
| 39-WS2HFCS                                                             | Softener | No    | 9-150    | 14"-63"      | Add       | 2.375"     | 1/2"-1"    | 2"         | 2" FPT   |
| 39-WS2HFCS-2F                                                          | Softener | No    | 9-150    | 24"-63"      | 6" Flange | 2.375"     | 1/2"-1"    | 2"         | 2" FPT   |
| <b>WS3 Brass Control Valves</b>                                        |          |       |          |              |           |            |            |            |          |
| 39-WS3CF-3F                                                            | Filter   | No    | 9-225    | 24"-63"      | 6" Flange | 2.375"     | 1/2"-1"    | 3"         | 3" FPT   |
| 39-WS3CS-3F                                                            | Softener | No    | 9-225    | 24"-63"      | 6" Flange | 2.375"     | 1/2"-1"    | 3"         | 3" FPT   |

| WS2HF & WS3 Accessories |                       |
|-------------------------|-----------------------|
| 39V-V3094-15            | 2" Meter              |
| 39V-V3095-15            | 3" Meter              |
| 39V-V3260-02            | 3" Side mount Adapter |
| 39V-V3674-02            | 3" Side mount Adapter |



# Clack<sup>™</sup> Meters & Accessories

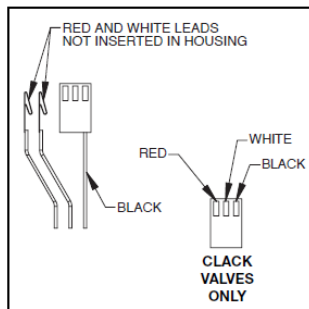


| Item #            | Description                       | Material  | Pulses per Gal. | Min-Max GPM |
|-------------------|-----------------------------------|-----------|-----------------|-------------|
| 39V-V3039* (1)    | 1" w/28" Cable (Add V3007-XX Kit) | Plastic   | 66              | .5-40       |
| 39V-V3039-15      | 1" w/15' Cable (Add V3007-XX Kit) | Plastic   | 66              | .5-40       |
| 39V-V3045K        | 1-1/2" w/28" Cable (Add V4430-XX) | Plastic   | 37              | .5-75       |
| 39V-V3045-15K (2) | 1-1/2" w/15' Cable (Add V4430-XX) | Plastic   | 37              | .5-75       |
| 39V-V3048K (3)    | 2" w/28" Cable (Add V4460-XX)     | Plastic   | 20              | 1.5-150     |
| 39V-V3048-15K     | 2" w/15' Cable (Add V4460-XX)     | Plastic   | 20              | 1.5-150     |
| 39V-V3040         | 1-1/2" MxF w/28" Cable            | Stainless | 37              | .5-75       |
| 39V-V3040-15 (4)  | 1-1/2" MxF w/ 15' Cable           | Stainless | 37              | .5-75       |
| 39V-V3094         | 2" MxF w/28" Cable                | Stainless | 20              | 1.5-150     |
| 39V-V3094-15 (5)  | 2" MxF w/15' Cable                | Stainless | 20              | 1.5-150     |
| 39V-V3095         | 3" MxF w/48" Cable                | Stainless | 8               | 3.5-350     |
| 39V-V3095-15 (6)  | (8) 3" MxF w/15' Cable            | Stainless | 8               | 3.5-350     |
| 39V-V3003-06 (7)  | Meter Turbine w/28" Cable         | N/A       | N/A             | N/A         |
| 39V-4039          | Meter Turbine w/48" Cable         | N/A       | N/A             | N/A         |
| 39V-V3221         | Meter Turbine w/15' Cable         | N/A       | N/A             | N/A         |

| 1" Plastic Meter Connectors |                          |
|-----------------------------|--------------------------|
| Item #                      | Description              |
| 39V-V3008-18*               | 3/4" Plastic Male NPT    |
| 39V-V3007-04*               | 1" Plastic Male NPT      |
| 39V-V3007-05*               | 1.25" Plastic Male NPT   |
| 39V-V3007-03LF              | 3/4" Brass Sweat         |
| 39V-V3007-02LF              | 1" Brass Sweat           |
| 39V-V3007-09LF              | 1.25" x 1.5" Brass Sweat |
| 39V-V3007-07                | 1.25" & 1.5" PVC Solvent |
| 39V-V3007-19                | 3/4" John Guest          |
| 39V-V3007-17                | 1" John Guest            |

| 1-1/2" Plastic Meter Connectors |                                |
|---------------------------------|--------------------------------|
| Item #                          | Description                    |
| 39V-V4430-01*                   | 1.5" MNPT QC Straight          |
| 39V-V4430-07*                   | 1.5" MNPT QC Elbow             |
| 39V-V4430-13*                   | 1.5" & 2" PVC Glue             |
| 39V-V4430-03                    | 1.5" QC to QC Coupler Straight |
| 39V-V4430-09                    | 1.5" QC to QC Coupler Elbow    |

| 2" Plastic Meter Connectors |                      |
|-----------------------------|----------------------|
| Item #                      | Description          |
| 39V-V4460-01*               | QC x 2" NPT Straight |
| 39V-V4460-04*               | QC x 2" NPT Elbow    |
| 39V-V4460-13                | 2" PVC Solvent       |
| 39V-V4460-03                | QC x QC Straight     |
| 39V-V4460-06                | QC x QC Elbow        |



## Wiring to an S Series Stenner

WHITE: Pulse/PPM/Hall signal

BLACK: Signal Common

RED: Hall +12VDC

| 8                            | 9                | 10             |
|------------------------------|------------------|----------------|
| Pulse/<br>PPM/Hall<br>signal | Signal<br>Common | Hall<br>+12VDC |

New Remote Meter Controller  
Coming Soon!





# Clack® Flow Controls

| Clack WS1, 125, 1.0 Twin            |                                                                                                |
|-------------------------------------|------------------------------------------------------------------------------------------------|
| 39V-V3962 (1)                       | 3/4" Male NPT Elbow for Small Clack Button 0.7-10 GPM                                          |
| 39V-V3008-04 (2)                    | 1" Male NPT for Large Clack Button 9-25 GPM                                                    |
| Clack WS1.5EE/i5 Brass Valve        |                                                                                                |
| 39V-V3414 (3)                       | 1-1/4" Adapter for use with 39V-V3962 or 39V-V3008-04                                          |
| 39V-V3079 (4)                       | 1-1/4" Male NPT x 1-1/2" Female NPT uses (1) Large(6) Small Clack Buttons, Stainless. 9-85 GPM |
| Clack WS1.5EE/i5 Plastic Valve      |                                                                                                |
| 39V-V4430-04NPT (5)                 | 1" Elbow with Flow Control Retainer (1-5 Small DLFC Buttons)                                   |
| 39V-V4430-08 (6)                    | 1.5" Elbow, to Replace the 1" Elbow Above 25 GPM                                               |
| Clack WS2EE/i5 and WS2QCEE/i5 Valve |                                                                                                |
| 39V-V3158-04 (7)                    | 3/4" Male NPT Elbow for Small Clack Button 0.7-10 GPM                                          |
| 39V-V3008-05 (8)                    | 1" Male NPT for Large Clack Button 9-25 GPM                                                    |
| 39V-V3080 (9)                       | 1-1/2" Male NPT x 1-1/2" Female NPT Uses (1) Large(6) Small Clack Buttons, Stainless. 9-85 GPM |
| Clack WS2HF                         |                                                                                                |
| 39V-V3051 (10)                      | 2" Male NPT x 2" Female NPT use up to (4) Large (5) Small Clack Buttons, Stainless 7-150 GPM   |
| Clack WS3                           |                                                                                                |
| 39V-V3764 (7)                       | 3" Male NPT x 3" Female NPT uses up to (9) Large Clack Buttons, Stainless 9-225 GPM            |



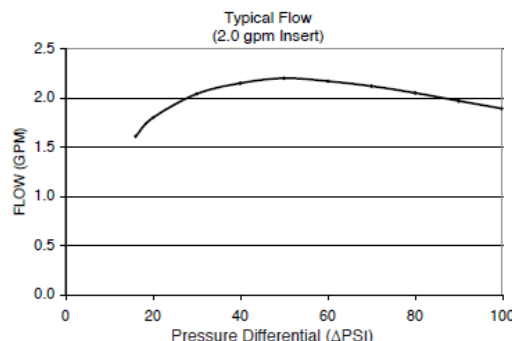
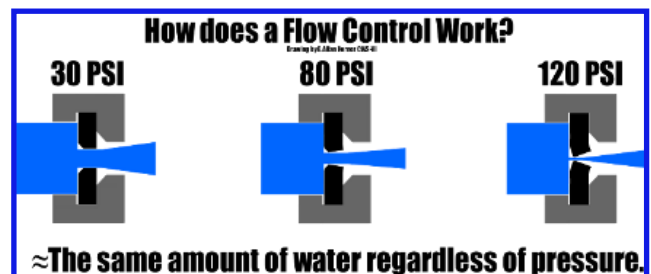
| Clack Small Buttons |          |
|---------------------|----------|
| 39V-V3162-007       | 0.7 GPM  |
| 39V-V3162-010       | 1.0 GPM  |
| 39V-V3162-013       | 1.3 GPM  |
| 39V-V3162-017       | 1.7 GPM  |
| 39V-V3162-022       | 2.2 GPM  |
| 39V-V3162-027       | 2.7 GPM  |
| 39V-V3162-032       | 3.2 GPM  |
| 39V-V3162-042       | 4.2 GPM  |
| 39V-V3162-053       | 5.3 GPM  |
| 39V-V3162-065       | 6.5 GPM  |
| 39V-V3162-075       | 7.5 GPM  |
| 39V-V3162-090       | 9.0 GPM  |
| 39V-V3162-100       | 10.0 GPM |
| Clack Large Buttons |          |
| 39V-V3190-900       | 9 GPM    |
| 39V-V3190-100       | 10 GPM   |
| 39V-V3190-110       | 11 GPM   |
| 39V-V3190-130       | 13 GPM   |
| 39V-V3190-150       | 15 GPM   |
| 39V-V3190-170       | 17 GPM   |
| 39V-V3190-200       | 20 GPM   |
| 39V-V3190-250       | 25 GPM   |



| Item #          | FIOET Flow Controls |
|-----------------|---------------------|
| 39P-V7A101C1-05 | 1" MPT PVC 5 GPM    |
| 39P-V7A101C1-10 | 1" MPT PVC 10 GPM   |
| 39P-V7A101C1-12 | 1" MPT PVC 12 GPM   |
| 39P-V7A101C1-15 | 1" MPT PVC 15 GPM   |
| 39P-V7A101C1-20 | 1" MPT PVC 20 GPM   |



Stocked items listed.  
Available in PVC threaded, glue and flanged ends. Sizes from .25 gpm-540 GPM in 1/2" to 6". Also available in Brass.



# Clack<sup>™</sup> MAV and NHWBP Valves

NHWBP valves can be installed to shut off the outlet during regeneration to prevent untreated water from exiting the system, common in progressive flow designs. MAV's are used for twin alternating or to use a separate regeneration source.

| Item #         | Size                        | Type  | Material      | Notes                                |
|----------------|-----------------------------|-------|---------------|--------------------------------------|
| 39V-V3069FF-01 | 1" & 1.25" Female QC        | MAV   | Composite     | Bottom Port is Clack QC or 1-1/4 MPT |
| 39V-V3069MM-01 | 1" & 1.25" Male QC          | MAV   | Composite     | Bottom Port is Clack QC or 1-1/4 MPT |
| 39V-V3070FF    | 1" & 1.25" Female QC        | NHWBP | Composite     | Add Connectors                       |
| 39V-V3070FM    | 1" & 1.25" Male x Female QC | NHWBP | Composite     | Add Connectors                       |
| 39V-V3034      | 1.5" QC Female              | MAV   | Composite     | Add Connectors                       |
| 39V-V3035      | 1.5" QC Female              | NHWBP | Composite     | Add Connectors                       |
| 39V-V3071      | 1.5" FPT                    | MAV   | LF Brass      | NA                                   |
| 39V-V3097      | 1.5" FPT/MPT                | NHWBP | 316 Stainless | NA                                   |
| 39V-V3036      | 2" QC Female                | MAV   | Composite     | Add Connectors                       |
| 39V-V3037      | 2" QC Female                | NHWBP | Composite     | Add Connectors                       |
| 39V-V3076      | 2" FPT                      | MAV   | LF Brass      | NA                                   |
| 39V-V3098      | 2" FPT/MPT                  | NHWBP | 316 Stainless | NA                                   |
| 39V-V3083      | 3" FPT                      | MAV   | LF Brass      | NA                                   |
| 39V-V3099      | 3" FPT x MPT                | NHWBP | LF Brass      | NA                                   |



| Item #           | 1" & 1.25" Connectors*         |
|------------------|--------------------------------|
| 39V-V3007        | 1" MPT Elbow                   |
| 39V-V3007-18     | 3/4" MPT Straight              |
| 39V-V3007-04     | 1" MPT Straight                |
| 39V-V2007-05     | 1.25" MPT Straight             |
| 39V-V3007-01     | 3/4" & 1" PVC Solvent Elbow    |
| 39V-V3007-07     | 1.25" x 1.5" PVC Solvent Elbow |
| 39V-V3007-22     | 1" Press and Sweat             |
| 1.5" Connectors* |                                |
| 39V-V4430-01     | 1.5" Straight MPT              |
| 39V-V4430-07     | 1.5" MPT Elbow                 |
| 39V-V4430-13     | 1.5" & 2" Solvent Straight     |
| 39V-V4430-03     | QC x QC Coupler Straight       |
| 39V-V4430-09     | QC x QC Coupler Elbow          |
| 2" Connectors*   |                                |
| 39V-V4460-01     | 2" Straight MPT                |
| 39V-V4460-04     | 2" MPT Elbow                   |
| 39V-V4460-13     | 2" Solvent Straight            |
| 39V-V4460-03     | QC x QC Coupler Straight       |
| 39V-V4460-06     | QC x QC Coupler Elbow          |



\* Connectors come in packs of two, couplers come in singles. Many more 1" and 1.25" connectors available, see 1" install parts page for details.



# Commercial Water Softener Sizing

Water usage estimates vary widely due to factors like building size, occupancy, efficiency of fixtures/equipment, location (climate), operations (e.g., laundry kitchen), and water conservation measures. These are typical averages or ranges—actual usage should be measured or calculated for specific designs. Figures are generally in gallons per day (gpd) unless noted otherwise. Gallons per minute (GPM) is an important factor to consider and should be sized within the service flow rates while avoiding water flows near the peak flow. Hot water often represents 20–40%+ of total in hospitality/healthcare (higher for kitchens/laundry/showers) but is lower in offices.

| Commercial Application         | ≈Gallons      |
|--------------------------------|---------------|
| Hotels Hot Only Per Room       | 100 "Per Day" |
| Hotels Hot/Cold Per Room       | 300 "Per Day" |
| Restaurants Hot Only Per Guest | 3 "Per Day"   |
| Restaurants Hot/Cold Per Guest | 10 "Per Day"  |
| Offices Hot Only Per Employee  | 5 "Per Day"   |
| Offices Hot/Cold Per Employee  | 10 "Per Day"  |
| Schools Hot Only Per Student   | 5 "Per Day"   |
| Schools Hot/Cold               | 20 "Per Day"  |
| Laundry Top Load               | 3 "Per Pound" |
| Laundry Front load             | 2 "Per Pound" |
| Laundry Tunnels                | 2 "Per Pound" |

Livestock are more tolerant than humans but poor water reduces intake, feed efficiency, growth, reproduction, and health. Test your well water regularly (TDS, pH, alkalinity, sulfates, nitrates, bacteria etc.),

- **Total Dissolved Solids (TDS/Salinity):** <1,000 mg/L = excellent; 1,000–3,000 = satisfactory (mild diarrhea possible in new animals); 3,000–5,000 = marginal (avoid for young/pregnant/lactating); >7,000–10,000 = risky/unfit. Poultry is most sensitive.
- **pH:** Ideally 6.5–8.5 (most tolerate 5.5–9.0). Your well's pH 8.8 is on the high side—generally acceptable for mature ruminants but monitor for refusal or digestive upset. Very high pH (>9–10) can irritate mouths/eyes, reduce palatability, or cause issues with minerals.
- **Alkalinity** (as CaCO<sub>3</sub>): <400–1,000 mg/L preferred. Your ~1,000 mg/L level is borderline/high—may cause laxative effects or reduced intake in sensitive animals. High bicarbonate alkalinity can contribute to urinary calculi (stones) in males or interact with diet.
- **Sulfates:** <500–1,000 mg/L (lower for calves/poultry). High levels cause diarrhea and copper deficiency.
- **Nitrates/Nitrites:** Nitrate-N <100 mg/L (safer <45); nitrite lower. High levels risk methemoglobinemia ("blue baby" syndrome), especially in young/ruminants.
- **Bacteria/Coliforms:** Low counts essential (<200 total bacteria/100 mL ideally). Avoid fecal contamination.
- **Other:** Iron/Mn (staining/taste), heavy metals (low limits, e.g., lead <0.1 mg/L), and toxins like blue-green algae.

## General Best Practices

- Test water seasonally + after weather events.
- Ensure clean troughs (algae, debris reduce intake).
- In hot climates or with high-alkalinity water, monitor intake closely—animals may drink less, impacting health.
- For sensitive groups (young, lactating, pregnant), aim for highest quality.

| Livestock Water Consumption    | ≈Gallons Per Day |
|--------------------------------|------------------|
| <b>Cattle (Beef/Dairy)</b>     |                  |
| Dry/Mature Cow                 | 15               |
| Lactating Cow/Dairy            | 45               |
| Bulls                          | 15               |
| Calves (Young)                 | 5                |
| <b>Horses</b>                  |                  |
| Idle/Non Working               | 4-12             |
| Working (Medium-Heavy)         | 15+              |
| Lactating/Gestating            | 12               |
| <b>Sheep &amp; Goats</b>       |                  |
| Adult (Dry)                    | 3                |
| Lactating (With Young)         | 4                |
| Lamb/Kids (Feeder)             | 2                |
| <b>Pigs</b>                    |                  |
| Finishing/Growing              | 6                |
| Lactating Sows                 | 8                |
| Gestating Sow                  | 6                |
| <b>Poultry (Per 100 Birds)</b> |                  |
| Laying Hens                    | 8                |
| Broilers (Young to mature)     | 12               |
| Turkeys                        | 20               |

Pipe size is one of the more critical calculations when designing a water treatment system. The chart to the left show recommended maximum flow rates in GPM based on pipe size and water temperature. Hot water and high velocity can destroy copper plumbing. By using this chart you can ensure your systems are designed for the application. Water flowing above 8 Feet Per Second (FPS) can cause noise, erosion of the copper, water hammer and

| Type "L" Copper | Cold (8 FPS Max) | Hot <140° F (5 FPS Max) | Hot >140° F (2 FPS Max) |
|-----------------|------------------|-------------------------|-------------------------|
| 1/2"            | 5.8 GPM          | 3.6 GPM                 | 1.5 GPM                 |
| 3/4"            | 12.1 GPM         | 7.5 GPM                 | 3 GPM                   |
| 1"              | 20.5 GPM         | 12.9 GPM                | 5.2 GPM                 |
| 1-1/4"          | 31.3 GPM         | 19.6 GPM                | 7.8 GPM                 |
| 1-1/2"          | 44 GPM           | 28 GPM                  | 11 GPM                  |
| 2"              | 77 GPM           | 48 GPM                  | 19 GPM                  |
| 2-1/2"          | 119 GPM          | 75 GPM                  | 30 GPM                  |
| 3"              | 170 GPM          | 106 GPM                 | 43 GPM                  |
| 4"              | 333 GPM          | 208 GPM                 | 82 GPM                  |
| 5"              | 514 GPM          | 321 GPM                 | 128 GPM                 |
| 6"              | 735 GPM          | 459 GPM                 | 184 GPM                 |





# i5 & Clack Service Parts

## Tools

|              |                           |
|--------------|---------------------------|
| 39V-V3193-02 | Service Wrench            |
| 39V-V3022    | 1" & 1" Twin Stack Puller |
| 39V-V3022-15 | 1.25" & 1.5" Stack Puller |

## Rebuild Kit (Pistons, Stack, Cap)

|             |                       |
|-------------|-----------------------|
| 39V-CK10-CK | (1) 1" Downflow       |
| 39V-V3630   | (2) WS2HF, WS3, WS2H* |

## Drive Cap

|           |                                         |
|-----------|-----------------------------------------|
| 39V-V3004 | (3) 1", 1" Twin, 1.25", 1.5", 1.5" Twin |
| 39V-V3728 | (4) 2", 2"QC (Not WS2HF)                |
| 39V-V3093 | (5) WS2HF & WS3*                        |

## Pistons

|              |                                              |
|--------------|----------------------------------------------|
| 39V-V3011    | (6) 1" & 1" Twin Downflow                    |
| 39V-V3011-01 | (7) 1" & 1" Twin Upflow                      |
| 39V-V3407    | (8) 1.25", 1.5" Brass, 1.5" Plastic Downflow |
| 39V-V4042    | (9) 1.25", 1.5" Brass, 1.5" Plastic Upflow   |
| 39V-3725     | (10) 2", 2"QC Downflow (Not WS2HF)           |
| 39V-V4059    | (11) 2" Upflow (Not WS2HF)                   |
| 39V-V3666-01 | (12) WS2HF, WS3, WS2H*                       |

## Brine Piston

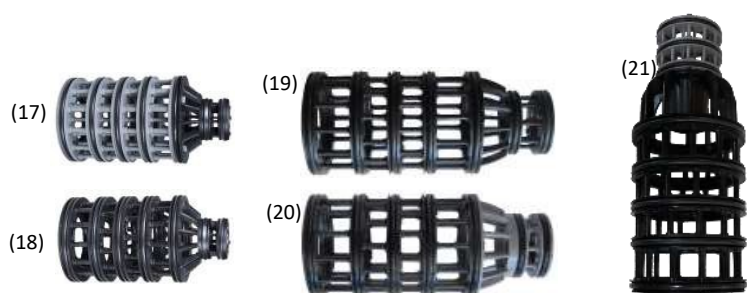
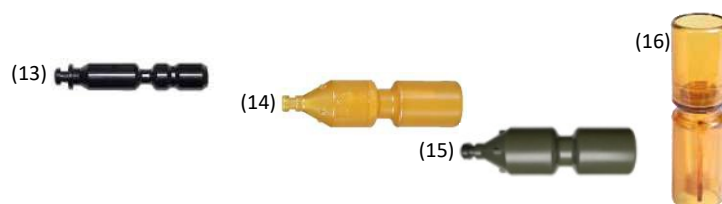
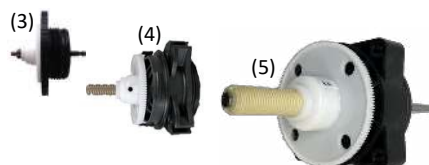
|              |                                      |
|--------------|--------------------------------------|
| 39V-V3174    | (13) 1.25", 1.5" Brass, 1.5" Plastic |
| 39V-V3726    | (14) 2" & 2" QC (Not WS2HF)          |
| 39V-V3745    | (15) 2" & 2" QC Upflow (Not WS2HF)   |
| 39V-V3238-01 | (16) WS2HF, WS3, WS2H                |

## Seal/Spacer Stack

|              |                                     |
|--------------|-------------------------------------|
| 39V-V3005-02 | (17) 1" and 1" Twin                 |
| 39V-V3430-01 | (18) 1.25", 1.5" Brass, 1.5 Plastic |
| 39V-V3729    | (19) 2" & 2"QC                      |
| 39V-V3729-01 | (20) 2" & 2"QC Upflow (Not WS2HF)   |
| 39V-V3092    | (21) WS2HF, WS3, WS2H*              |

## Boards Excluding WS2H/HF/3

|                |                                      |
|----------------|--------------------------------------|
| 40-V4445       | All i5 Systems                       |
| 39V-V3818TC    | 3 Button 1" & 1.25" Valves           |
| 39V-V3408EE    | 4 Button EE                          |
| 39V-V3108-5B   | 5 Button Standard, 1" & 1.25" Valves |
| 39V-V4072SP-03 | Solar for EE                         |



## Boards for WS2H/HF/3

|              |                                  |
|--------------|----------------------------------|
| 39V-V3241-02 | Pod Board                        |
| 39V-V3082-01 | Complete Replacement Pod w/Board |
| 39V-V3242-03 | Main Board w/Modbus              |
| 39V-V4427    | Relay Expansion Kit              |
| 39V-V4428    | Complete Upgrade Electronics Kit |



# i5 & Clack Service Parts



| Motor                |                                            |
|----------------------|--------------------------------------------|
| 39V-V3107-01         | (1) All Valves Except 1" Twin Transfer     |
| 39V-V4055            | (2) 1" Twin Transfer Valve                 |
| 39V-V3476            | (3) MAV/NHWBP                              |
| Meter Rebuild        |                                            |
| 39V-V3003-05         | (4) 1" & 1.25"                             |
| 39V-V4055            | 1", 1.5" Twin                              |
| 39V-V3003-06         | Remote Meter with 28" Cord                 |
| 39V-V3221            | Remote Meter with 15' Cord                 |
| 39V-V4039            | Remote Meter with 4' Cord                  |
| Mav/NHWBP Piston     |                                            |
| 39V-V3506-01         | 1", 1.25", 1.5"                            |
| 39V-V3634-01         | 2"                                         |
| 39V-V3695-01         | 3"                                         |
| MAV Stack Assembly   |                                            |
| 39V-V3074            | 1", 1.5" S.S. & Plastic MAV (Single Stack) |
| 39V-V3077            | 2" S.S. & Plastic MAV (Double Stack)       |
| 39V-V3084            | 3" Brass MAV (Double Stack)                |
| NHWBP Stack Assembly |                                            |
| 39V-V3074            | 1", 1.5" Plastic (Single Stack)            |
| 39V-V3077            | 2" Plastic (Double Stack)                  |
| 39V-V3886            | 1.5" SS NHWBP (Single Stack)               |
| 39V-V3887            | 2" SS NHWBP (Single Stack)                 |
| 39V-V3888            | 3" Brass NHWBP (Single Stack)              |
| Power Supply         |                                            |
| 39V-V3186-06         | 110V to 15VDC Transformer                  |
| 39V-V3186EU-06       | 220V to 15VDC Transformer Euro Plug        |
| 39V-3461-02          | 110V WS2H/WS2HF/WS3 Transformer            |
| Solar Retrofit Parts |                                            |
| 39V-V3846            | Solar Retrofit Kit for EE Valves           |
| 39V-V3842            | Solar Panel w/Bracket                      |
| 39V-V3835-02         | Battery Pack                               |
| 39V-V4072SP-03       | Solar for EE                               |
| 39V-V3814-01         | Drive Bracket w/out battery                |
| 39V-V3175SP-01       | EE Solar Cover                             |

# Clack Injectors, Draw & Feed Tubes

Downflow regeneration is the most common way to regenerate water softeners. It is easy to design and maintain, and works reliably with standard resin beds and you do not need to concern yourself with bed fluidization which can negatively affect the regeneration process. In some applications counter-current (upflow) regeneration can have some benefits that outweigh the negatives. Slightly higher efficiencies, variable brining, and slightly higher water quality can be achieved with counter-current regeneration but care must be taken to not fluidize the resin bed, thus much smaller injectors are typically used.

Upflow/Downflow Notes: Clack 1" and 1.25" single softener valves use a different valve body for upflow and downflow and can not be converted without the valve body. The 1.5" brass valve uses a different feed and draw tube and a different piston and stack and can be converted in the field with these parts. The 1" and 1.5" twin alternating valve and the 1.5" Plastic single valve require the piston be changed and the injector and injector plug locations be switched to the correct position. The 2" brass valve uses different feed and draw tubes and a different piston, brine piston and stack kit and can be converted in the field with these parts. Be sure to change the injector size according to the injector chart.

| Upflow (Counter-Current) Regeneration Conversion Parts |              |              |              |
|--------------------------------------------------------|--------------|--------------|--------------|
| Piston                                                 | Stack        | Draw Tube    | Feed Tube    |
| 1" and 1" Twin Alternator Composite                    |              |              |              |
| 39V-V3011-01                                           | 39V-V3005-02 | NA           | NA           |
| 1.25", 1.5", 1.5" Twin Alternator Composite            |              |              |              |
| 39V-V4042                                              | 39V-V3430-01 | NA           | NA           |
| 1.5" Brass                                             |              |              |              |
| 39V-V4042                                              | 39V-V3430-01 | 39V-V3969-01 | 39V-V3968-01 |
| 2" Composite                                           |              |              |              |
| 39V-V4059                                              | 39V-V3279-01 | NA           | NA           |
| 2" Brass*                                              |              |              |              |
| 39V-V4059                                              | 39V-V3279-01 | 39V-V3731-01 | 39V-V3730-01 |
| WS2HF & WS3                                            |              |              |              |
| Upflow Not Available                                   |              |              |              |

\*For the 2" Brass valve a replacement brine piston is also required. Part# 39V-V3745



| Item #                   | ≈Draw/<br>Rinse Rate<br>at 60 PSI    | ≈Total<br>at 60<br>PSI | Tank Size<br>Down<br>Flow | Tank<br>Size Up<br>Flow |
|--------------------------|--------------------------------------|------------------------|---------------------------|-------------------------|
| 1"-1.25" Clack           |                                      |                        |                           |                         |
| 39V-V3010-1A Black       | .06/.17                              | .23                    | 6"                        | 8"                      |
| 39V-V3010-1B Brown       | .14/.21                              | .35                    | 7"                        | 9"                      |
| 39V-V3010-1C Violet      | .18/.29                              | .47                    | 8"                        | 10"                     |
| 39V-V3010-1D Red         | .22/.34                              | .56                    | 9"                        | 12"                     |
| 39V-V3010-1E White       | .27/.39                              | .66                    | 10"                       | 13"                     |
| 39V-V3010-1F Blue        | .37/.55                              | .92                    | 12"                       | 13"                     |
| 39V-V3010-1G Yellow      | .45/.68                              | 1.13                   | 13"                       | 16"                     |
| 39V-V3010-1H Green       | .46/.77                              | 1.23                   | 14"                       | 18"                     |
| 39V-V3010-1I Orange      | .62/1.1                              | 1.72                   | 16"                       | 21"                     |
| 39V-V3010-1J Light Blue  | .70/1.4                              | 2.10                   | 18"                       | NA                      |
| 39V-V3010-1D Light Green | .78/1.9                              | 2.68                   | 21"                       | NA                      |
| 1.5" Clack               |                                      |                        |                           |                         |
| 39V-V3010-15B Violet     | .45/.70                              | 1.15                   | 12"                       | 14"                     |
| 39V-V3010-15C Red        | .55/.80                              | 1.35                   | 13"                       | 16"                     |
| 39V-V3010-15D White      | .80/1.3                              | 2.10                   | 14"                       | 18"                     |
| 39V-V3010-15E Blue       | .95/1.4                              | 2.35                   | 16"                       | 21"                     |
| 39V-V3010-15F Yellow     | 1.3/2.1                              | 3.4                    | 18"                       | 24"                     |
| 39V-V3010-15G Green      | 1.8/2.8                              | 4.6                    | 21"                       | 30"                     |
| 39V-V3010-15H Orange     | 2.3/3.6                              | 5.9                    | 24"                       | NA                      |
| 2" & 3" Clack            |                                      |                        |                           |                         |
| 39V-V3010-2-15           | 2" Injector to 1.5" Injector Adapter |                        |                           |                         |
| 39V-V3010-2R-15B Violet* | .45/.70                              | 1.15                   | 12"                       | 14"                     |
| 39V-V3010-2S-15C Red*    | .55/.80                              | 1.35                   | 13"                       | 16"                     |
| 39V-V3010-2T-15D White*  | .80/1.3                              | 2.10                   | 14"                       | 18"                     |
| 39V-V3010-2U-15E Blue*   | .95/1.4                              | 2.35                   | 16"                       | 21"                     |
| 39V-V3010-2A "A"         | 1.2/1.9                              | 3.1                    | 18"                       | 24"                     |
| 39V-V3010-2B "B"         | 1.6/2.4                              | 4.0                    | 21"                       | 30"                     |
| 39V-V3010-2C "C"         | 2.0/3.1                              | 5.1                    | 24"                       | 36"                     |
| 39V-V3010-2D "D"         | 3.2/4.9                              | 8.1                    | 30"                       | 42"                     |
| 39V-V3010-2E "E"         | 4.0/6.5                              | 10.5                   | 36"                       | 48"                     |
| 39V-V3010-2F "F"         | 5.0/8.0                              | 13                     | 42"                       | NA                      |
| 39V-V3010-2G "G"         | 7.0/11                               | 18                     | 48"                       | NA                      |
| 39V-V3010-2H "H"         | 14/21                                | 35                     | 63"                       | NA                      |

\* V3010-2X-15X Injectors contain a V3010-2-15 WS2 injector





# Stainless Flex Lines



Out of this world performance! Full Flow flexible stainless steel connectors are a critical installation component, eliminating the need for unions and allowing for tank expansion. Flexible connections are required to maintain most mineral tank warranties and may prevent costly leaks. Made of premium grade 304 stainless steel, these high flow connectors will substantially reduce both installation and upkeep

| Stainless Flex Lines                           |         |               |                   |                   |
|------------------------------------------------|---------|---------------|-------------------|-------------------|
| Item #                                         | ≈Length | Tube Diameter | Connection Side 1 | Connection Side 2 |
| <b>Clack QC x John Guest (Push to Connect)</b> |         |               |                   |                   |
| 51-333                                         | 18"     | 3/4"          | Clack DC          | 3/4" PTC          |
| 51-335                                         | 24"     | 3/4"          | Clack DC          | 3/4" PTC          |
| 51-453                                         | 18"     | 1"            | Clack DC          | 1" PTC            |
| 51-455                                         | 24"     | 1"            | Clack DC          | 1" PTC            |
| <b>Clack QC x FPT</b>                          |         |               |                   |                   |
| 51-331                                         | 18"     | 3/4"          | Clack DC          | 3/4" FPT          |
| 51-449                                         | 18"     | 1"            | Clack DC          | 1" FPT            |
| 51-451                                         | 24"     | 1"            | Clack DC          | 1" FPT            |
| <b>Clack QC x Clack QC</b>                     |         |               |                   |                   |
| 51-457                                         | 18"     | 1"            | Clack DC          | Clack DC          |
| 51-459                                         | 24"     | 1"            | Clack DC          | Clack DC          |
| <b>FPT x John Guest (Push to Connect)</b>      |         |               |                   |                   |
| 51-327                                         | 18"     | 3/4"          | 3/4" FPT          | 3/4" PTC          |
| 51-328                                         | 24"     | 3/4"          | 3/4" FPT          | 3/4" PTC          |
| 51-446                                         | 18"     | 1"            | 1" FPT            | 1" PTC            |
| 51-447                                         | 24"     | 1"            | 1" FPT            | 1" PTC            |
| <b>FPT x FPT</b>                               |         |               |                   |                   |
| 51-312                                         | 12"     | 3/4"          | 3/4" FPT          | 3/4" FPT          |
| 51-315                                         | 15"     | 3/4"          | 3/4" FPT          | 3/4" FPT          |
| 51-318                                         | 18"     | 3/4"          | 3/4" FPT          | 3/4" FPT          |
| 51-321                                         | 18"     | 3/4"          | 3/4" FPT          | 1" FPT            |
| 51-324                                         | 24"     | 3/4"          | 3/4" FPT          | 3/4" FPT          |
| 51-322                                         | 24"     | 3/4"          | 3/4" FPT          | 1" FPT            |
| 51-418                                         | 18"     | 1"            | 1" FPT            | 1" FPT            |
| 51-424                                         | 24"     | 1"            | 1" FPT            | 1" FPT            |
| 51-421                                         | 18"     | 1"            | 1" FPT            | 1-1/4" FPT        |
| 51-422                                         | 24"     | 1"            | 1" FPT            | 1-1/4" FPT        |
| 51-518                                         | 18"     | 1-1/4"        | 1-1/4" FPT        | 1-1/4" FPT        |
| 51-524                                         | 24"     | 1-1/4"        | 1-1/4" FPT        | 1-1/4" FPT        |
| 51-618                                         | 18"     | 1-1/2"        | 1-1/2" FPT        | 1-1/2" FPT        |
| 51-624                                         | 24"     | 1-1/2"        | 1-1/2" FPT        | 1-1/2" FPT        |
| 51-818                                         | 18"     | 2"            | 2" FPT            | 2" FPT            |
| 51-824                                         | 24"     | 2"            | 2" FPT            | 2" FPT            |
| <b>MPT x FPT Stainless Flex Lines</b>          |         |               |                   |                   |
| 51-325                                         | 18"     | 3/4"          | 3/4" MPT          | 3/4" FPT          |
| 51-326                                         | 24"     | 3/4"          | 3/4" MPT          | 3/4" FPT          |
| 51-414                                         | 18"     | 1"            | 1" MPT            | 1" FPT            |
| 51-416                                         | 24"     | 1"            | 1" MPT            | 1" FPT            |
| 51-618P                                        | 18"     | 1-1/2"        | 1-1/2" MPT        | 1-1/2" FPT        |
| 51-624P                                        | 24"     | 1-1/2"        | 1-1/2" MPT        | 1-1/2" FPT        |
| 51-818P                                        | 18"     | 2"            | 2" FPT            | 2" MPT            |
| 51-824P                                        | 24"     | 2"            | 2" FPT            | 2" MPT            |
| <b>FPT x Copper Sweat Stainless Flex Lines</b> |         |               |                   |                   |
| 51-319                                         | 18"     | 3/4"          | 3/4" FPT          | 3/4" Sweat        |
| 51-444                                         | 18"     | 1"            | 1" FPT            | 1" Sweat          |



| Item # | Common Options/Accessories   |
|--------|------------------------------|
| 51-075 | 3/4" x 2" Stainless Nipple   |
| 51-10  | 1" x 2" Stainless Nipple     |
| 51-15  | 1-1/2" x 4" Stainless Nipple |
| 51-20  | 2" x 4" Stainless Nipple     |
| 51-W3  | Washer For 3/4" FPT          |
| 51-W4  | Washer For 1" FPT            |
| 51-W5  | Washer For 1-1/4" FPT        |
| 51-W6  | Washer For 1-1/2" FPT        |
| 51-W8  | Washer For 2" FPT            |
| 51-J3R | O-Ring For 3/4" JG PTC       |
| 51-J4R | O-Ring For 1" JG PTC         |

# Cartridge Tank Filtration

Clack's Hydro-Cure® Cartridge Tank is injection molded using glass filled composite material. Clack's design provides a continuous seamless tank for higher strength and pressure capabilities. Sediment, Carbon and fillable cartridges available.

| Cartridge Tank/Accessories |                                           |
|----------------------------|-------------------------------------------|
| CTH-100*                   | Clack Tank w/Bypass & Blowdown            |
| CT-C3039                   | Clack Tank Wrench                         |
| CT-100BP                   | Enpress Tank w/Bypass                     |
| CT-100BP-P                 | Enpress Tank w/Bypass Pioneer Electronics |
| CT-125                     | Enpress Tank 1.25" PVC Socket             |
| CT-200                     | Enpress Tank 2" PVC Socket                |

\*Add a Clack connector of your choice

| Budget Melt Blown Sediment 1" & 1.25" |                     |
|---------------------------------------|---------------------|
| CF-MB2501                             | 25/01 Micron 30 GPM |
| CF-MB2505                             | 25/05 Micron 30 GPM |
| CF-MB5005                             | 50/05 Micron 30 GPM |
| CF-MB5025                             | 50/25 Micron 30 GP  |

| Pleated Sediment 1" & 1.25" |                               |
|-----------------------------|-------------------------------|
| CTG-02N                     | 20/0.2 Micron Pleated Nano-AL |
| CF-PL01                     | 1 Micron 30 GPM               |
| CF-PL05                     | 5 Micron 30 GPM               |
| CF-PL20                     | 20 Micron 30 GPM              |
| CF-PL50                     | 50 Micron 30 GPM              |

| CTO Sediment/Carbon 1" & 1.25" |                                      |
|--------------------------------|--------------------------------------|
| CTU-PNR                        | Pioneer Certified PFAS               |
| CF-CT2505                      | 25/05 Micron w/Carbon 20 GPM         |
| CF-CT2520                      | 25/20 Micron w/Carbon 25 GPM         |
| CF-CT2515                      | 25/15 Chloramine Carbon 20 GPM       |
| CTG-02NC                       | 20/0.2 Micron Pleated Nano-AL Carbon |

| Fillable Cartridge Tank 1" & 1.25" |                                             |
|------------------------------------|---------------------------------------------|
| CF-FCNM                            | .5 Ft <sup>3</sup> No Mid-Plate             |
| CF-FCMP                            | .25 Ft <sup>3</sup> Per Chamber w/Mid Plate |

| 2" Cartridge Filters |                                  |
|----------------------|----------------------------------|
| CTP-05               | 5 Micron Melt Blown 100 GPM      |
| CTP-20               | 20 Micron Melt Blown 100 GPM     |
| CTR-001A             | 1 Micron Pleated Absolute 50 GPM |
| CTR-005              | 5 Micron Pleated 100 GPM         |
| CTR-020              | 20 Micron Pleated 100 GPM        |
| CTR-050              | 50 Micron Pleated 100 GPM        |
| CTR-150              | 150 Micron Pleated 100 GPM       |



The **NanoAL** Series are electropositively charged dual gradient double pleated filtration solutions that remove contaminants from 1 to 0.2 microns. The filters are designed with a larger 20 micron pre-filtration layer externally and the charged media internally, extending filtration level contamination and service life. NanoAL filters feature the use of AgionR antimicrobial technology that provides built-in protection by working 24/7 resisting the growth of microbes.

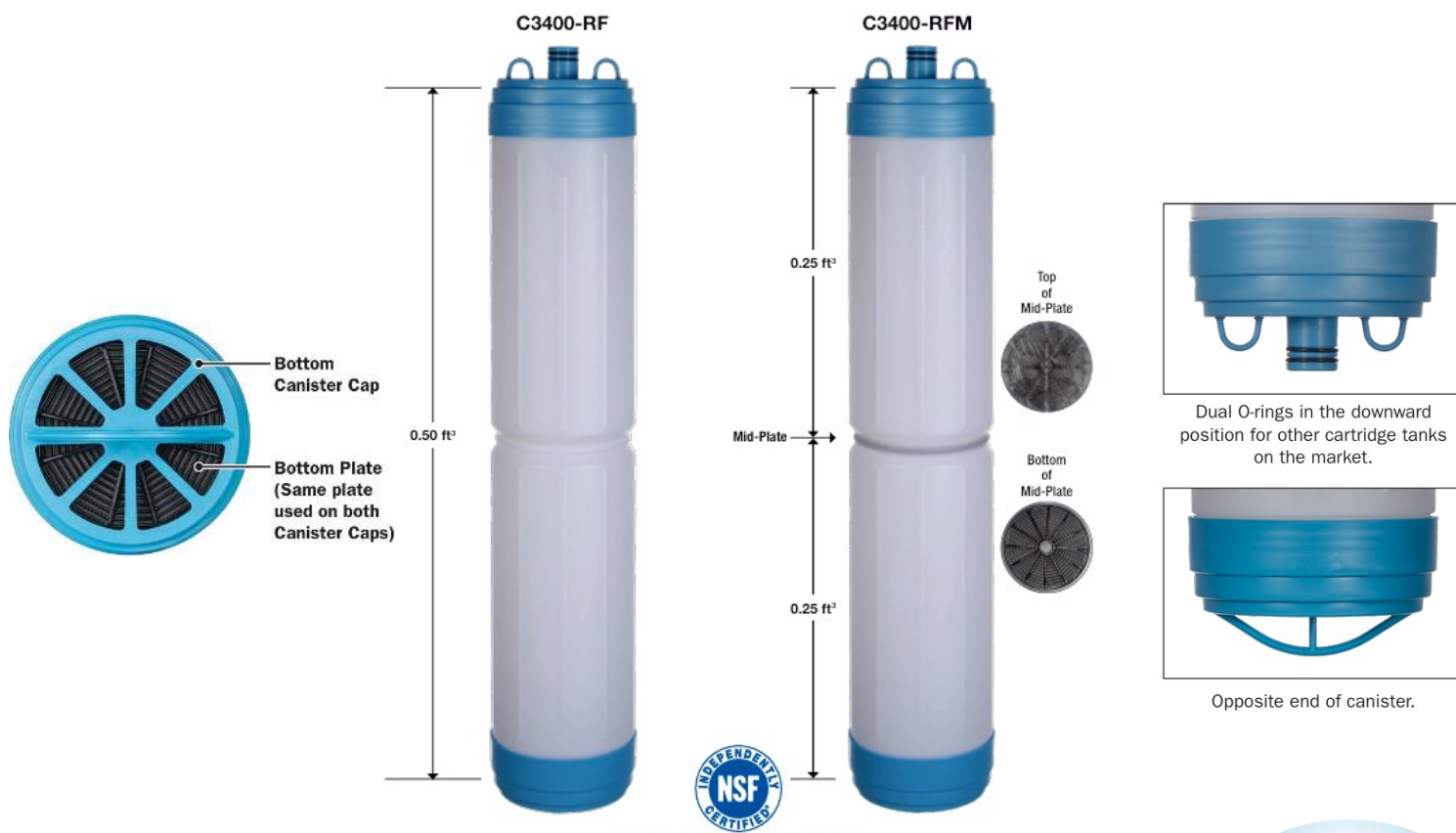


# High Capacity Specialty Filters

Our largest Specialty filters feature up to ½ cubic feet of media. Simple maintenance and high capacity make these filters an excellent choice for residential and commercial applications. Don't see your filter in the list below, just call us and we will make it for you!

| Item #         | Description                               | Rec. Flow | Capacity                    | Function                        |
|----------------|-------------------------------------------|-----------|-----------------------------|---------------------------------|
| <b>CTE-C</b>   | Empty Cartridge ½ ft3                     | N/A       | N/A                         | Empty, Single Chamber           |
| <b>CTE-CK</b>  | Empty Cartridge Kit ½ ft3                 | N/A       | N/A                         | Empty, Single Chamber w/Foam    |
| <b>CTE-C2K</b> | Empty Cartridge Kit ¼ X2 ft3 Mid Plate    | N/A       | N/A                         | Empty 2 Chamber w/Foam and Plug |
| <b>CTE-MP</b>  | Empty Cartridge Mid Plate Plug            | N/A       | N/A                         | Mid Plate Plug                  |
| <b>CTE-FM</b>  | Empty Cartridge Upflow Expansion Foam     | N/A       | N/A                         | Expansion Foam                  |
| <b>CTE-120</b> | Mixed Bed DI Resin                        | ≈6 GPM    | ≈5000 Gallons @ 10 mg/L     | Deionization                    |
| <b>CTE-160</b> | Cation Softening Resin                    | ≈6 GPM    | ≈1500 Gallons @ 10 GPG      | Hardness                        |
| <b>CTE-180</b> | Nitrate Selective Anion Resin             | ≈2 GPM    | ≈4500 Gallons @ 20 mg/L     | Nitrate                         |
| <b>CT-190</b>  | Chromium VI Selective Anion Resin         | ≈3 GPM    | ≈55,000 Gallons @ 15 ppb    | Chromium(VI)                    |
| <b>CTE-200</b> | Coconut Shell GAC                         | ≈5 GPM    | ≈50,000 Gallons             | Chlorine/Organics               |
| <b>CTE-210</b> | Catalytic GAC                             | ≈3 GPM    | ≈36,000 Gallons             | Chloramines                     |
| <b>CTE-410</b> | 3.5 Liter Scale Reduction                 | ≈10 GPM   | ≈12 Months                  | Scale Reduction                 |
| <b>CTE-505</b> | Calcium Carbonate                         | ≈4 GPM    | ≈40,000 Gallons             | Neutralization                  |
| <b>CTE-510</b> | Magnesium Oxide                           | ≈4 GPM    | ≈40,000 Gallons             | Neutralization                  |
| <b>CTE-520</b> | 50% Magnesium Oxide/50% Calcium Carbonate | ≈4 GPM    | ≈40,000 Gallons             | Neutralization                  |
| <b>CTE-610</b> | Activated Alumina                         | ≈1 GPM    | ≈2500 Gallons @ 4 mg/L      | Fluoride/Bicarbonate            |
| <b>CTE-620</b> | Filter-Ag Plus (Clinoptilolite)           | ½ GPM     | 25,000 Gallons @ 10 mg/L    | Ammonia                         |
| <b>CTE-640</b> | Nano Titanium Oxide                       | ≈2 GPM    | ≈120,000 Gallons @ 40 ppb   | Arsenic                         |
| <b>CTE-670</b> | Bone Char                                 | ≈2 GPM    | NA                          | Fluoride/Chlorine               |
| <b>CTE-AK</b>  | Alkaline Media (Ceramics)                 | ≈2 GPM    | ≈60,000 Gallons (R.O. Feed) | pH/ORP Adjustment               |

## Cartridge Tank Canister



Certified to NSF/ANSI 42 and NSF/ANSI/CAN 372.  
Visit [www.nsf.org](http://www.nsf.org) to view our Certified Products.



# Polymeric UF Ultrafiltration

## TECHNOLOGY THAT IS EASY TO UNDERSTAND

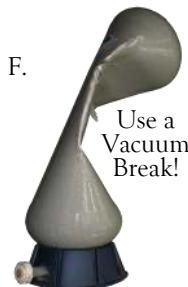
Water Savings. Environmentally Friendly. Innovative Design. ENPRESS LLC,<sup>®</sup> introduces its Polymeric Ultrafiltration (Poly-UF) Vessel system. The ENPRESS Poly-UF offers 0.02 micron filtration at service flow rates up to 12gpm, just another tool in the water treatment tool box. Another example of the innovative thinking you've come to expect from ENPRESS.

Utilizing ENPRESS' patented and industry exclusive liner design, the internal UF module treats colloids, bacteria, cysts, viruses, turbidity, tannins, and other particles down to 0.02 micron size. The back washable system, allows for multiple standard 2.5" top inlet connections, from standard back washable control valves to in/out heads. The high surface area UF bundles require normal line pressure to operate, low waste discharge when in backwash/cleaning mode, and offer low pressure drop with high service flow rates.

The ENPRESS Poly-UF can be utilized as a final polishing stage or on water reclamation systems for Rainwater or Grey water, along with offering protection during power outages and intermittent power. The membrane is NSF 61 certified, and the system is BioVir certified and tested for log reduction. The vessel also comes standard with a bottom drain opening for ease of drainage and cleaning purposes of the tank system. Technology that is easy to understand and use, another innovation from ENPRESS.

### Specification:

- 0.02 micron.
- Operating Temperature: 35 to 100 degrees F.
  - Operation Pressure: 10 to 100 psi.
  - Continuous Flow Rate: 10 GPM.
- Peak Flow 12 GPM at 25 C and 60 psi.
  - Membrane is NSF 61 Certified.
  - Raw Water Specification:
    - Pre-filtration: 5 microns or less.
- Chlorine: 1 ppm maximum (up to 2000 ppm for cleaning only).
  - Iron: Less than .3 ppm.
  - Manganese: Less than .05 ppm.
  - Silt Density Index: Less than 6.0
  - pH: 3 to 11.
- Pressure Decay Test (PDT) is required upon installation.



### TECHNICAL INFORMATION:

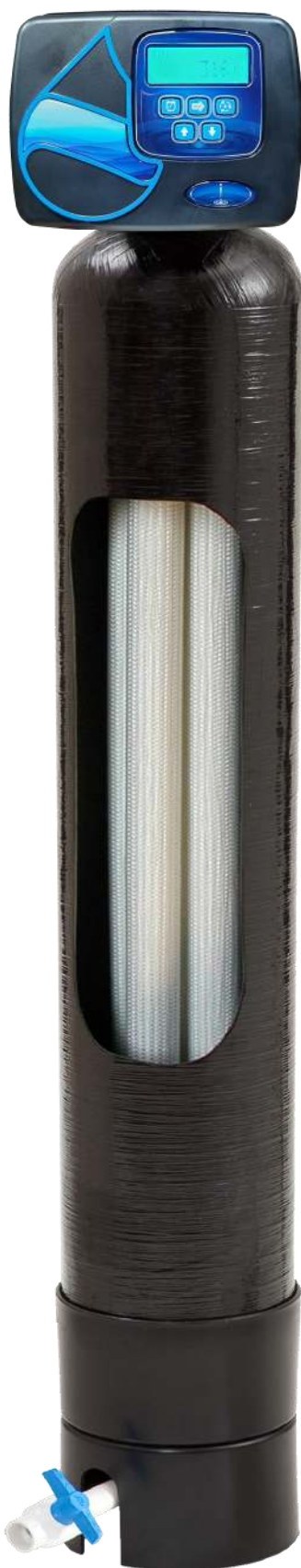
- Backflush: Once per day (5 minutes at 0.7 to 2 GPM).
- Drain Flush: Once per week (2 minutes at 5 GPM).
- Continuous flow at 10 GPM filtration at 0.02 microns.
  - 4.4 log reduction of Bacteria
  - 2.4 log reduction of Virus
  - 2.0 log (est) reduction of Cyst.
  - 100,000 MWC



*\*This product is not certified as a microbiological purifier and should not be applied as a stand-alone disinfection solution for microbiologically unsafe water.*

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Data herein is provided as a courtesy and is subject to change without notice.



# UF-E8-i10M24

1/2" MPT  
Vacuum Break

3/4" MPT  
Pressure Relief

## UF-E8-i10M24 Includes

- ◆ 10 GPM UF Tank
- ◆ i5 Metered Control Valve
- ◆ Bypass Pre-plumbed as Shown
- ◆ Auto Daily Backwashing
- ◆ Auto Daily Tank Purge
  - ◆ 1/2" Vacuum Break
- ◆ 3/4" pressure Relief Valve
- ◆ No Hard Water Bypass
- ◆ 40 gallon Clean Water Storage tank
  - ◆ Ball Valve at Bottom of UF tank
  - ◆ Automatic Tank Blow Down Valve
    - ◆ Blow Down Flow Control
- ◆ Relay for Sending Signal to Pump Control

## UF-E8-i10M24 Does Not Include

- ◆ Plumbing
- ◆ Ball Valve Above the 40 Gallon Tank
- ◆ UF Integrity tester

"40" Gallon Tank  
(Actual Capacity ≈24 Gallons)

| Item #       | Description                                                        |
|--------------|--------------------------------------------------------------------|
| UF-E8-i10M24 | UF with Automatic Tank Flush, Clean Water Backwash, 40 Gallon Tank |
| UF-E8-i10M   | UF with i5 and Manual Tank Flush Valve                             |
| UF-E8-10SC   | UF with 15 and Manual Tank Flush Valve                             |
| UF-E8-BW     | UF Ultra Filtration Replacement Tank                               |
| UF-E8-T      | UF Integrity Tester                                                |
| UF-E-PT      | UF Pilot test ≈.8 GPM Peak                                         |
| 56-VAC       | 1/2" MPT Vacuum Break                                              |
| 56-PRV12SS   | 3/4" MPT Stainless Pressure Relief                                 |

Backwash Daily  
5 minutes at 2 GPM

Drain every 1-5 Days  
2 minutes at 5 GPM

*The membrane is  
NSF 61 certified,  
and the system is BioVir  
certified and tested  
for log reduction.*



The Poly-UF Stick offering 0.02 micron filtration at test flow rates up to 0.8 GPM is intended to be used as a pilot testing device for application of the Poly-UF ultrafiltration system.



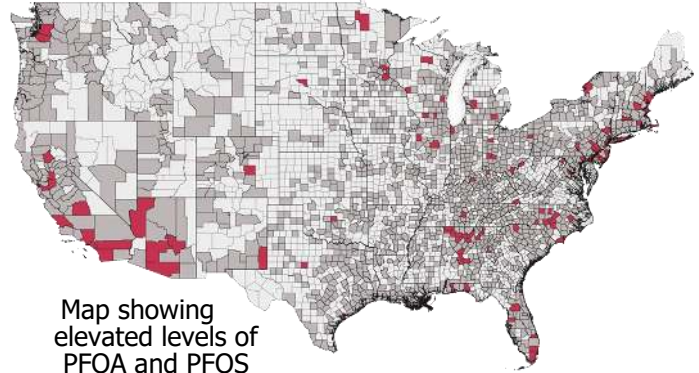
# PIONEER™

## Whole House PFOA, PFOS, Lead, Cyst, Chlorine, Chloramine Reduction

The chemicals Perfluorooctanoic acid (PFOA), also known as C8, and Perfluorooctane sulfonic acid (PFOS) are bio-permanent, are resistant to direct oxidation, and do not break down naturally in the environment or the human body. Studies suggest that exposure to the chemicals may lead to cancer.

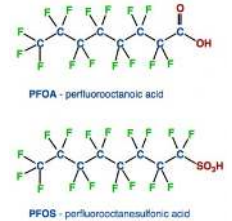
**PIONEER™** successfully removes these chemicals and is installed where the water line enters your home, business or restaurant. This system has been tested and third-party certified as required in the NSF/ANSI P473 standard for PFOA/PFOS, along with NSF/ANSI 53 standard for the reduction of lead and cyst.

It's obvious that PFOA/PFOS chemicals need to be removed from your water. The **PIONEER™** POE filtration system houses a strategically designed nominal 0.5-micron filter to remove BOTH chemicals along with BOTH forms of lead (soluble and particulate) from your house in a single filter. The **PIONEER™** is the First of its Kind Whole-House Chlorine, Chloramine, Lead, Cyst & PFOA/PFOS Removal System, providing safe drinking water throughout your entire home.



Map showing elevated levels of PFOA and PFOS in the US

| Cartridge Tanks    |                                                    |
|--------------------|----------------------------------------------------|
| CT-100BP-P         | Cartridge Tank Assembly w/1" Bypass and 100K Meter |
| Replacement Filter |                                                    |
| CTU-PNR            | Pioneer Cartridge NSF 53, NSF 42 .5 micron         |



"Pioneer" 8 GPM lead, heavy metal chlorine, chloramine and cyst reduction. Certified in California and Iowa!





# More Than One Road to Efficiency

By E. Allan Horner, CWS-VI

Reprinted from Water Conditioning & Purification, June 2010

For years, water softener control valves and media manufacturers have been pushed by customers and legislation to achieve greater water and salt efficiency. Electronic controls, variable reserves, meters, lower salt settings and aggressive training on how to make all of these advances work while still providing long media life and customer satisfaction has been very successful in achieving this important goal. Some advances created improved efficiency; others created more problems. Lately, gains in efficiency have been almost insignificant. We have started to hit the practical limits of a water softener's salt efficiency. While some designs are more efficient than others, real savings have yet to be realized. Until a truly effective salt-free technology or a completely new design in water softening is invented, we need to start looking for ways to make bigger steps in efficiency. Many municipalities push customers with rebates to purchase highly energy-efficient, tankless water heaters, but then discourage them from also purchasing a softener, the simplest and most effective way to ensure this appliance does not quickly become a landfill candidate. Efficiency decreases rapidly with even small amounts of scale buildup, due to the heat exchanger's inability to transfer heat to the water. Total system failure is common when these systems are not maintained properly.

## *Hot versus cold installation*

During a recent technical phone call, I was asked how to make a homeowner more satisfied with a softener system that could only be installed on the hot water side due to plumbing limitations. I advised the caller to lower the hot water heater temperature, thereby forcing the homeowner to use more hot water in the shower, where they would feel the soft water. (tankless water application only)

Installing a softener to hot water only may sound new, but it is common practice in most commercial and industrial applications. Softeners that feed cold water applications are relatively uncommon and are usually only done when the water quality requires it for a particular application. Hot-water-only installations are common in restaurants, hotels, hospitals and manufacturing plants. Protection and efficiency of water heating equipment and applications that are sensitive to hardness minerals are the primary concerns. Specialized equipment that requires softened water (such as espresso machines or steamers) usually has its own small water softener, so salt consumption and the associated costs can be kept to a minimum.

### **The advantages of hot-water-only installations in residential applications that have a tankless water heater are numerous:**

- Up to 65-percent reduction in wastewater and salt consumption
- Smaller equipment requirements
- Typically easier installations
- Lower initial cost
- Lower operating costs
- Encouragement of safer water temperature (106°F [41.1°C])
- Additional equipment sales for whole-house treatment
- Acceptance of water softener by municipalities that have already banned, or plan to ban, salt-based water softeners

### **Some disadvantages are apparent in some applications:**

- Installation of recommended remote temperature keypads adds to initial cost.
- Toilets and other cold-water applications remain untreated.



Further whole-house water treatment may still be needed for iron or other contaminant removal that can be done with properly designed multiple media systems.

I decided to start experimenting at my own house by replacing my 10-year-old tank water heater with a new tankless water heater. I installed flow meters with totalizers on the main feed to the house where my softener is installed, and a totalizing meter on the inlet side of the tankless water heater. I purchased remote keypads for the tankless water heater and installed them throughout the house, so the hot water temperature could easily be adjusted anytime. The basic premise was to find out if a residential hot-water-only installation could satisfy a homeowner's desire for soft water, what problems could arise from this type of installation and most importantly, how much savings could be achieved.

The results have far exceeded my expectations. Existing studies have shown conclusively that for a tankless water heater to remain efficient, scaling must be minimized or eliminated. Anti-scaling medias, polyphosphate filter systems and other technologies have fallen short on eliminating scale in heat exchanger systems like tankless water heaters. The sudden massive rise in temperature creates a condition that is ideal for precipitation of hardness minerals scaling to occur. Water softeners have been proven to effectively eliminate these problems, thus maintaining heat exchanger efficiency.

After the remote keypads for the tankless water heater were installed, my family started using the water as if the water softener were installed to the hot water only. (This has proved to be much easier and nicer than expected.) The initial set point of the tankless water heater was 120°F (48.8°C). For this test, it was changed to 106°F, which has been surprisingly beneficial for showers and baths; the right temperature is achieved every time. This lower temperature creates a safer home for children and the elderly; it has nearly zero potential to burn or even irritate skin. Household dishwashers, which use a very small amount of water and are fed with hot water, are not affected by the lower temperature. These appliances heat the water to the proper temperature, regardless of the temperature of incoming water.

## *Impressive results*

Is soft water critical for the rinse water in residential laundry? Probably not, so a hot-water wash and cold rinse should be satisfactory for most customers. Soft water to the laundry can be achieved through different ways. In my own application, a cold soft-water-feed was plumbed due to close proximity to the water heater. Using a warm-water wash and rinse and simply turning off the cold water feed to the laundry also worked well in my testing. The final water consumption results after a month of testing were impressive. Approximately 35 percent of water use went through the tankless heater under these test procedures. This could result in a savings of 65 percent of salt consumption by a traditional water softener installation and an equal savings in regeneration. Installations are typically less expensive, and the equipment sizing could be considerably smaller.

## *Conclusion*

By rethinking ways to make water softeners more efficient, we often overlook the obvious. The installation of tankless water heaters can open up new channels of business. Partnering with water heater installation companies or acquiring the knowledge, training and licensing to install and maintain tankless heaters yourself can help to expand business into new fields. The rapid growth of tankless water heaters gives us a new chance at increasing efficiency by simply reducing how much soft water we really need. And, as water softener brine discharge becomes more of an issue, our industry needs to pre-emptively do what is necessary.

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# Clack Mineral Tanks 6"-35"



Clack® Mineral Tanks are made of high density polyethylene (HDPE) plastic liner with composite fiberglass filament winding over the liner. Clack's design provides a continuous seamless inner liner with a glass filled polypropylene inlet for higher strength and pressure capabilities. Clack USA made mineral tanks are available in sizes from 8" to 35" diameters. Most tanks are stocked in black.

| Item #                             | Size    | Height | Typical Ft <sup>3</sup> |
|------------------------------------|---------|--------|-------------------------|
| 2.5" Tank opening                  |         |        |                         |
| 22C-0835K                          | 8"x35"  | ≈34.9" | 0.5                     |
| 22C-0844K                          | 8"x44"  | ≈44.2" | 0.75                    |
| 22C-0918K                          | 9"x18"  | 19"    | .35                     |
| 22C-0935K                          | 9"x35"  | ≈34.8" | 0.75                    |
| 22C-0948K                          | 9"x48"  | ≈48.3" | 1                       |
| 22C-1018K                          | 10"x18" | ≈18.4" | 0.4                     |
| 22C-1035K                          | 10"x35" | ≈35"   | 0.75                    |
| 22C-1040K                          | 10"x40" | ≈40.6" | 1                       |
| 22C-1044K                          | 10"x44" | ≈44.3" | 1                       |
| 22C-1047K                          | 10"x47" | ≈47.2" | 1.25                    |
| 22C-1054K                          | 10"x54" | ≈54.4" | 1.5                     |
| 22C-1235K                          | 12"x35" | ≈35.4" | 1.5                     |
| 22C-1248K                          | 12"x48" | ≈48.3" | 1.75                    |
| 22C-1252K                          | 12"x52" | ≈52.8" | 2                       |
| 22C-1335K                          | 13"x35" | ≈35"   | 1.75                    |
| 22C-1354K                          | 13"x54" | ≈55"   | 2.5                     |
| 22C-14652K                         | 14"x65" | ≈65.6" | 3                       |
| 22C-1653K                          | 16"x53" | ≈54"   | 4                       |
| 2.5" Tank with Dome Hole (Natural) |         |        |                         |
| 22C-1054DN                         | 10"x54" | ≈54.4" | 1.5                     |
| 22C-1354DN                         | 13"x54" | ≈55"   | 2.5                     |
| 4" Tank Opening                    |         |        |                         |
| 22C-14654K                         | 14"x65" | ≈65.6" | 3                       |
| 22C-16654K                         | 16"x65" | ≈65.6" | 4                       |
| 22C-1865K                          | 18"x65" | ≈67.7" | 5                       |
| 22C-2162K                          | 21"x62" | ≈67.8" | 7                       |
| 22C-2472K                          | 24"x72" | ≈73.6" | 10                      |
| 6" Flange (Natural)                |         |        |                         |
| 22C-3072                           | 30"x72" | ≈76.0" | 15                      |
| 22C-3572                           | 35"x72" | ≈76.9" | 20                      |



This product is Tested and Certified by NSF International against NSF/ANSI 44 for material and structural integrity requirements and NSF/ANSI/CAN Standard 61 for material requirements. Certified to NSF/ANSI 372.

Available in Black, Blue, Almond, Grey and Natural

1/2" MPT Vacuum Break



56-VAC



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# Pentair Polyglass Mineral Tanks 6"-16"

MADE IN THE  
**USA**  
OF FOREIGN & DOMESTIC PARTS

Pentair® Structural® Poly Glass Vessels have been the industry standard for quality and performance for over 40 years. Featuring a one piece, seamless high density polyethylene liner and an encapsulated, leak free engineered polymer inlet, Structural Poly Glass Vessels are designed to provide you with years of worry free performance. Most tanks are stocked in black. Some tanks require extended lead time and or minimum order quantity. Other sizes, options and colors are available, contact IWP for details.

1/2" MPT  
Vacuum Break



56-VAC



| Item #                       | Size    | Height  | Typical<br>Ft <sup>3</sup> |
|------------------------------|---------|---------|----------------------------|
| 2.5" Tank neck               |         |         |                            |
| 21-0735K                     | 7"x35"  | ≈35.4"  | 0.5                        |
| 21-0840K                     | 8"x40"  | ≈40.1"  | .75                        |
| 21-0844K                     | 8"x44"  | ≈44.5"  | .75                        |
| 21-0918K                     | 9"x18"  | ≈18.4"  | .35                        |
| 21-0935K                     | 9"x35"  | ≈35.3"  | .75                        |
| 21-0942K                     | 9"x42"  | ≈41.9"  | 1                          |
| 21-0948K                     | 9"x48"  | ≈48.7"  | 1                          |
| 21-1018K                     | 10"x18" | ≈18.9"  | 0.4                        |
| 21-1035K                     | 10"x35" | ≈35.5"  | 1                          |
| 21-1040K                     | 10"x40" | ≈40.3"  | 1                          |
| 21-1044K                     | 10"x44" | ≈44.6"  | 1.25                       |
| 21-1047K                     | 10"x47" | ≈47.7"  | 1.5                        |
| 21-1054K                     | 10"x54" | ≈54.4"  | 1.5                        |
| 21-12482K                    | 12"x48" | ≈49"    | 1.75                       |
| 21-12522K                    | 12"x52" | ≈53"    | 2                          |
| 21-13542K                    | 13"x54" | ≈54.3"  | 2.5                        |
| 4" Tank neck                 |         |         |                            |
| 21-13544K                    | 13"x54" | ≈54.9"  | 2.5                        |
| 21-14474K                    | 14"x47" | ≈47"    | 2.5                        |
| 21-14654K                    | 14"x65" | ≈66.1"  | 3                          |
| 21-16654K                    | 16"x65" | ≈66.2"  | 4                          |
| 4.5" Tank Neck Exchange Tank |         |         |                            |
| 21-125245                    | 12"x52" | ≈53.14" | 2.8                        |
| 21-144745                    | 14"x47" | ≈47.3"  | 3.6                        |



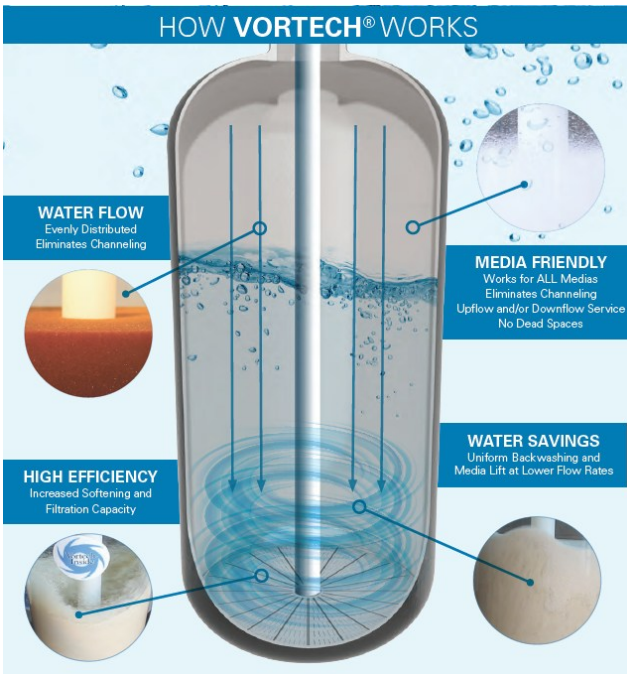
Vessels tested and certified by the Water Quality Association (WQA) to NSF/ANSI Std. 44 for material safety and structural integrity requirements and Std. 372 for low lead compliance.





# Enpress Mineral Tanks

ENPRESS™ Vessels are manufactured with computer controlled cut-lengths which allow us to achieve the most consistent vessel height in the industry – consistent within 3/16". Our DI Exchange Poly Bases save up to 16 pounds per vessel compared to the competition, provide full support, roll easier and they won't come off. From top to bottom, nobody tops our mineral tanks and DI Exchange Vessels.



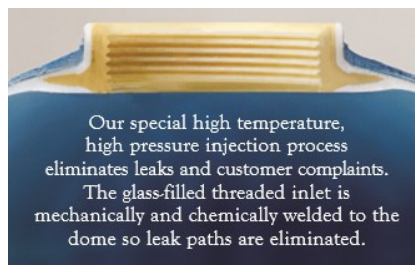
**Vortech**  
DISTRIBUTION TECHNOLOGY



ENPRESS™ Vortech MidPlate tanks allow for multiple medias to be properly separated inside of the same tank! Available for both 10" and 13" diameter tanks. Contact



Portable Exchange tanks available by special order! Unique Poly Base is lighter and more durable than traditional rubber bases.



Our special high temperature, high pressure injection process eliminates leaks and customer complaints. The glass-filled threaded inlet is mechanically and chemically welded to the dome so leak paths are eliminated.



This pressure vessel is tested and certified by NSF International against NSF/ANSI Standard 44 for materials and structural integrity requirements

COMPONENT



# Tank Jackets

HDPE jackets are economical, attractive and ideal for indoor or outdoor applications.

## Molded Heavy Duty HDPE

| Item #    | Fits                    |
|-----------|-------------------------|
| 28P-1054P | 10"x54" <b>Platinum</b> |
| 28P-12P   | 12"x52" <b>Platinum</b> |
| 28P-13P   | 13"x54" <b>Platinum</b> |
| 28K-1054K | 10"x54" <b>Black</b>    |
| 28K-1054A | 10"x54" <b>Almond</b>   |



## "Bright" 430 Full

| Item #      | Fits             | Size       |
|-------------|------------------|------------|
| 28B-0948WC  | Clack            | 9"x48"     |
| 28B-0948W   | Structural       | 9"x48"     |
| 28B-0948WE  | Enpress          | 9"x48"     |
| 28B-1054W   | Clack/Structural | 10"x54"    |
| 28B-1054WE  | Enpress          | 10"x54"    |
| 28B-1252WC  | Clack/Structural | 12"x52"    |
| 28B-1252WE  | Enpress          | 12"x52"    |
| 28B-1354WC  | Clack            | 13"x54"    |
| 28B-1354W   | Structural       | 13"x54"    |
| 28B-1354WE  | Enpress          | 13"x54"    |
| 28B-1465W   | Clack/Structural | 14"x65"    |
| 28B-1653W   | Clack            | 16"x53"    |
| 28B-1465W   | Clack/Structural | 14"x65"    |
| 28B-1653W   | Clack            | 16"x53"    |
| 28B-1665W-4 | Clack/Structural | 16"x65"-4" |



## "Brushed" 304 Welded

| Item #     | Fits             | Size    |
|------------|------------------|---------|
| 28D-0948WE | Enpress          | 9"x48"  |
| 28D-1054W  | Clack/Structural | 10"x54" |
| 28D-1054WE | Enpress          | 10"x54" |
| 28D-1252W  | Clack/Structural | 12"x52" |
| 28D-1252WE | Enpress          | 12"x52" |
| 28D-1354WE | Enpress          | 13"x54" |

Brushed 304 stainless offer better corrosion resistance and a "refined" look.

## "Brushed" 304 w/Plastic Cap

| Item #    | Fits             | Size    |
|-----------|------------------|---------|
| 28D-1054C | Clack/Structural | 10"x54" |
| 28D-1252C | Structural       | 12"x52" |
| 28D-1354C | Structural       | 13"x54" |



## "Bright" 430 Welded to Floor

| Item #     | Fits             | Size    |
|------------|------------------|---------|
| 28B-0948WX | Clack/Structural | 9"x48"  |
| 28B-1054WX | Clack/Structural | 10"x54" |
| 28B-1252WX | Clack/Structural | 12"x52" |
| 28B-1354WX | Clack/Structural | 13"x54" |

## "Bright" 430 Jacket w/Plastic Cap

| Item #     | Fits             | Size    |
|------------|------------------|---------|
| 28B-0948C  | Clack/Structural | 9"x48"  |
| 28B-1054C  | Clack/Structural | 10"x54" |
| 28B-1054CE | Enpress          | 10"x54" |
| 28B-1252C  | Structural       | 12"x52" |
| 28B-1354C  | Clack/Structural | 13"x54" |
| 28B-1354CE | Enpress          | 13"x54" |







# Pentair Structural Mineral Tanks 18"-63"

MADE IN THE  
USA  
OF FOREIGN & DOMESTIC PARTS

® Structural® vessels have been the industry standard for quality and performance for over 40 years. Featuring a one piece, seam-less liner. ASME Code tanks available. Most commercial tanks stocked in Natural. Some tanks require extended lead times and or minimum order quantity.

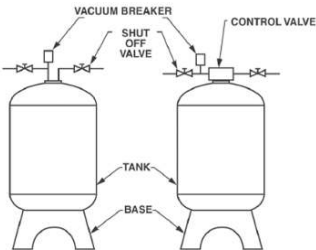


Vessels Tested and Certified by NSF  
International to NSF/ANSI Standard 61 for  
material and structural integrity requirements.

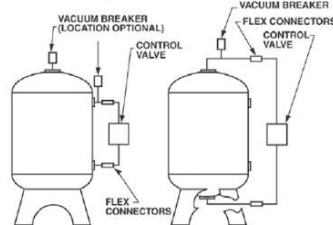


56-VAC150

## Vacuum Breaker Installation



## Flex Connectors Installation



### Material of Construction

- Polyethylene inner shell

### Operating Parameters

- Maximum operating pressure: 150 PSI
- Maximum operating temperature:

### Pentair Design Parameters

- Safety factor: 4:1
- Minimum burst at 600 PSI
- Tested to 250,000 cycles without leakage

NOTE: Flexible connectors must be installed between hard piping and tank openings. These pressure vessels are rated for an internal negative pressure of 5y Hg (17 Pa) vacuum below atmospheric. If negative pressure could ever exceed 5y Hg (17 Pa), an adequate vacuum breaker must be properly installed. Failure to install flex connection or improper installation of a vacuum breaker may void the warranty.

| Item #       | Size         | Neck                                | Height | Code    |
|--------------|--------------|-------------------------------------|--------|---------|
| 21-18654K*   | 18"x65"      | 4" Top                              | 67"    | CH30948 |
| 21-21624K*   | 21"x62"      | 4" Top                              | 67"    | CH30953 |
| 21-2162FN    | 21"x62"      | 6" FLG Top                          | 69"    | CH34096 |
| 21-2162FFN   | 21"x62"      | 6" FLG Top/Bottom                   | 80"    | CH34097 |
| 21-24654N    | 24"x65"      | 4" Top                              | 66"    | CH33394 |
| 21-24654K*   | 24"x65"      | 4" Top                              | 66"    | CH33976 |
| 21-2465FFN   | 24"x65"      | 6" FLG Top/Bottom                   | 79"    | CH33397 |
| 21-24724N    | 24"x72"      | 4" Top                              | 75"    | CH31153 |
| 21-24724K*   | 24"x72"      | 4" Top                              | 75"    | CH31153 |
| 21-247244N   | 24"x72"      | 4" Top/Bottom                       | 81"    | CH33403 |
| 21-2472FN    | 24"x72"      | 6" FLG Top                          | 77"    | CH33406 |
| 21-2472FFN   | 24"x72"      | 6" FLG Top/Bottom                   | 89"    | CH33408 |
| 21-30724N    | 30"x72"      | 4" Top                              | 79"    | CH34157 |
| 21-307244N   | 30"x72"      | 4" Top/Bottom                       | 78"    | CH33409 |
| 21-3072FN    | 30"x72"      | 6" FLG Top                          | 80"    | CH33412 |
| 21-3072FFN   | 30"x72"      | 6" FLG Top/Bottom                   | 89"    | CH33414 |
| 21-3657FN    | 36"x57"      | 6" FLG Top                          | 68"    | CH33417 |
| 21-3657FFN   | 36"x57"      | 6" FLG Top/Bottom                   | 78"    | CH33418 |
| 21-36724N    | 36"x72"      | 4" Top                              | 81"    | CH34079 |
| 21-367244N   | 36"x72"      | 4" Top/Bottom                       | 81"    | CH33419 |
| 21-3672FN    | 36"x72"      | 6" FLG Top                          | 83"    | CH33421 |
| 21-3672FK    | 36"x72"      | 6" FLG Top                          | 83"    | CH33422 |
| 21-3673FFN   | 36"x72"      | 6" FLG Top/Bottom                   | 91"    | CH33424 |
| 21-3672FF44N | 36"x72"      | 6" FLG Top/Bottom<br>4" Side Flange | 91"    | CH33246 |
| 21-4272FN    | 42"x72"      | 6" FLG Top                          | 73"    | CH33427 |
| 21-4272FFN   | 42"x72"      | 6" FLG Top/Bottom                   | 91"    | CH33429 |
| 21-4272FF44N | 42"x72"      | 6" FLG Top/Bottom<br>4" Side Flange | 95"    | CH32175 |
| 21-4872FN    | 48"x72"      | 6" FLG Top                          | 82"    | CH33431 |
| 21-4872FFN   | 48"x72"      | 6" FLG Top/Bottom                   | 91"    | CH33429 |
| 21-4872FF44N | 48"x72"      | 6" FLG Top/Bottom<br>4" Side Flange | 97"    | CH33434 |
| 21-4872MFN   | 48"x72"      | 16" MNWY Top/FLG<br>Bottom          | 97"    | CH31647 |
| 21-6367FFN   | 63"x67"      | 6" FLG Top/Bottom                   | 82"    | CH33629 |
| 21-6386FFN   | 63"x86"      | 6" FLG Top/Bottom                   | 99"    | CH33437 |
| 21-6386MFN   | 63"x86"      | 16" MNWY Top/FLG<br>Bottom          | 99"    | CH33436 |
| 21-63144MFN  | 63"x144<br>" | 16" MNWY Top/FLG<br>Bottom          | 158"   | CH31456 |

\*Black Tank

2101 E. Francis Street, Ontario, CA USA 91761 • 909-939-8008 • [www.ImpactWaterProducts.com](http://www.ImpactWaterProducts.com)

Data herein is provided as a courtesy and is subject to change without notice.





# Softener Flow Rates

**The inlet and outlet diameters of the water softener must match the diameter of the water supply piping at the location where the softener will be installed. UPC610.2**

Softener flow rates are misunderstood or poorly applied in many applications. Intermittent pressure drops, short resin or media life, low quality soft water or poor contaminant reduction and other problems occur when a system is improperly sized.

**Service Flow Rate** is a critical factor to calculate when sizing a water treatment system. Softening, neutralizing, chemical reduction and more require systems designed within set parameters. The most common medias can be found throughout our catalog with detailed flow rate information for each. Intermittent water softening flow rates can be as high as 10 gpm per ft<sup>3</sup> (20-30 gpm per ft<sup>2</sup>) but slower flow rates are recommended. High flow rates for extended amounts of time will produce low quality water, excessive pressure drop and reduced resin life.

**Pressure Drop** will occur anytime something is added to the plumbing. A softener, pipe length, fittings and more all create flow restrictions increasing the pressure drop. Larger pipe sizes, wider tanks, high flow manifolds and multiple tank systems should be considered to reduce pressure drop.

**Peak Flow Rates** are based on the systems flow rate with a specified amount of pressure loss. All systems will create some pressure loss while water is flowing. Sizing a system to the peak flow rate should be avoided, but if a system will only hit the peak flow rates intermittently, this can be an effective way to prevent the installation of excessively large equipment.

**Uniform Plumbing Code (UPC)** and local plumbing codes must be followed when sizing and installing a water treatment system. The charts below can be used to assist in sizing a softener or water treatment device.

**Velocity** is the speed of water inside of a pipe. 1" Copper pipe can flow in excess of 40 gpm but the velocity at this flow rate can cause damage to the pipe, excessive noise and considerable water hammer. A properly designed plumbing system would limit the flow to less than 20 gpm in a cold water 1" pipe. The velocity charts below are guidelines to assist you in proper systems sizing.

## Quick Reference Guide for Fixture Unit Count and Water Softener Sizing Reference: Plumbing Code UPC 610.2 UPC 610.6

The chart to the right is a quick reference guide for common fixture counts. Actual fixture counts may vary.

| Fixture Location | Fixture Count |
|------------------|---------------|
| Bathroom Group   | 7.5           |
| Kitchen Sink     | 1.5           |
| Dishwasher       | 1.5           |
| Washing Machine  | 4.0           |
| Shower           | 2.0           |
| Lavatory         | 1.0           |
| Toilet           | 2.5           |
| Bathtub          | 10            |
| Hose Bib         | 3.5           |

Water line sizing was done at 50 to 60 PSI with a development length of 40-150 feet.

| Number of Baths | Fixture Estimate | ~Flow Rate Needed GPM | Water Meter | Main Line |
|-----------------|------------------|-----------------------|-------------|-----------|
| 1               | 14.5             | 11                    | 5/8"        | 3/4"      |
| 2               | 22               | 15.5                  | 3/4"        | 1"        |
| 2.5             | 25.5             | 18                    | 3/4"        | 1"        |
| 3               | 29.5             | 20                    | 1"          | 1"        |
| 3.5             | 33               | 22                    | 1"          | 1"        |
| 4               | 37               | 24                    | 1"          | 1.25"     |
| 4.5             | 40.5             | 25                    | 1"          | 1.25"     |
| 5               | 44.5             | 27                    | 1"          | 1.25"     |

## Pipe Size vs. Velocity

An undersized piping system will cause excessive water velocity. Installation of larger piping will lower velocities and lessen undue wear, water hammer and equipment damage. The recommended maximum velocity for water in a copper pipe system is 8 feet per second (fps) for cold water systems, 5 fps for hot water systems < 140° F, and 2 fps for hot water systems with a temperature greater than 140° F. PEX, PVC and CPVC are rated at approximately 10 FPS. Poly tubing has a maximum recommended flow of 10 fps. The following charts are guidelines. Plumbing systems must be designed, engineered, installed and operated in accordance with accepted industry standards and practices, as well as any applicable code requirements.

| Type "L" Copper | Cold (8 FPS Max) | Hot <140° F (5 FPS Max) | Hot >140° F (2 FPS Max) |
|-----------------|------------------|-------------------------|-------------------------|
| 1/2"            | 5.8 GPM          | 3.6 GPM                 | 1.5 GPM                 |
| 3/4"            | 12.1 GPM         | 7.5 GPM                 | 3 GPM                   |
| 1"              | 20.5 GPM         | 12.9 GPM                | 5.2 GPM                 |
| 1-1/4"          | 31.3 GPM         | 19.6 GPM                | 7.8 GPM                 |
| 1-1/2"          | 44 GPM           | 28 GPM                  | 11 GPM                  |
| 2"              | 77 GPM           | 48 GPM                  | 19 GPM                  |
| 2-1/2"          | 119 GPM          | 75 GPM                  | 30 GPM                  |
| 3"              | 170 GPM          | 106 GPM                 | 43 GPM                  |
| 4"              | 333 GPM          | 208 GPM                 | 82 GPM                  |
| 5"              | 514 GPM          | 321 GPM                 | 128 GPM                 |
| 6"              | 735 GPM          | 459 GPM                 | 184 GPM                 |

| PVC Pipe | Sch. 40  | Sch. 80  |
|----------|----------|----------|
| 1/2"     | 9 GPM    | 7 GPM    |
| 3/4"     | 16 GPM   | 13 GPM   |
| 1"       | 26 GPM   | 21 GPM   |
| 1-1/4"   | 45 GPM   | 38 GPM   |
| 1-1/2"   | 62 GPM   | 53 GPM   |
| 2"       | 102 GPM  | 90 GPM   |
| 2-1/2"   | 146 GPM  | 128 GPM  |
| 3"       | 225 GPM  | 200 GPM  |
| 4"       | 391 GPM  | 350 GPM  |
| 5"       | 615 GPM  | 556 GPM  |
| 6"       | 890 GPM  | 798 GPM  |
| 8"       | 1543 GPM | 1400 GPM |

| Poly Tubing | 10 FPS Max |
|-------------|------------|
| 1/4"        | .71 GPM    |
| 5/16"       | .86 GPM    |
| 3/8"        | 1.53 GPM   |
| 1/2"        | 3.44 GPM   |
| 5/8"        | 4.8 GPM    |

| PEX Tubing | 10 FPS Max |
|------------|------------|
| 3/8"       | 3 GPM      |
| 1/2"       | 5.5 GPM    |
| 5/8"       | 8 GPM      |
| 3/4"       | 11 GPM     |
| 1"         | 18 GPM     |

| CPVC Tubing | 10 FPS Max |
|-------------|------------|
| 1/2"        | 5.4 GPM    |
| 3/4"        | 12 GPM     |
| 1"          | 20 GPM     |

~Maximum flow rate of water through an open pipe.

| Pipe ID | 75 PSI   |
|---------|----------|
| 1/2"    | 21 GPM   |
| 3/4"    | 36 GPM   |
| 1"      | 53 GPM   |
| 1-1/4"  | 95 GPM   |
| 1-1/2"  | 153 GPM  |
| 2"      | 329 GPM  |
| 2-1/2"  | 591 GPM  |
| 3"      | 955 GPM  |
| 4"      | 2035 GPM |

# Filtration Medias & Carbon (GAC)

Sand is a common layer in multi-media filters and is used under Titanium Oxide.

Gravel is the most common under bedding used for most softeners and filtration systems.

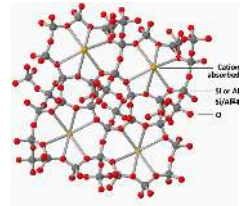
Garnet is commonly used as under bedding for heavier medias e.g. Filox, Pyrolox and KDF.

Anthracite is used in multi-media filtration systems.

Clinoptilolite (AKA Filter-Ag Plus) is a natural zeolite ore. Clinoptilolite is ideal for well water clarification. Reduction of sediment as small as 3-5 microns and excellent capacities has allowed clinoptilolite to replace multi-media multiple layer thereby simplifying the design and allows for significant water saving by reduced backwashing.

Filter-Ag is a near direct replacement to multi-media with far lower shipping weight and 1/3 the backwash water requirement. Excellent performance, low cost and reduction of sediment down to 20-40 microns make Filter-Ag the favorite choice for those replacing multi-media beds.

| Item #     | Media                           | Volume              | Weight Lbs. | Pallet Qty. |
|------------|---------------------------------|---------------------|-------------|-------------|
| 16-FS4555  | Filter Sand #35 (.45-.55mm) Bag | 1 ft <sup>3</sup>   | 100         | 30          |
| 16-GR216   | Gravel 1/8" x 1/16" AKA #6 Bag  | .5 ft <sup>3</sup>  | 50          | 56          |
| 16-GR416   | Gravel 1/4" x 1/8" Bag          | .5 ft <sup>3</sup>  | 50          | 56          |
| 16-GR416SS | Gravel 1/4" x 1/8" Super Sack   | ≈32 ft <sup>3</sup> | ≈3200       | 1           |
| 16-GR816   | Gravel 1/2" x 1/4" Bag          | .5 ft <sup>3</sup>  | 50          | 56          |
| 16-GT812   | Garnet #8-12 Bag                | .36 ft <sup>3</sup> | 50          | 70          |
| 16-GT34    | Garnet #30-40 Bag               | .38 ft <sup>3</sup> | 50          | 70          |
| 16-ANT15   | Anthracite #1.5                 | 1 ft <sup>3</sup>   | 50          | 50          |
| 16-FAP     | Filter Ag+ (Clinoptilolite)     | 1 ft <sup>3</sup>   | 55          | 40          |
| 16-FA      | Filter-AG                       | 1 ft <sup>3</sup>   | 25          | 70          |



## Activated Carbon

**Standard** coconut shell carbon is used to remove impurities like organic contaminants, chlorine, chloramine, pesticides, color and much more.

**Acid Washed** coconut shell carbon is used for applications where the raising of pH can negatively effect the process. Acid washing of the carbon reduces the slight pH rise that is common with carbon.

**Coarse Catalytic** 8x30 mesh carbon is popular for upflow systems where the larger carbon particles tend to fluidize less than finer mesh sizes. This can increase the performance of upflow carbon systems which can be compromised due to the fluidization of the bed.

**Catalytic** carbon has a higher affinity for chloramine and is preferred in most applications. Price is considerably higher. H2S reduction is greatly enhanced with catalytic carbon compared to standard carbons.

**Fine Mesh Catalytic 20x50** mesh is an excellent choice where the quality of water is most critical and the highest levels of contaminant reduction are needed. Slightly reduced peak flow rates are to be expected.

**Centaur Catalytic** carbon is a bituminous catalytic carbon that is popular when coconut material is of concern.

| Item #   | Description         | Material      | Mesh  | Volume            | ≈Backwash Rate ft <sup>3</sup> | Weight lbs. | Pallet Qty. |
|----------|---------------------|---------------|-------|-------------------|--------------------------------|-------------|-------------|
| 12J-CC   | Acid Washed         | Coconut Shell | 12x40 | 1 ft <sup>3</sup> | 10 GPM                         | 27.5        | 40          |
| 12J-CT   | Catalytic           | Coconut Shell | 12x40 | 1 ft <sup>3</sup> | 10 GPM                         | 27.5        | 40          |
| 12J-CT8  | Catalytic           | Coconut Shell | 8x30  | 1 ft <sup>3</sup> | 15 GPM                         | 27.5        | 40          |
| 12J-CT20 | Fine Mesh Catalytic | Coconut Shell | 20x50 | 1 ft <sup>3</sup> | 5 GPM                          | 27.5        | 40          |
| 12-CCT   | Centaur Catalytic   | Bituminous    | 12x40 | 1 ft <sup>3</sup> | 10 GPM                         | 33          | 70          |



# Iron, Manganese, H<sub>2</sub>S, Arsenic, Fluoride Reduction

**Filter-Ox®** is an excellent media that does not create as high of a pH rise that is common with Katalox Light and can be used in place of Greensand+ in most applications. Soluble iron and manganese are oxidized and precipitated by contact with the catalytic coating (12.5% manganese dioxide) on the Filter-Ox® granules. A quick chlorine rinse on start up is all that is needed.

**Katalox-Light®** combines natural clinoptilolite with a 10% coating/impregnation of manganese dioxide. The unique structure of the media allows for suspended solids reduction to about 3-5 microns. Expect a pH increase of undetermined length and severity.

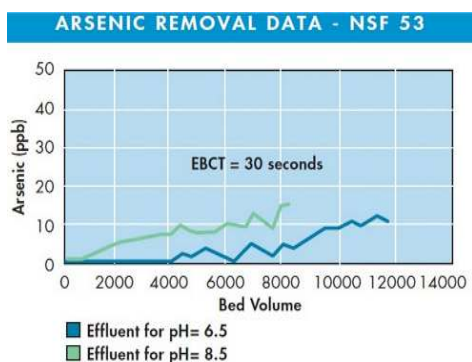
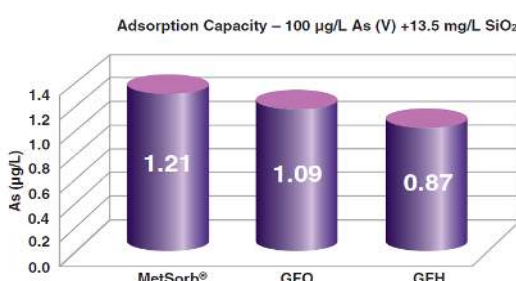
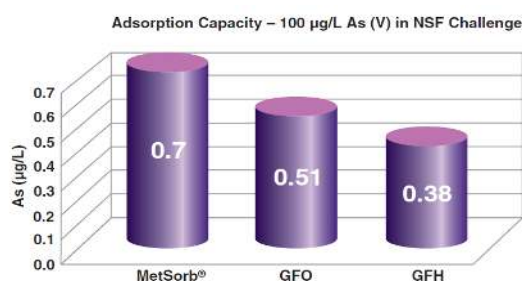
**Greensand+®** Low pH rise, excellent capacity and reasonable backwash rates make this a popular choice. Typically configured 60% Greensand +/40% Anthracite.

**Nano-Titanium Oxide (NTO)** is a highly effective granular adsorbent media. Properly applied, NTO media reduces arsenic III and V plus a wide variety of heavy metals and other contaminants including lead, cadmium, copper, chromium<sup>+6</sup>, selenium, uranium, antimony and zinc. Careful pre-treatment is important to the longevity and effectiveness of NTO.

**Bone Char** is a carbon material produced from animal bones that is used in water filtration primarily to remove fluoride, arsenic, and heavy metals through adsorption and ion exchange.

**Activated Alumina** is a form of aluminum oxide used in water treatment to effectively adsorb and remove fluoride, arsenic, and selenium through its high surface area.

| Item #     | Description         | ≈Service GPM/ft <sup>2</sup> | ≈Backwash GPM ft <sup>2</sup> | Bag Size ft <sup>3</sup> | ≈Ship Lbs. | Notes                         |
|------------|---------------------|------------------------------|-------------------------------|--------------------------|------------|-------------------------------|
| 13-FX      | Filter-Ox USA       | 2-12                         | 12-15                         | .5                       | 42         | Best Seller, lower pH rise    |
| 13-FL      | Katalox Light       | 2-12                         | 10-15                         | 1                        | 66         | pH rise can be an issue       |
| 13-GSP     | GreenSand +         | 2-12                         | >12                           | .5                       | 44         | Replaces Greensand            |
| 13-NTX     | Nano-Titanium Oxide | 1-3                          | 5                             | 1                        | 40         | Sand underbed recommended     |
| 12-BC12    | Bone Char           | 1-3                          | 10                            | 1                        | 40         | May impart taste              |
| 11R-SIR900 | Activated Alumina   | 1-3                          | 8                             | 1                        | 38         | Lower capacity than Bone Char |



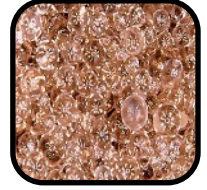


# Cation & Anion Resins

Impact Water Products stocks and distributes a wide variety of high quality cation, anion and mixed bed exchange resins for residential, commercial and industrial applications. Contact IWP for your specific water treatment needs.

| Item #    | Description                                                                                                                                  | Volume             | Weight | Bags Per Skid |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------|---------------|
| 11-IX08   | 8% Cross-Linked Softening Resin                                                                                                              | 1 Ft <sup>3</sup>  | 50     | 42            |
| 11-IX08SS | 8% Cross-Linked Softening Resin Super Sack                                                                                                   | 42 Ft <sup>3</sup> | 2100   | 1             |
| 11-IX10   | 10% Cross-Linked Softening Resin                                                                                                             | 1 Ft <sup>3</sup>  | 50     | 42            |
| 11-IX10SS | 10% Cross-Linked Softening Resin Super Sack                                                                                                  | 42 Ft <sup>3</sup> | 2100   | 1             |
| 11-IX10K  | 10% Cross-Linked Dark Softening Resin                                                                                                        | 1 Ft <sup>3</sup>  | 50     | 42            |
| 11P-MB13  | Mixed Bed DI Resin ≈13-15 Megohm Standard DI                                                                                                 | 1 Ft <sup>3</sup>  | 44     | 42            |
| 11-IXMB16 | Mixed Bed DI Resin ≈>16 Megohm High Purity DI                                                                                                | 1 Ft <sup>3</sup>  | 44     | 42            |
| 11R-SBG2  | Anion for Arsenic, Sulfates, Nitrates, Uranium, Regenerable NaCl<br>Hexavalent Chromium Disposable Resin ≈110,000 gallons at 15 ppb influent | 1 Ft <sup>3</sup>  | 44     | 42            |
| 11R-TN    | Anion for Tannin, Pilot Testing Recommended Regenerable NaCl                                                                                 | 1 Ft <sup>3</sup>  | 44     | 42            |
| 11-NT     | Anion Nitrate Selective Resin for Residential/Commercial, Regenerable NaCl                                                                   | 1 Ft <sup>3</sup>  | 44     | 42            |
| 11P-A600E | Anion, Hexavalent Chromium Disposable Resin ≈110,000 gallons at 15 ppb influent                                                              | 1 Ft <sup>3</sup>  | 44     | 42            |
| 11R-PFAS  | Perchlorate, PFOA and PFOS Selective Resin, Non Regenerable                                                                                  | 1 Ft <sup>3</sup>  | 44     | 42            |

New cation softening resin, round hard beads, consistent size



Cation resin long after it's reasonable service life. Irregular broken beads, "mushy".



## Other Medias

KDF-55 Coarse reduces chlorine and can remove up to 99% of water-soluble lead, mercury, nickel, chromium, and other dissolved metals.

KDF-85 Coarse media act as catalysts to change soluble ferrous cations into insoluble ferric hydroxide which is easily removed by regular backwashing.

Slow Dissolving Polyphosphate This product appears as hard balls and dissolves at a controlled concentration to prevent scale formation and corrosion.

Scale Reduction Media is intended for upflow applications and the media should be fluidized during service. Flow rate of less than 3 gpm per liter and 5 gpm per ft<sup>2</sup> are recommended.

Calcium Carbonate is a consumable media that is used to raise the pH of water. It is a naturally occurring media composed of crushed marble and is commonly used for water neutralization of water between 5.5 and 7.0 pH.

Magnesium Oxide is used to neutralize acidity by increasing the pH value. Magnesium Oxide can neutralize 5X more acidity than calcium carbonate and is often blended with calcium carbonate.

| Item #    | Description                                                  | ≈Service Flow             | ≈Backwash GPM             | Notes                                                         |
|-----------|--------------------------------------------------------------|---------------------------|---------------------------|---------------------------------------------------------------|
| 12-KDF55C | KDF-55 Coarse 57 Pound 1/3 FT <sup>3</sup> Drum              | 25-30 GPM ft <sup>2</sup> | 25-30 GPM ft <sup>2</sup> | Chlorine and Heavy Metals                                     |
| 12-KDF85  | KDF-85 57 Pound 1/3 FT <sup>3</sup> Drum                     | 25-30 GPM ft <sup>2</sup> | 25-30 GPM ft <sup>2</sup> | Ferrous Iron, Hydrogen Sulfide and Chloramines                |
| 14-PC     | Slow Dissolving Polyphosphate Per Pound                      | Highly Variable           | N/A                       | (≈120 lbs/ft <sup>3</sup> ) Scale, Iron, Corrosion Control    |
| 14-SRa    | Scale Reduction Media Per Liter                              | 2-3 GPM per L.            | N/A                       | Scale Prevention/Reduction                                    |
| 15-C      | Calcium Carbonate 45 Pound .5 ft <sup>3</sup> Bag (Puri-Cal) | ≈3-6 GPM ft <sup>2</sup>  | 8-12 GPM ft <sup>2</sup>  | 60 Bags/Skid, pH Adjustment, Remineralization, Neutralization |
| 15-MX     | Magnesium Oxide 55 Pound .66 ft <sup>3</sup> Bag (Corosex)   | ≈5-6 GPM ft <sup>2</sup>  | 10-12 GPM ft <sup>2</sup> | 49 Bags/Skid, pH Adjustment, Remineralization, Neutralization |



# Backwash Rated By Tank Diameter

Backwashing filtration media is critical for proper system performance and longevity. This chart will help you to properly size the backwash rate for the most common medias. If the media you are using is not included in the chart below, you will need to check with the manufacturer for the recommended backwash rate. A simple mathematical formula is used to determine the correct backwash rate.  $\pi r^2 \div 144 \times$  the manufacturers recommended backwash rate. These charts are based on water temperatures of approximately 60° F. Higher water temperatures require higher backwash rates, lower temperatures require lower backwash rates.

| Diameter | ft²   | 2 gpm | 3 gpm | 4 gpm | 5 gpm | 6 gpm | 8 gpm | 10 gpm | 12 gpm | 15 gpm | 20 gpm | 25 gpm | 30 gpm |
|----------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 6"       | .19   | .4    | .6    | .8    | 1     | 1.1   | 1.5   | 1.9    | 2.3    | 2.9    | 3.8    | 4.8    | 5.7    |
| 7"       | .26   | .5    | .8    | 1     | 1.3   | 1.6   | 2.1   | 2.6    | 3.1    | 3.9    | 5.2    | 6.5    | 7.8    |
| 8"       | .34   | .7    | 1     | 1.4   | 1.7   | 2     | 2.7   | 3.4    | 4.1    | 5.1    | 6.8    | 8.5    | 10     |
| 9"       | .44   | .9    | 1.3   | 1.8   | 2.2   | 2.6   | 3.5   | 4.4    | 5.3    | 6.6    | 8.8    | 11     | 13     |
| 10"      | .54   | 1.1   | 1.6   | 2.2   | 2.7   | 3.2   | 4.3   | 5.4    | 6.5    | 8.1    | 11     | 14     | 16     |
| 12"      | .78   | 1.6   | 2.3   | 3.1   | 3.9   | 4.7   | 6.2   | 7.8    | 9.4    | 12     | 16     | 20     | 23     |
| 13"      | .92   | 1.8   | 2.8   | 3.7   | 4.6   | 5.5   | 7.4   | 9.2    | 11     | 14     | 18     | 23     | 28     |
| 14"      | 1.06  | 2.1   | 3.2   | 4.2   | 5.3   | 6.4   | 8.5   | 11     | 13     | 16     | 21     | 27     | 32     |
| 16"      | 1.39  | 2.8   | 4.2   | 5.6   | 7     | 8.3   | 11    | 14     | 17     | 21     | 28     | 35     | 42     |
| 18"      | 1.76  | 3.5   | 5.3   | 7     | 8.9   | 11    | 14    | 18     | 21     | 26     | 35     | 44     | 53     |
| 21"      | 2.40  | 4.8   | 7.2   | 10    | 12    | 14    | 19    | 24     | 29     | 36     | 48     | 60     | 72     |
| 24"      | 3.14  | 6.3   | 9.4   | 13    | 16    | 19    | 25    | 31     | 38     | 47     | 63     | 79     | 94     |
| 30"      | 4.90  | 10    | 15    | 20    | 25    | 29    | 39    | 49     | 59     | 74     | 98     | 125    | 150    |
| 36"      | 7.06  | 14    | 21    | 28    | 35    | 42    | 56    | 71     | 85     | 105    | 140    | 175    | 210    |
| 42"      | 9.62  | 19    | 29    | 38    | 48    | 58    | 77    | 96     | 115    | 145    | 190    | 240    | 290    |
| 48"      | 12.56 | 25    | 38    | 50    | 63    | 75    | 100   | 125    | 150    | 190    | 250    | 315    | 375    |
| 54"      | 15.90 | 31    | 47    | 62    | 78    | 94    | 125   | 155    | 185    | 235    | 310    | 390    | 470    |
| 60"      | 19.63 | 39    | 59    | 79    | 98    | 120   | 155   | 195    | 235    | 295    | 390    | 490    | 590    |
| 63"      | 21.64 | 43    | 65    | 87    | 110   | 130   | 175   | 215    | 260    | 325    | 435    | 540    | 650    |
| 72"      | 28.26 | 57    | 85    | 115   | 140   | 170   | 225   | 280    | 340    | 425    | 565    | 705    | 850    |
| 96"      | 50.24 | 100   | 150   | 200   | 250   | 300   | 400   | 500    | 605    | 755    | 1005   | 1255   | 1505   |

Approximate temperature compensation factors 40° F =.75, 50° F =.90, 60° F =1.0, 70° F =1.1, 80° F =1.2, 100° F =1.5, 120° F =1.7, 140° F =2.0

| Media               | Backwash Rate gpm ft² | % Bed Expansion | Lbs. Per ft³ | Rec. serv. Flow gpm |
|---------------------|-----------------------|-----------------|--------------|---------------------|
| Anion Resin         | 2-3                   | 40-50           | 43           | 1-5 ft³             |
| Softening Resin     | 4-5                   | 40-50           | 50           | 3-20 ft²            |
| Nano Titanium Oxide | 4-5                   | 20-40           | 40           | 8-10 ft²            |
| Filter Ag           | 8-10                  | 20-40           | 26           | 1-5 ft²             |
| Activated Alumina   | 8-10                  | 30-40           | 43           | <3 ft³              |
| MTM                 | 8-10                  | 50              | 45           | 2-5 ft²             |
| GAC/Catalytic 12x40 | 8-12                  | 30-40           | 28           | 1-10 ft³            |
| GAC/Catalytic 20x50 | 4-6                   | 30-40           | 28           | 1-10 ft³            |
| Calcium Carbonate   | 8-12                  | 35              | 90           | 3-6 ft²             |
| Magnesium Oxide     | 10-12                 | Varies          | 75           | 5-6 ft²             |
| Filter-Ox           | 12-15                 | 35              | 86           | 2-12 ft²            |
| Katalox-Light       | 10-15                 | 20-30           | 66           | 6-12 ft²            |

| Media                         | Backwash Rate gpm ft² | % Bed Expansion | Lbs. Per ft³ | Rec. Serv. Flow gpm |
|-------------------------------|-----------------------|-----------------|--------------|---------------------|
| Greensand +                   | 12-15                 | 35              | 86           | 2-12 ft²            |
| #1 Anthracite                 | 12-18                 | 20-40           | 50           | 5 ft²               |
| Crushed Glass                 | 12-18                 | 10-25           | 72           | 5-10 ft²            |
| Garnet 30-40                  | 15-20                 | 10-20           | 140          | n/a                 |
| Clinoptilolite/Filter-Ag Plus | 15-20                 | 30-40           | 50           | 12-20 ft²           |
| Micro-Z/Zeolite/Nextsand      | 15-20                 | 30-40           | 50           | 12-20 ft²           |
| Multi-Media                   | 15-25                 | 20-40           | Varies       | 5 ft²               |
| Sand .45-.55 mm               | 15-20                 | 10-20           | 100          | 5 ft²               |
| Bone Char/GAC 8x30            | 15-20                 | 20-40           | 25           | 2-4 ft³             |
| Filox                         | 20-30                 | 10-20           | 120          | 1-6 ft³             |
| Pyrolox                       | 25-30                 | 10-20           | 120          | 5 ft²               |
| KDF 55/85                     | 25-30                 | 10-15           | 171          | 15 ft²              |

## How does a Flow Control Work?

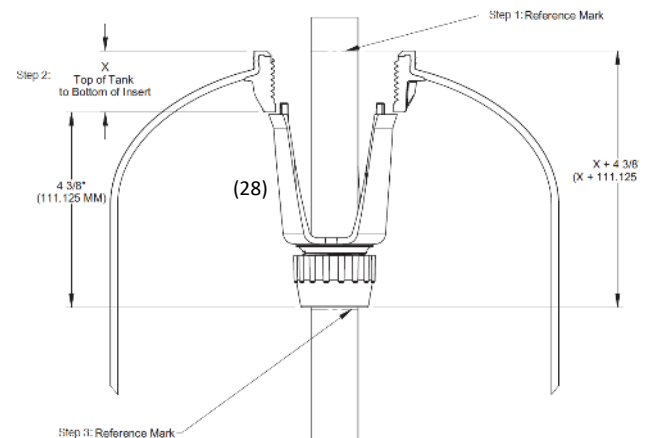


≈The same amount of water regardless of pressure.

The charts above are to be used as a guideline only. Field and pilot testing must be done to determine a medias actual performance. Water conditions will vary including water temperatures, pH, competing ions, seasonal changes, TDS, etc. The quality of water required for a specific application must be considered in order to successfully use the medias listed above. Please contact your IWP professional for assistance.

# 13/16", 1.05" & 1.32" Screens

| Item #      | Bottom Screens                                |
|-------------|-----------------------------------------------|
| 27-081LH    | (1) 13/16" 6 Segment Heavy Duty               |
| 27-105L     | (2) 1.05" Light Duty                          |
| 27-105LH    | (3) 1.05" 11 Segment Heavy Duty               |
| 27-105LF    | (4) 1.05" 11 Segment Fine Mesh                |
| 27-105LHW   | (5) 1.05" Heavy Duty Hot Water                |
| 27-105AS    | (6) 1.05" Upflow Specific                     |
| 27-131H     | (7) 1.32" 15 Segment Heavy Duty               |
| Item #      | Top Screens                                   |
| 27-T081     | (8) 13/16" Light Duty Twist Lock              |
| 27-T105     | (9) 1.05" Light Duty Twist lock               |
| 27-T105H    | (10) 1.05" Fine Mesh Heavy Duty Twist Lock    |
| 27-T1052    | (11) 1.05" AIO Air Blocker Twist Lock         |
| 27-R6       | (12) 1.05" 6 Segment Diffuser                 |
| 27-R6D      | (13) 1.05" 6 Segment Diffuser Drilled         |
| 27-T132     | (14) 1.32" Light Duty Twist Lock              |
| 27-T132H    | (15) 1.32" 14 Segment Heavy Duty Twist lock   |
| Item #      | Misc.                                         |
| 27D-08112   | 13/16" Riser Pipe 12' Length                  |
| IWP-D105    | 1.05" Black Riser Pipe per Foot               |
| IWP-D105-54 | 1.05" Riser Pipe with Heavy Bottom Screen 54" |
| IWP-D105-72 | 1.05" Riser Pipe with Heavy Bottom Screen 72" |
| IWP-CAP105  | (16) 1.05" Riser Cap for Filling Tanks        |
| IWP-D132    | 1.32" Black Riser Pipe per Foot               |
| IWP-D132-54 | 1.32" Riser Pipe w/Heavy Bottom Screen 54"    |
| IWP-D132-72 | 1.32" Riser Pipe w/Heavy Bottom Screen 72"    |
| IWP-CAP125  | 1.32" Riser Cap for Filling Tanks             |
| 27-T105C    | (17) 1.05" Riser Pipe Hold Down Clamp         |
| 27-DTA040   | (18) Diffuser for RT40                        |
| 27-DTA080   | Diffuser for RT80                             |



## Common Distributor Sizes

**13/16"** O.D. is used on older valves and some in/out heads. It does not match any common PVC pipe size.

**1.05"** O.D. is common on the Clack 1" and the Fleck 5600, 5800, 9100, 2510 valves and is the same O.D. as 3/4" PVC pipe.

**1.32"** O.D. is common on the Clack 1.25" and is the same O.D. as 1" PVC pipe.





# 1-1/2" - 3" Commercial Distributor Systems

| Item #   | Bottom Screens                                  |
|----------|-------------------------------------------------|
| 27-150L3 | (1) 1.5" Solvent x 3" Typical for 12"-16" Tank  |
| 27-150L6 | (2) 1.5" Solvent x 6" Typical for 18"-30" Tanks |
| 27-200L  | (3) 2" Solvent x 6" Typical for 12"-30" Tank    |



| Item #      | Upper Screen/Diffuser                 |
|-------------|---------------------------------------|
| 27-D1300    | (4) 1.5" Diffuser                     |
| 27-D1300-01 | 2" Diffuser                           |
| 27-150UK    | (5) 1.5" Top Screen (Includes Screws) |
| 27-D1058    | (6) 1.5" Air Blocker                  |
| 27-200UK    | 2" Top Screen (Includes Screws)       |



| Item #    | Lower Hub and Laterals for Side Mount Valves |
|-----------|----------------------------------------------|
| 27H-24B3F | 24" Tank 6" Flange 3" FNPT                   |
| 27H-30B3F | 30" Tank 6" Flange 3" FNPT                   |
| 27H-36B3F | 36" Tank 6" Flange 3" FNPT                   |
| 27H-42B3F | 42" Tank 6" Flange 3" FNPT                   |
| 27H-48B3F | 48" Tank 6" Flange 3" FNPT                   |
| 27H-63B3F | 63" Tank 6" Flange 3" FNPT                   |



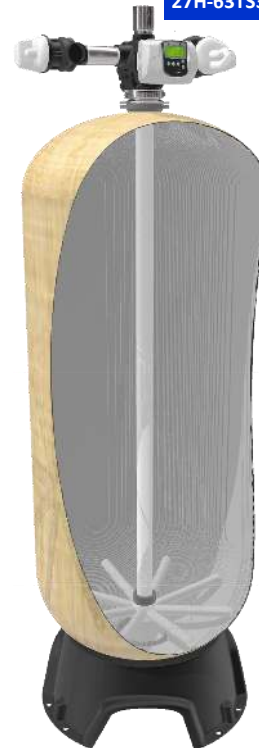
| Item #    | Upper Diffuser/Screens for Side Mount Valves |
|-----------|----------------------------------------------|
| 26-TF3    | Flange Adapter 3" FNPT                       |
| 27B-1216A | 3" MNPT                                      |
| 27B-DK3   | 6" Flange, 3" FNPT                           |
| 27B-DK3X  | 6" Flange, 3" FNPT High Flow                 |



| Item #       | Hub & Laterals 1.5"-2"           |
|--------------|----------------------------------|
| 27-D1087     | 2" Socket PVC Hub                |
| 55H-437-251  | 2" x 1.5" PVC Bushing            |
| 27-D14TL     | Laterals 14" Tanks (Order 6)     |
| 27-D16TL     | Laterals 16" Tanks (Order 6)     |
| 27-D18TL     | Laterals 18" Tanks (Order 6)     |
| 27-D21TL     | Laterals 21" Tanks (Order 6)     |
| 27-D24TL     | Laterals 24"-35" Tanks (Order 6) |
| 37-D3036TLTL | Laterals 36" Tanks (Order 6)     |



| Item #    | Hub & Laterals 3" |
|-----------|-------------------|
| 27H-24T3S | 24" Tank          |
| 27H-30T3S | 30" Tank          |
| 27H-36T3S | 35"-36" Tanks     |
| 27H-42T3S | 42" Tank          |
| 27H-48T3S | 48" Tanks         |
| 27H-63T3S | 63" Tank          |



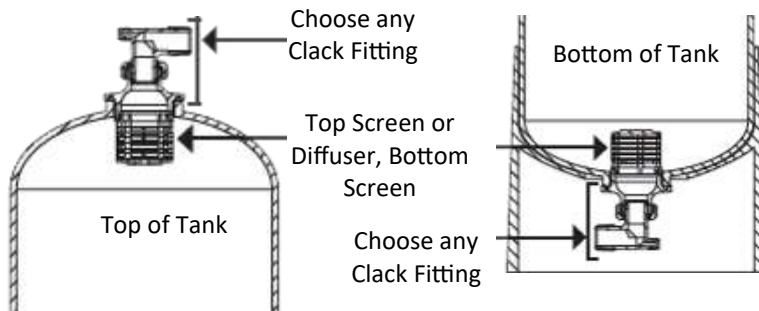
# In/Out Heads

Ideal for simple in-out filters such as carbon, pH neutralizers, DI and much more.

| 1191 In/Out 1" to 1.25"        |                                                              |
|--------------------------------|--------------------------------------------------------------|
| 26-1191                        | (1) In/Out Head 1.05" Riser, Add Bypass/Connectors           |
| 26-11913                       | (1) In/Out Head 1.32" Riser, Add Bypass/Connectors           |
| 26-1190F                       | (2) 1.05" With Fill Port Cap & Wrench, Add Bypass/Connectors |
| 39V-V3006                      | (3) Bypass Assembly                                          |
| 39V-V3007                      | (4) 1" PVC Male NPT Elbow                                    |
| 39V-V3007-01                   | (5) 3/4" x 1" PVC Solvent Elbow                              |
| 1192 In/Out 1.5" to 2"         |                                                              |
| 26-1192                        | (6) In/Out head 1.9" (1.5" PVC) Riser Add Bypass/Connector   |
| 39V-V4678                      | (7) Bypass Assembly                                          |
| 39V-V4430-01                   | (8) 1.5" MPT Straight Kit                                    |
| 39V-V4430-07                   | (9) 1.5" MPT Elbow Kit                                       |
| 39V-V4430-13                   | (10) 1.5" and 2" PVC Glue kit                                |
| 39V-V4430-14                   | (11) QC Elbow Kit                                            |
| Simple In/Out Heads & DI Heads |                                                              |
| 26-890S                        | (12) 3/4" FNPT with 13/16" Distributor                       |
| 26-990S                        | (13) 1" FNPT with 1.05" Distributor                          |
| 39L-H890                       | (14) 3/4" FNPT w/ 1/2" Resilite Port 13/16" Distributor      |
| 39L-R73500                     | (15) 1/2" Resilite 500K (1 PPM)                              |
| Bottom Purge Tank Adapters     |                                                              |
| 39A-D1287                      | (16) Tank adapter with Cam Lock, 1" NPT Elbow                |
| 39A-D1288                      | (17) Tank adapter with Cam Lock, 1" x3/4 PVC Solvent Elbow   |
| 39A-D1225-10                   | (18) Top/Bottom Screen for D1287/D1288                       |
| 27-R6                          | (19) Top Only Diffuser                                       |



Many more install parts available, see install parts page



# Portable Exchange Tank Components

| Item #      | In/Out Heads and Accessories For 2.5" Tanks                           |
|-------------|-----------------------------------------------------------------------|
| C650127     | (1) 2-1/2"-8 Thread with 3/4" In-Out TOP, 13/16" Riser                |
| 26-IO-XW8IS | (2) 2-1/2"-8 Thread with 3/4" In-Out Side, 13/16" Riser               |
| 26-75HDL    | (3) Aluminum Handle for 26-IO-XW8IS and 26-890S                       |
| 27-081LH    | (4) 13/16" Heavy Bottom Screen                                        |
| 27QD-M12T   | (5) Quick Disconnect Male x 3/4" MNPT (C6MA75)                        |
| 27QD-F12B   | (6) Quick Disconnect Female Union x 3/4" Barb (C6UHB75)               |
| 27QD-F12T   | (7) Quick Disconnect Female Union x 3/4" MNPT (C6UMA75)               |
| 27QD-M12B   | (8) Quick Disconnect Male x 3/4" Barb (C6HB75)                        |
| Item #      | In/Out Heads and Accessories For 4.5" Tanks                           |
| 39X-D810344 | (9) 4.5"-8 Buttress Thread, 1" MNPT In-Out-Fill Port, 1.32" Riser     |
| 39X-D810587 | (10) 4.5"-8 Buttress Thread, 1" In-Out, 1-3/4" Fill Port, 1.32" Riser |
| 27-132960   | (11) 1.32" Offset Bottom Screen (C650113)                             |
| 27QD-M16T   | (12) Quick Disconnect Male x 1" MNPT (C6MA100)                        |
| 27QD-F16B   | (13) Quick Disconnect Female Union x 1" Barb (C6UHB100)               |
| 27QD-F16T   | (14) Quick Disconnect Female Union x 1" MNPT (C6UMA100)               |
| 27QD-M16B   | (15) Quick Disconnect Male x 1" Barb (C6HB100)                        |
| C6CAP-MA    | (16) Dust Cap for Male Adapter                                        |
| C6PLUG-UN   | (17) Dust Plug for Union                                              |
| 39V-14RB    | (15) 14" Rubber Bumper                                                |
| Item #      | Portable Exchange Tank With Rubber Base                               |
| 22-144745NR | 14" x 47" 3.64 Ft <sup>3</sup> 4.5"-8 Buttress Tank neck              |



Exchange tanks are ideal for simple in-out filters such as carbon, pH neutralizers, DI and much more. High quality rubber bumper at the top of the tank reduce damage and extend the service life. Rubber bases are designed to last for years! Let IWP help you improve your exchange tank business!





## Tank Adapters/Caps/Vacuum Breaks/Tools

| Tank Adapters          |                                                                       |
|------------------------|-----------------------------------------------------------------------|
| 26-T4025K              | (1) 4"-8 x 2.5"-8 Noryl Tank Adapter                                  |
| 26-TF4                 | (2) 6" Flange x 4"-8 Tank Adapter (Includes Hardware)                 |
| 26-TF3                 | (3) 6" Flange x 3" FNPT x 3" FNPT (Includes Hardware)                 |
| Tank Closures          |                                                                       |
| 26-25C1                | (4) 2.5" Shipping Cap for 1.05" Riser (Not for Pressure Applications) |
| 26-25C2                | (5) 2.5" Shipping Cap for 1.32" Riser (Not for Pressure Applications) |
| IWP-4CAP               | (6) 4" Shipping Cap (Not For Pressurized Applications)                |
| 26-25C8                | (7) 2.5"-8 Cap                                                        |
| 26-4C                  | (8) 4"-8 Cap                                                          |
| 26-TCF                 | (9) 6" Flange Cap (Includes Hardware)                                 |
| Vacuum Breaks          |                                                                       |
| 56-VAC                 | (10) 1/2" MNPT for 16" and Smaller Tanks or <1-1/4" Pipe              |
| 56-VAC150              | (11) 1-1/4" MNPT for 16" and Smaller Tanks or =>1-1/4" Pipe           |
| Funnels                |                                                                       |
| 56-F25                 | (12) 2.5" Funnel                                                      |
| 56-F4                  | (13) 4" and 6" Funnel                                                 |
| 26-CDF                 | (14) Funnel For Clack Dome Hole                                       |
| Media Extractors/Tools |                                                                       |
| IWP-X25                | (15) Media Extractor Kit for 2.5" Opening                             |
| IWP-X40                | (16) Media Extractor Kit for 4" Opening                               |
| IWP-X60                | (17) Media Extractor Kit for 4" Opening                               |
| 203766                 | (18) Media Vacuum Loader Tool for 2.5"                                |
| Other Tools            |                                                                       |
| 56-SL53                | Tube of Lube, Molykote Release Compound 7                             |
| 68-PGRED               | Test Pressure Gauge w/Max Indicator                                   |



# Drain Components

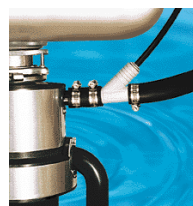
IWP is your source for drain line components. Black, UV Resistant PVC 5/8" I.D. tubing is rated for up to 10 GPM! Larger drain tubing makes for a quieter regeneration! This unique tubing bends nicely without kinking. It also won't collapse like lower quality tubing.



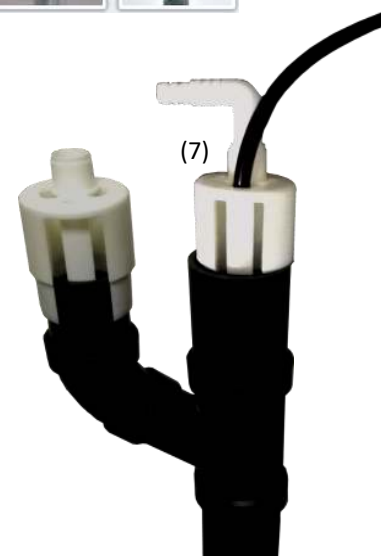
| Item #     | Description                                                  |
|------------|--------------------------------------------------------------|
| 65G-5878   | (1) 5/8" I.D. PVC Drain Tubing 100 Ft.                       |
| 55B-12F10B | (3) 3/4" FNPT x 5/8" Barb Straight (i5 1"/1.25", CK10/WS125) |
| 55B-10BX3K | (4) 5/8" Barb Tee                                            |
| 94-HC8     | (5) S.S. Clamp                                               |
| 39V-V3192K | 1/2" PEX nut for (i5 1"/1.25", CK10/WS125) valves.           |
| 39V-V58T   | 1/2" PEX insert for (i5 1"/1.25", CK10/WS125) valves.        |

## Air Gaps & Drain Line Adapters

| Item #   | RO Air Gaps and Components                              |
|----------|---------------------------------------------------------|
| 56-AGDW1 | Dishwasher Air Gap for RO w/1/4" QC connection          |
| 56-AGD   | Universal Drain Line Adapter for Garbage Disposal       |
| 56-AG9   | Drain Line Adapter 1-1/2" x 3/8" QC With Slip-Joint Tee |



| Item #   | Softener/Backwash Air Gaps                                                   |
|----------|------------------------------------------------------------------------------|
| 56-AGMD  | (1) Mr. Drain Universal Fit 1/2" Slip                                        |
| 56-AGS15 | (2) DLA 3/4" FNPT, Installs on 1-1/2" Standpipe                              |
| 56-AGS20 | (3) DLA 1" FNPT, Installs on 2" Standpipe                                    |
| 56-AGGF  | (4) Gap-A-Flo 1/4" and 3/4" Connections Inline Air Gap                       |
| 56-AGT15 | (5) Laundry Box Air Gap for 1-1/2" Standpipe 1/2" Slip                       |
| 56-AGT20 | (6) Laundry Box Air Gap for 2" Standpipe 1/2" Slip                           |
| 56-AGT15 | (7) Softener and RO Gap, Fits 1-1/2" and 2" standpipes. 1/2" Slip Connection |



# Brine Tanks and Components

| Item #     | Brine Tanks (Blow Molded)                          | ≈Gal | ≈Salt #'s |
|------------|----------------------------------------------------|------|-----------|
| 44-1016K6  | 10"x16" with 3/8" Safety Float                     | 5    | 40        |
| 44-1138K6  | 11"x11"x38" with 3/8" Safety Float                 | 19   | 150       |
| 44-14K6    | 15"x17"x36" with 3/8" Safety Float                 | 27   | 250       |
| 44-14P6    | 15"x17"x36" <b>Platinum</b> with 3/8" Safety Float | 27   | 250       |
| 44-14U6    | 15"x17"x36" <b>Blue</b> with 3/8" Safety Float     | 27   | 250       |
| 44-1633K6  | 16"x33" with 3/8" Safety Float                     | 26   | 250       |
| 44-1640K6  | 16"x 40" with 3/8" Safety Float                    | 34   | 325       |
| 44-1826K6  | 18"x26" with 3/8" Safety Float                     | 28   | 250       |
| 44-1833K6  | 18"x33" with 3/8" Safety Float                     | 36   | 350       |
| 44-1840K6  | 18"x40" with 3/8" Safety Float                     | 43   | 450       |
| 44-1840K8  | 18"x40" with 1/2" Safety Float                     | 43   | 450       |
| 44-1840K16 | 18"x40" with 1/2" to 1" Safety Float               | 43   | 450       |
| 44-2440F06 | 24"x41" with 3/8" Safety Float                     | 80   | 700       |
| 44-2440F08 | 24"x41" with 1/2" Safety Float                     | 80   | 700       |
| 44-2440F16 | 24"x41" with 1/2" to 1" Safety Float               | 80   | 700       |
| 44-2450F06 | 24"x50" with 3/8" Safety Float                     | 100  | 900       |
| 44-2450F08 | 24"x50" with 1/2" Safety Float                     | 100  | 900       |
| 44-2450F16 | 24"x50" with 1/2" to 1" Safety Float               | 100  | 900       |
| 44-3050F08 | 30"x50" with 1/2" Safety Float                     | 150  | 1400      |
| 44-3050F16 | 30"x50" with 1/2" to 1" Safety Float               | 150  | 1400      |



## Notes:

- ◆ Brine Tanks are **BLACK** Unless Otherwise Specified.
- ◆ Blow Molded Brine Tanks are a Popular Budget Choice
- ◆ 3/8" and 1/2" Floats are Rated Up to 1.5 GPM refill and Draw
- ◆ 1/2" to 1" Float Rated Up to 10 GPM Refill/20 GPM Draw
- ◆ Special Order **BLUE** **ALMOND** and **PLATINUM** Color Available on Some Brine tanks,



| Item #  | Deluxe Molded Cover |
|---------|---------------------|
| 44-11IM | 11"x11" Black       |
| 44-15IM | 15"x17" Black       |
| 44-16IM | 16" Black Round     |
| 44-18IM | 18" Black Round     |





# Brine Tanks & Components

Brine tank grids and cubes primary function is to allow for the use of a smaller brine tank by increasing the amount of water that can be in the brine tank. Brine grids will reduce dry salt capacity.



| Item #                | Heavy Duty Brine Tanks                                                 | ≈Gal                 | ≈Salt #'s |
|-----------------------|------------------------------------------------------------------------|----------------------|-----------|
| 44-2460F08            | 24"x60" with 1/2" Safety Float                                         | 115                  | 1000      |
| 44-2460F16            | 24"x60" with 1/2" to 1" Safety Float                                   | 115                  | 1000      |
| 44-3060F08            | 30"x60" with 1/2" Safety Float                                         | 180                  | 1600      |
| 44-3060F16            | 30"x60" with 1/2" x 1" Safety Float                                    | 180                  | 1600      |
| 44-3948F16            | 39"x48" with 1/2" 1" Safety Float                                      | 250                  | 2200      |
| 44-3960F16            | 39"x60" with 1/2" to 1" Safety Float                                   | 300                  | 2700      |
| 44-4260F16            | 42"x60" with 1/2" to 1" Safety Float                                   | 350                  | 3100      |
| 44-5060F16            | 50"x60" with 1/2" to 1" Safety Float                                   | 500                  | 4500      |
| Brine Tank Grids      |                                                                        | ≈Gal. Extra          |           |
| 44-11GK               | 11" Brine Grid                                                         | 2                    |           |
| 44-15GK               | 15"x17" Brine Grid                                                     | 3.5                  |           |
| 44-16GK               | 16" Brine Grid                                                         | 3.5                  |           |
| 44-18GK               | 18" Brine Grid                                                         | 5                    |           |
| 44-18GKX3             | 3" Salt Grid Extender for 11-18" Grids                                 | Varies               |           |
| 44-18GKX              | 6" Salt Grid Extender for 11-18" Grids                                 | Varies               |           |
| 44-24GK               | 24" Brine Grid (Specify Height)                                        | 2 Gallons per Inch   |           |
| 44-30GK               | 30" Brine Grid (Specify Height)                                        | 3 Gallons per inch   |           |
| 44-39GK               | 39" Brine Grid (Specify Height)                                        | 5 Gallons per Inch   |           |
| 44-50GK               | 50" Brine Grid (Specify Height)                                        | 8.5 Gallons per inch |           |
| 44-i60G               | 24"x24"x24" Brine Cube                                                 | 60 Total             |           |
| Safety Floats & Parts |                                                                        |                      |           |
| 44-SF0634             | 4"x30" Brine Well w/474 Safety Float 3/8" (11x11, 15x17, 16x33, 18x33) |                      |           |
| 44-SF0640             | 4"x36" Brine Well w/474 Safety Float 3/8" (18x40)                      |                      |           |
| 44-SF06               | 4"x36" w/474 Safety Float Safety Float Kit w/out Brine Well            |                      |           |
| 44-SF08               | 4"x36" Brine Well w/474 Safety Float 1/2" (18x40)                      |                      |           |
| 44-SF1                | 1/2" to 1" 494 60" Safety Float Kit w/out Brine Well                   |                      |           |
| 44-SF148              | 1/2" to 1" 494 48" Safety Float Kit w/5" Brine Well                    |                      |           |
| 44-SF160              | 1/2" to 1" 494 60" Safety Float Kit w/5" Brine Well                    |                      |           |
| 39K-H4600             | 474 3/8" Brine Safety Valve Only                                       |                      |           |
| 39K-H4600-02          | 474 1/2" Brine Safety Valve Only                                       |                      |           |
| 44-BW448              | 4"x48" Brine Well                                                      |                      |           |
| 44-BC4                | 4" Brine Well Cap                                                      |                      |           |
| 44-BW560              | 5"x60" Brine Well                                                      |                      |           |
| 44-BC5                | 5" Brine Well Cap                                                      |                      |           |
| 44-BF                 | 2 Piece Brine Well Overflow                                            |                      |           |
| IWP-RFC               | 5 GPM Brine Refill Flow Control 1" MNPT                                |                      |           |

# Brine Tank Capacities

A brine grids primary function is to allow the use of a smaller brine tank by displacing the salt and allowing the brine tank to hold more water. Use this chart to determine the best brine tank for your system configuration.

| ≈Brine Tank Size     | ≈Dry Salt Pounds Capacity | ≈Gallons per Inch/Total Gallons | ≈Lbs as Brine Per In. Height No Grid/Grid | ≈Max Ft <sup>3</sup> @5Lb Per Ft <sup>3</sup> ≈20 KGR/Ft <sup>3</sup> | ≈Max Ft <sup>3</sup> @8Lb Per Ft <sup>3</sup> ≈24 KGR/Ft <sup>3</sup> | ≈Max Ft <sup>3</sup> @10Lb Per Ft <sup>3</sup> ≈26 KGR/Ft <sup>3</sup> | ≈Max Ft <sup>3</sup> @15Lb Per Ft <sup>3</sup> ≈30 KGR/Ft <sup>3</sup> |
|----------------------|---------------------------|---------------------------------|-------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|
| 10x16                | 50                        | .35/6                           | .3/.75                                    | .5                                                                    | .3                                                                    | .25                                                                    | .15                                                                    |
| 10x16 w/5" Grid      | 35                        | .35/6                           | .3/.75                                    | .75                                                                   | .4                                                                    | .35                                                                    | .25                                                                    |
| 11x11x34             | 150                       | .5/17                           | .4/1                                      | 1.5                                                                   | 1                                                                     | .75                                                                    | .5                                                                     |
| 11x11x34 w/5" Grid   | 125                       | .5/17                           | .4/1                                      | 2                                                                     | 1.25                                                                  | 1                                                                      | .5                                                                     |
| 14x14x34             | 200                       | .75/25                          | .6/1.5                                    | 2.5                                                                   | 1.5                                                                   | 1.25                                                                   | .75                                                                    |
| 14x14x34 w/5" Grid   | 150                       | .75/25                          | .6/1.5                                    | 3                                                                     | 1.75                                                                  | 1.5                                                                    | 1                                                                      |
| 15x17x36 (#14)       | 250                       | .8/27                           | .8/2                                      | 3                                                                     | 1.75                                                                  | 1.5                                                                    | 1                                                                      |
| 15x17x36 w/5" Grid   | 200                       | .8/27                           | .8/2                                      | 4                                                                     | 2.5                                                                   | 2                                                                      | 1.5                                                                    |
| 16x33                | 275                       | .9/26                           | .6/1.5                                    | 2.5                                                                   | 1.5                                                                   | 1.25                                                                   | .75                                                                    |
| 16x33 w/5" Grid      | 225                       | .9/26                           | .6/1.5                                    | 3                                                                     | 1.75                                                                  | 1.5                                                                    | 1                                                                      |
| 18x26                | 250                       | 1.1/27                          | 1/2.5                                     | 2.5                                                                   | 1.5                                                                   | 1.25                                                                   | .75                                                                    |
| 18x26 w/5" Grid      | 200                       | 1.1/27                          | 1/2.5                                     | 3                                                                     | 1.75                                                                  | 1.5                                                                    | 1                                                                      |
| 18x26 w/11" Grid     | 150                       | 1.1/27                          | 1/2.5                                     | 4                                                                     | 3                                                                     | 2.5                                                                    | 1.5                                                                    |
| 18x33                | 350                       | 1.1/35                          | 1/2.5                                     | 4                                                                     | 2.5                                                                   | 2                                                                      | 1                                                                      |
| 18x33 w/5" Grid      | 300                       | 1.1/35                          | 1/2.5                                     | 5                                                                     | 3                                                                     | 2.5                                                                    | 1.5                                                                    |
| 18x33 w/11" Grid     | 250                       | 1.1/35                          | 1/2.5                                     | 6                                                                     | 3.5                                                                   | 3                                                                      | 2                                                                      |
| 18x40                | 400                       | 1.1/45                          | 1/2.5                                     | 5                                                                     | 3                                                                     | 2.5                                                                    | 1.5                                                                    |
| 18x40 w/5" Grid      | 350                       | 1.1/45                          | 1/2.5                                     | 6                                                                     | 3.5                                                                   | 3                                                                      | 2                                                                      |
| 18x40 w/11" Grid     | 300                       | 1.1/45                          | 1/2.5                                     | 7                                                                     | 5                                                                     | 4                                                                      | 2.5                                                                    |
| 24x40/41             | 700                       | 2/80                            | 2/5                                       | 10                                                                    | 6                                                                     | 5                                                                      | 3                                                                      |
| 24x40/41 w/5" Grid   | 600                       | 2/80                            | 2/5                                       | 11                                                                    | 7                                                                     | 6                                                                      | 4                                                                      |
| 24x40/41 w/20" Grid  | 350                       | 2/80                            | 2/5                                       | 18                                                                    | 10                                                                    | 9                                                                      | 6                                                                      |
| 24x50/54             | 900                       | 2/100                           | 2/5                                       | 12                                                                    | 7                                                                     | 6                                                                      | 4                                                                      |
| 24x50/54 w/5" Grid   | 800                       | 2/100                           | 2/5                                       | 15                                                                    | 9                                                                     | 8                                                                      | 5                                                                      |
| 24x50/54 w/24" Grid  | 450                       | 2/100                           | 2/5                                       | 20                                                                    | 12                                                                    | 10                                                                     | 7                                                                      |
| 24x60*               | 1050                      | 2/115                           | 2/5                                       | 15                                                                    | 8                                                                     | 7                                                                      | 5                                                                      |
| 24x60* w/5" Grid     | 950                       | 2/115                           | 2/5                                       | 20                                                                    | 12                                                                    | 10                                                                     | 6                                                                      |
| 24x60* w/30" Grid    | 500                       | 2/115                           | 2/5                                       | 28                                                                    | 16                                                                    | 14                                                                     | 9                                                                      |
| 30x48*/50            | 1100                      | 3/150                           | 3.2/8                                     | 20                                                                    | 12                                                                    | 10                                                                     | 6                                                                      |
| 30x48*/50 w/5" Grid  | 950                       | 3/150                           | 3.2/8                                     | 23                                                                    | 13                                                                    | 11                                                                     | 7                                                                      |
| 30x48*/50 w/24" Grid | 550                       | 3/150                           | 3.2/8                                     | 30                                                                    | 18                                                                    | 15                                                                     | 10                                                                     |
| 30x60*               | 1500                      | 3/180                           | 3.2/8                                     | 24                                                                    | 14                                                                    | 12                                                                     | 8                                                                      |
| 30x60* w/5" Grid     | 1350                      | 3/180                           | 3.2/8                                     | 30                                                                    | 18                                                                    | 15                                                                     | 12                                                                     |
| 30x60* w/30" Grid    | 750                       | 3/180                           | 3.2/8                                     | 40                                                                    | 24                                                                    | 20                                                                     | 14                                                                     |
| 39x48*               | 2000                      | 5/250                           | 5.2                                       | 30                                                                    | 18                                                                    | 15                                                                     | 10                                                                     |
| 39x60*               | 2500                      | 5/300                           | 5.2                                       | 40                                                                    | 24                                                                    | 20                                                                     | 13                                                                     |
| 42x60*               | 3000                      | 6/350                           | 6.2                                       | 50                                                                    | 30                                                                    | 25                                                                     | 15                                                                     |
| 50x60*               | 4300                      | 8.5/500                         | 9                                         | 60                                                                    | 36                                                                    | 30                                                                     | 20                                                                     |
| 60x48 Storage Tank   | 4000                      | 12.25/575                       | 12.5                                      | 80                                                                    | 48                                                                    | 40                                                                     | 25                                                                     |
| 64x50 Storage Tank   | 4800                      | 14/700                          | 14                                        | 100                                                                   | 60                                                                    | 50                                                                     | 30                                                                     |
| 72x50 Storage Tank   | 5700                      | 17.5/875                        | 17.5                                      | 120                                                                   | 72                                                                    | 60                                                                     | 40                                                                     |
| 72x64 Storage Tank   | 7600                      | 17/1100                         | 17.5                                      | 170                                                                   | 100                                                                   | 85                                                                     | 55                                                                     |
| 85x64 Storage Tank   | 10,000                    | 24.5/1600                       | 24                                        | 230                                                                   | 135                                                                   | 115                                                                    | 75                                                                     |

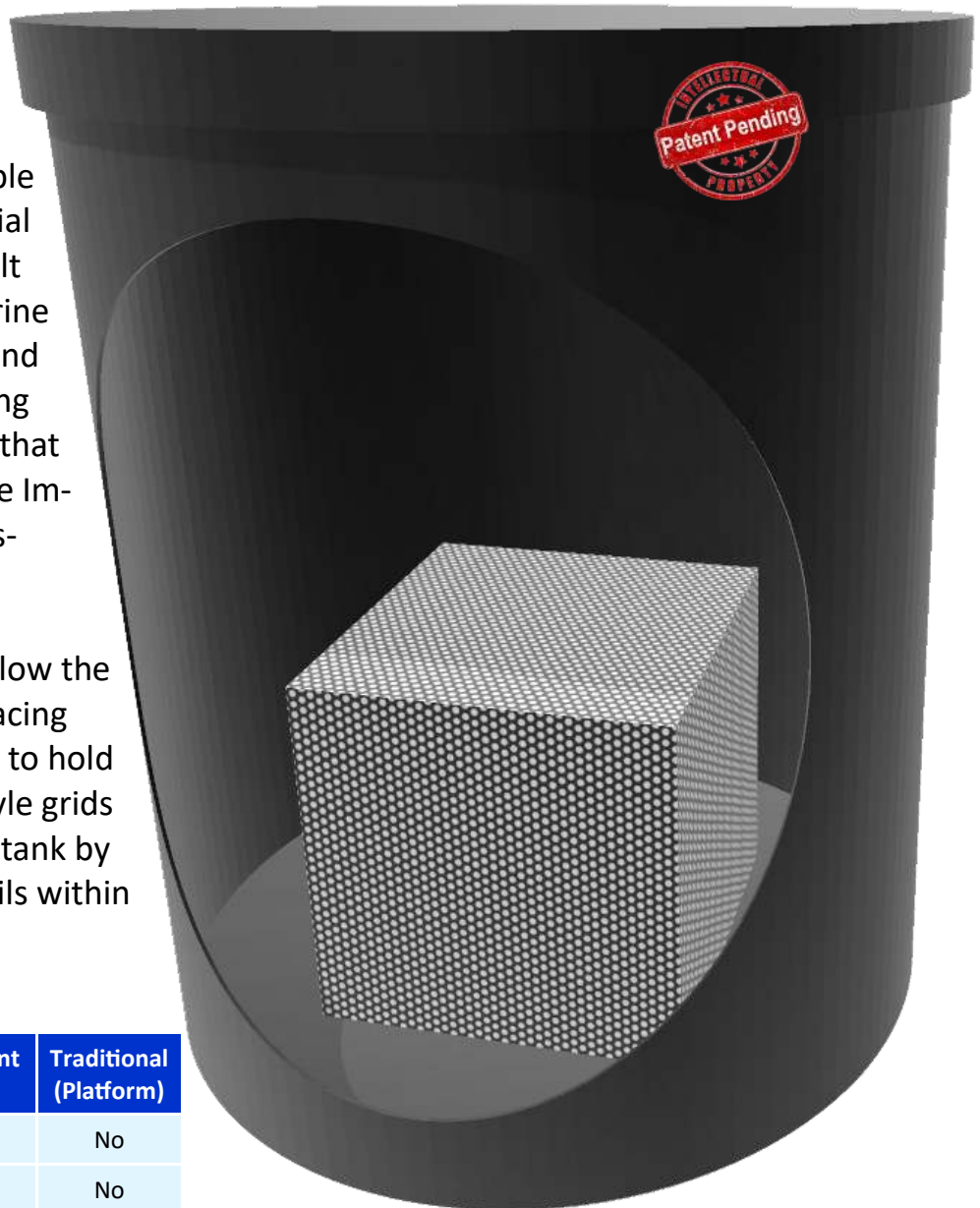


# IMPACT Salt Displacement Cubes

| Part #   | Salt Displacement Cube Size | ≈Water Capacity Added | Ideal for Brine Tank Diameter | Extra Brine Capacity |
|----------|-----------------------------|-----------------------|-------------------------------|----------------------|
| 44-i60G  | 24"x24"x24"                 | 60 Gallons            | 39" & Larger                  | 150 Lbs.             |
| 44-i135G | 36"x36"x24"                 | 135 Gallons           | 60" & Larger                  | 325 Lbs.             |

Finally, an effective high quality salt displacement component for large brine tanks! The IWP Impact Salt Displacement Cubes are available in a multitude of sizes for commercial applications. Our unique Impact Salt Displacement Cubes are ideal for brine tanks from 39" to 84" in diameter and are typically good in stock. Stop using the antiquated pressed wood grids that will fail shortly after installation. The Impact Water Products Impact Salt Displacement Cube is a game changer!

A salt grids primary function is to allow the use of a smaller brine tank by displacing the salt and allowing the brine tank to hold more water. Traditional platform style grids are typically custom made for each tank by hand out of particle board which fails within a few years of going into service.



|                              | Salt Displacement Cube | Traditional (Platform) |
|------------------------------|------------------------|------------------------|
| Easily Installed             | Yes                    | No                     |
| Reduces Salt Bridging        | Yes                    | No                     |
| Easily Cleaned Underneath    | Yes                    | No                     |
| Requires Height Calculations | No                     | Yes                    |
| Adjustable Height            | Not Needed             | Some                   |
| Potential for Collapse       | No                     | Yes                    |
| Ideal for Shared Brine Tank  | Yes                    | No                     |
| Fast Brine Production        | Yes                    | No                     |
| Large Surface Area           | Yes                    | No                     |





| Part No.   | Description                  |
|------------|------------------------------|
| 19L-SPDW   | Lamotte Spin Test Kit        |
| 19L-4336-H | 50 Pack Municipal Test Discs |
| 19L-4337-H | 50 Pack Well Test Discs      |

| Part No.   | Description                      |
|------------|----------------------------------|
| 17-TKGPG5B | Hach 5B Hardness Test Kit GPG    |
| 39N-U7101  | Simple Soap Test Kit             |
| 17-ORP200  | Hand Held Digital ORP Tester     |
| 17-PH200   | Hand Held Digital PH Tester      |
| 17-TDST-HM | TDS and Temperature Tester       |
| 17-TDS-342 | TDS Calibration Solution 342 ppm |

## Reliable Results

- Virtually Eliminates User-Error
- Pre-Measured Reagents
- Exact Reaction Times and Auto-Blanking
- Meter Calibration Check System
- New 6-Wavelength Photometer

## Super Fast & Simple

- 1 Minute for 9 Complete Tests on One Disk
- Fill Disk and Insert > Select "Start Test" > Read Results



| Municipal Water   | 19L-4336-H  |
|-------------------|-------------|
| Free Chlorine     | 0-15 ppm    |
| Total Chlorine    | 0-15 ppm    |
| Combined Chlorine | 0-15 ppm    |
| pH                | 4.5-10.0 pH |
| Total Hardness    | 0-70 gpg    |
| Total Iron        | 0-6 ppm     |
| Copper            | 0-6 ppm     |
| Total Alkalinity  | 0-250 ppm   |

| Well Water       | 19L-4337-H |
|------------------|------------|
| pH               | 4.5-10 pH  |
| Total Hardness   | 0-70 gpg   |
| Total Iron       | 0-6 ppm    |
| Ferric Iron      | 0-6 ppm    |
| Ferrous Iron     | 0-6 ppm    |
| Copper           | 0-6 ppm    |
| Nitrate          | 0-300 ppm  |
| Nitrite          | 0-2 ppm    |
| Total Alkalinity | 0-250 ppm  |

The Lamotte Spin includes a carrying case, check disk, syringes and a charger as shown below.





| Hydra Standard |                                                            |
|----------------|------------------------------------------------------------|
| Item #         | Description                                                |
| 78-H112-PP5    | 3/4" Hydra 50 µ Pleated Polypropylene Screen 22 GPM Peak   |
| 78-H112-PE9    | 3/4" Hydra 90 µ Polyester Screen 22 GPM Peak               |
| 78-H112-SS9    | 3/4" Hydra 90 µ Stainless Screen 22 GPM Peak               |
| 78-H116-PP5    | 1" Hydra 50 µ Pleated Polypropylene Screen 26 GPM Peak     |
| 78-H116-PE9    | 1" Hydra 90 µ Polyester Screen 26 GPM Peak                 |
| 78-H116-SS9    | 1" Hydra 90 µ Stainless Screen 26 GPM Peak                 |
| 78-H124-PP5    | 1-1/2" Hydra 50 µ Pleated Polypropylene Screen 50 GPM Peak |
| 78-H124-PE9    | 1-1/2" Hydra 90 µ Polyester Screen 50 GPM Peak             |
| 78-H124-SS9    | 1-1/2" Hydra 90 µ Stainless Screen 50 GPM Peak             |
| 78-H-PP5       | Replacement 50 µ Pleated Polypropylene Screen              |
| 78-H-PE9       | Replacement 90 µ Polyester Screen                          |
| 78-H-SS9       | Replacement 90 µ Stainless Steel Screen                    |
| 78-XR25        | Replacement O-Ring                                         |
| 78-H-SSP       | Replacement Spring                                         |
| IWP-HYDFI5     | Auto Flush valve (Connects to i5 valve only)               |

**"HYDRA" & "HYDRA BIG"** by Atlas Filtri. A revolutionary design that allows for the addition of a simple automated purge timer. High capacity and high flow rates make the "Hydra" your first choice for simple particulate filtration, rated at 50 or 90µ. The Hydra filter assemblies include a blowdown ball valve, wrench, bracket kit and a code compliant backflow preventer.

| Hydra Big    |                                                   |
|--------------|---------------------------------------------------|
| Item #       | Description                                       |
| 78-HB1650    | 1" Hydra 50 µ Polyester Screen 50 GPM Peak        |
| 78-HB1690    | 1" Hydra 90 µ Polyester Screen 50 GPM Peak        |
| 78-HB2450    | 1-1/2" Hydra 50 µ Polyester Screen 75 GPM Peak    |
| 78-HB2490    | 1-1/2" Hydra 50 µ Polyester Screen 75 GPM Peak    |
| 78-HBX50     | Replacement 50 µ Polyester Screen                 |
| 78-HBX90     | Replacement 90 µ Polyester Screen                 |
| 78-HBXR      | Replacement O-Ring                                |
| 78-HBXSP     | Replacement Spring                                |
| IWP-BBHYDFI5 | Hydra Big Flush valve (Connects to i5 valve only) |

Check out the "VIDEOS" section of our website for a demonstration of the "Hydra" filter system!





# Stenner Pumps

Established in 1957, the Stenner Pump Company manufactures peristaltic pumps for reliable and accurate dosing of liquid solutions for. Popular for antiscalant, chlorine, hydrogen peroxide, sodium metabisulfite, soda ash, citric acid, polyguard and several other water treatment chemicals.

The “Econ LD” is ideal for low flow/low dose application like antiscalant and polyphosphate injection. Simple potentiometer allows quick adjustments from 10-100% for precise control. Many other pump sizes available.

| Econ LD Series Pumps |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| 75S-LD05             | .45 GPD Max, .04-2.4 Ounces per Hour, 80 PSI, Pump Tube M, White Roller, 120V |
| 75S-LD15             | 1.5 GPD Max, .04-2.4 Ounces per Hour, 80 PSI, Pump Tube F, White Roller, 120V |
| 75S-LD05-2           | .45 GPD Max, .04-2.4 Ounces per Hour, 80 PSI, Pump Tube M, White Roller, 220V |
| 75S-LD15-2           | 1.5 GPD Max, .04-2.4 Ounces per Hour, 80 PSI, Pump Tube M, White Roller, 220V |
| Clack Chemical Tank  |                                                                               |
| 75S-TKG15N           | 15 Gallon Natural Chemical Tank w/LD Pump Stand                               |
| 75S-TKG15G           | 15 Gallon Grey Chemical Tank w/LD Pump Stand                                  |
| 75S-TKG35N           | 35 Gallon Natural Chemical Tank w/LD Pump Stand                               |
| 75S-TKG35G           | 35 Gallon Grey Chemical Tank w/LD Pump Stand                                  |



## The Charts Below are For .45 GPD Pumps

### Powdered Antiscalant

Add 4#’s to the chemical tank. Set potentiometer as shown below

### Powdered Antiscalant

Add antiscalant and water, set potentiometer as shown below

### Liquid Antiscalant

Add 1 gallon of liquid antiscalant to the appropriate amount of clean water and set the potentiometer according to the charts below.

| Water Flow GPM | Gallons of Water | Set pump % |
|----------------|------------------|------------|
| 2              | 10               | 10         |
| 3              | 10               | 20         |
| 4              | 10               | 25         |
| 5              | 10               | 30         |
| 6              | 10               | 40         |
| 7              | 10               | 45         |
| 8              | 10               | 50         |
| 10             | 10               | 60         |
| 12             | 10               | 70         |
| 15             | 10               | 100        |
| 17             | 5                | 50         |
| 20             | 5                | 70         |
| 25             | 5                | 80         |
| 30             | 5                | 90         |
| 35             | 5                | 100        |

| Water Flow GPM | Gallons of Water | Pounds of Antiscalant | Set pump % |
|----------------|------------------|-----------------------|------------|
| 10             | 10               | 5                     | 50         |
| 12             | 10               | 5                     | 60         |
| 15             | 10               | 5                     | 75         |
| 17             | 10               | 5                     | 80         |
| 20             | 10               | 5                     | 100        |
| 25             | 10               | 10                    | 60         |
| 30             | 10               | 10                    | 75         |
| 35             | 10               | 10                    | 85         |
| 40             | 10               | 10                    | 100        |
| 50             | 10               | 15                    | 50         |
| 60             | 10               | 15                    | 60         |
| 70             | 10               | 15                    | 75         |
| 80             | 10               | 15                    | 90         |
| 90             | 10               | 15                    | 100        |

| RO Feed GPM                                             | Gallons of Water | Set pump % | RO Feed GPM                                               | Gallons of Water | Set pump % |
|---------------------------------------------------------|------------------|------------|-----------------------------------------------------------|------------------|------------|
| Non Concentrate Liquid Antiscalant Settings for .45 GPD |                  |            | 8-10X Concentrate Liquid Antiscalant Settings for .45 GPD |                  |            |
| 2                                                       | 4                | 15         | 25                                                        | 2                | 10         |
| 4                                                       | 4                | 30         | 30                                                        | 2                | 15         |
| 5                                                       | 4                | 40         | 40                                                        | 2                | 20         |
| 7                                                       | 4                | 50         | 50                                                        | 2                | 25         |
| 10                                                      | 4                | 80         | 60                                                        | 2                | 30         |
| 15                                                      | 4                | 100        | 80                                                        | 2                | 40         |
| 20                                                      | 1                | 60         | 100                                                       | 2                | 50         |
|                                                         |                  |            | 150                                                       | 2                | 75         |

Use the equation below to determine the correct dilution/injection rates for other pumps and flow rates.

Injection Pump GPD ÷ Reverse Osmosis Permeate & Concentrate flow in GPD x Chemical Solution Strength in PPM

1.5 Pounds Antiscalant powder into 1 gallon of water = 1,000,000 ppm (Neat)





## Reliable Peristaltic Metering Pumps Manufactured by Stenner

The "Econ FP" series has quickly become the preferred pump for the water treatment industry. Variable injection controlled by a pulse meter or any i5 metered controller. 80 PSI rated.

| Item #      | Econ FP Series                                         |
|-------------|--------------------------------------------------------|
| 75S-FPX04   | Up to 4.5 GPD, 80 PSI, Pump Tube F, White Roller, 120V |
| 75S-FPX16   | Up to 16 GPD, 80 PSI, Pump Tube G, Black Roller, 120V  |
| 75S-FPX30   | Up to 30 GPD, 80 PSI, Pump Tube H, Black Roller, 120V  |
| 75S-FPX04-2 | Up to 4.5 GPD, 80 PSI, Pump Tube F, White Roller, 220V |
| 75S-FPX16-2 | Up to 16 GPD, 80 PSI, Pump Tube G, Black Roller, 220V  |
| 75S-FPX30-2 | Up to 30 GPD, 80 PSI, Pump Tube H, Black Roller, 220V  |

| Item #      | Econ FP Series Parts & Accessories                              |
|-------------|-----------------------------------------------------------------|
| 75S-RW      | Econ White Roller                                               |
| 75S-RK      | Econ Black Roller                                               |
| 75S-XEC355  | Econ Pump Tube Cover                                            |
| 75S-FPM121  | ¾" Plastic Meter 1 Pulse per Gallon, .25-22 GPM                 |
| 75S-FPM161  | 1" Plastic Meter w/Unions 1 Pulse per Gallon, .75-50 GPM        |
| 75S-FPM241  | 1½" Plastic Meter w/Unions 1 Pulse per Gallon, 2-100 GPM        |
| 75S-FPM321S | 2" Stainless Meter w/Unions 1 Pulse per Gallon, 1-160 GPM       |
| 75S-TKG15N  | 15 Gallon Natural Chemical Tank w/LD Pump Stand                 |
| 75S-TKG15G  | 15 Gallon Grey Chemical Tank w/LD Pump Stand                    |
| 75S-TKG35N  | 35 Gallon Natural Chemical Tank w/LD Pump Stand                 |
| 75S-TKG35G  | 35 Gallon Grey Chemical Tank w/LD Pump Stand                    |
| 75S-CV41    | Replacement Duckbill Check Valve (Each or discounted 5 pack)    |
| 75S-CVIJ14  | 1/4" Injection Check Valve Assembly 100 PSI                     |
| 75S-TK14    | 20' x 1/4" UV Black Tubing per ft. (Discount at 20', 100, 1000) |
| 75S-X14T    | 1/4" Connecting Nut (Each or discounted 10 Pack)                |
| 75S-X14F    | 1/4" Ferrule (Each or discounted 10 Pack)                       |
| 75S-AK600   | 1/4" Flow Indicator                                             |

| Pump Tubes |                                            |
|------------|--------------------------------------------|
| 75S-TB1    | Santoprene #1 (Each or discounted 5 pack)  |
| 75S-TB2    | Santoprene #2 (Each or discounted 5 pack)  |
| 75S-TB7    | Santoprene #7 (Each or discounted 5 pack)  |
| 75S-TB7X   | Santoprene #7X (Each or discounted 5 pack) |
| 75S-TB4    | Santoprene #4 (Each or discounted 5 pack)  |
| 75S-TB5    | Santoprene #5 (Each or discounted 5 pack)  |
| 75S-TBA    | "A" (Each or discounted 5 pack)            |
| 75S-TBB    | "B" (Each or discounted 5 pack)            |
| 75S-TBC    | "C" (Each or discounted 5 pack)            |
| 75S-TBF    | "F" (Each or discounted 5 pack)            |
| 75S-TBG    | "G" (Each or discounted 5 pack)            |
| 75S-TBH    | "H" (Each or discounted 5 pack)            |
| 75S-TBM    | "M" (Each or discounted 5 pack)            |

"S" Series! Select from the various modes of operation: Pump Signal Inputs: 4-20mA, 0-10VDC, Pulse and Hall Effect (use any Clack meter). The "S" series features pump signal outputs. Rated to 100 PSI. 110V, 220 available.



| Item #   | "S" Series           |
|----------|----------------------|
| 75S-311A | .05-5 GPD, Tube #1   |
| 75S-321A | .17-17 GPD Tube #2   |
| 75S-375A | .4-40 GPD Tube #7    |
| 75S-407X | .6-60 GPD Tube #7X   |
| 75S-570G | 1.3-125 GPD Tube #7G |

The roller, cover and pump tube should be changed annually as part of regular maintenance.



Item # 75S-MX35FP

35 Gallon chemical tank with a mixing/timer system to assist with mixing soda ash or citric acid. Timer included for intermittent automated mixing!



# Clack Retention Tanks

Clack retention tanks are typically used to provide additional contact time for chlorine, air, ozone, hydrogen peroxide and other chemicals. The oxidized precipitates collect in the bottom where they are easily purged from the tank. By using the unique baffled diffuser, the Clack tanks have the inlet and outlet on the top of the tank making installation simple. All Clack retention tanks include the popular 1191 in/out head with 1-1/4" threaded and 1-1/4"x1-1/2" PVC glue connection on the inlet and outlet plus a 3/4" CPVC bottom drain. See the Clack accessories page for more connection options. You can use the retention tanks for sediment reduction by shortening the baffled diffuser.



## Clack Retention Tanks

| Item #    | ≈Capacity   | In/Out                       | Drain          | ≈Dimensions |
|-----------|-------------|------------------------------|----------------|-------------|
| 22C-RT040 | 40 Gallon   | 1-1/4 MPT, 1-1/4"x1-1/2" PVC | 3/4" CPVC Pipe | 21"x41"     |
| 22C-RT080 | 80 Gallons  | 1-1/4 MPT, 1-1/4"x1-1/2" PVC | 3/4" CPVC Pipe | 21"x68"     |
| 22C-RT120 | 120 Gallons | 1-1/4 MPT, 1-1/4"x1-1/2" PVC | 3/4" CPVC Pipe | 24"x79"     |

### Retention Tank Operating Parameters

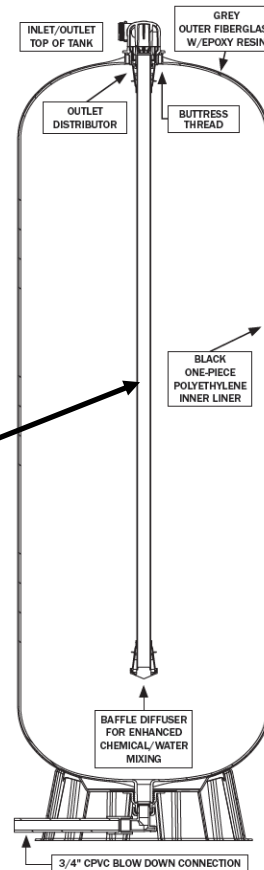
- Maximum Operating Pressure 75 psi/517 kPa
- Maximum Operating Temperature 120°F 49°C
- Maximum Allowable Operating Vacuum 0
- A Vacuum/Pressure Relief Valve of adequate size must be incorporated in the plumbing



i5 Valves include programming to flush the bottom of the tanks with a Clack NHWBP valve!



Shorten the internal baffled diffuser when using the retention tank as a sand and sediment trap.



## Retention Tank Accessories

| Item #       | Description                                                                 |
|--------------|-----------------------------------------------------------------------------|
| 22C-RTK      | 3/4" 4.2 GPM Auto Purge Kit, Requires an i5 Softener or Backwashing System  |
| 22C-RTKM     | 3/4" PVC Manual Flush Kit with Ball Valve for 40-120 Gallon Retention Tanks |
| 39V-V3006    | Clack Bypass for 40-120 Gallon Retention Tanks                              |
| 39V-V3007    | 1" MPT Threaded Elbow Connectors for 40-120 Gallon Retention Tanks          |
| 39V-V3007-01 | 3/4"x1" PVC Elbow Connectors for 40-120 Gallon Retention Tanks              |
| 56-VAC       | 1/2" MPT Vacuum Break                                                       |

# Static Mixer

The IWP static mixer design drastically reduces the time it takes to combine the fluids and maximizes the effective blend. This can boost the effectiveness of soda ash injection, chlorine, and hydrogen peroxide.



| Item #  | Description | Recommended Flow Rates GPM |
|---------|-------------|----------------------------|
| 18-CM10 | 1" MNPT     | 1-10                       |
| 18-CM15 | 1.5" MNPT   | 4-30                       |
| 18-CM20 | 2" MNPT     | 10-60                      |



# Flexcon Baffled Retention Tanks

Baffled retention tanks are typically used to provide additional contact time for hydrogen peroxide, chlorine, air or other chemicals. The oxidized precipitates collect in the bottom where they are easily purged from the tank. Call your IWP technical support team for assistance in sizing your retention tank. Inlet is in the bottom, outlet is at the top of the tank. **Flexcon's "MIXMASTER"** baffled retention tanks are up to 3-4 times more effective than a standard retention tank allowing for the use of smaller tanks. MixMaster Retention tanks include Sch. 80 PVC 1-1/4" MPT inlet/Drain on the bottom and a stainless 1-1/4" FPT outlet at the top. Rated at a .8 "Baffle Factor" by the WQA.

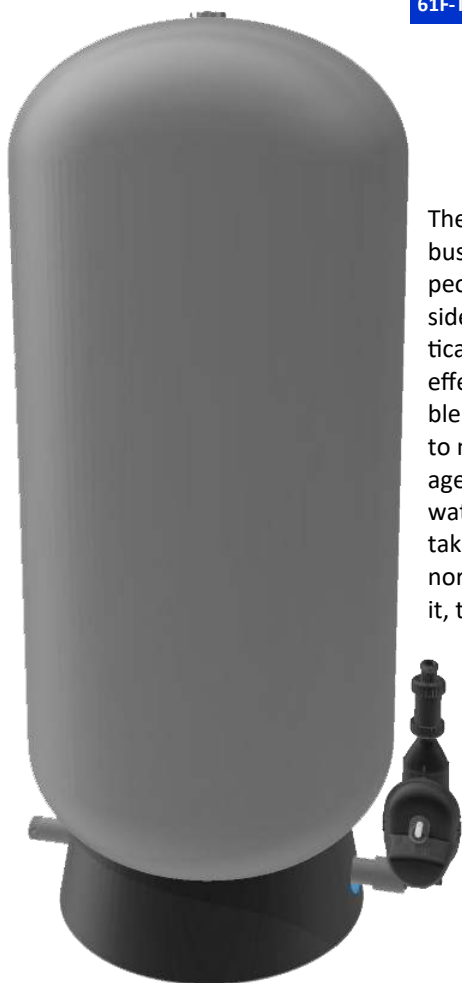
## Mixmaster Baffled Retention tank

| Item #    | Baffled Retention Tank                    | ~Dimensions |
|-----------|-------------------------------------------|-------------|
| 61F-TB080 | MixMaster 80 Gal. Baffled                 | 24"x57"     |
| 61F-TB120 | MixMaster 119 Gal. Baffled Retention tank | 24"x57"     |

### Retention Tank Operating Parameters

- Maximum Operating Pressure 75 psi/517 kPa
- Maximum Operating Temperature 120°F 49°C
- Maximum Allowable Operating Vacuum 0
- A Vacuum/Pressure Relief Valve of adequate size must be incorporated in the plumbing

The board of health mandates water disinfection systems for businesses supplying potable well water to greater than 25 people, Chemical disinfection using chlorine is generally considered the method of choice because it is reliable and practical. Flexcon's **MIXMASTER** baffle tank is one of the most effective High Mixing Disinfection Systems currently available. It ensures uniform mixing, and sufficient residence time to meet the CT (contact time) standard set by most health agencies in the United States. This remains true even when water is flowing continuously. With a .8 baffle factor, it also takes up less space, because one tank does the work of 4 normal tanks. **MIXMASTER**, like the water that comes out of it, the choice is clear.



The IWP i5 valve compatible automated purge kit utilizes the Clack NHWBP for highly programmable flushing!



## Baffled Retention Tank Accessories

| Item #   | Description                                                                      |
|----------|----------------------------------------------------------------------------------|
| 61F-RTK  | 3/4" 4.2 GPM Auto Blowdown Kit, Requires an i5 Backwashing System or i5 Softener |
| 61F-RTKM | 1" PVC Manual Blowdown Kit                                                       |
| 56-VAC   | 1/2" MPT Vacuum break                                                            |

1/2" MPT Vacuum Break  
56-VAC





## Neutralizing with Stenner

Treating water with high or low pH can be done safely and effectively with Stenner. Raising pH with soda ash is the most common method. Lowering pH with citric acid (Ban-T) is recommended for most applications. Neutra 7 is soda ash with polyphosphate and is ideal for post treatment pH correction. Neutra 5 is pure soda ash and is ideal for pH correction where the addition of polyphosphate could be detrimental.

**Stenner Pump GPD ÷ Well Pump Output Rate (GPD) x Solution Strength (PPM) = PPM Injected.**

Soda Ash (Neutra 7, Neutra 5, Sodium Carbonate,  $\text{Na}_2\text{CO}_3$ ) can be used to raise the pH of acidic water without raising the hardness. If you are dealing with low hardness and low pH, chemical **injection** usually makes more sense versus a calcite filter which can significantly raise the hardness of water. If your water is already hard and a softener is going to be installed a calcite neutralizing system makes sense. Soda Ash solubility is highly variable based on the water temperature. One gallon of 50°F water can dissolve  $\approx 1$  pound of Soda Ash, at 68° water can dissolve approximately 1.75 pounds of Soda Ash. 0.926 pounds of Soda Ash in one gallon of water will make a 10% solution (100,000 ppm) and it is common to inject between 50-500 ppm of Soda Ash to increase the pH of your water. To get the correct injection amount some trial and error will be necessary. Each ppm of  $\text{CO}_2$  is neutralized with 2.5 ppm of Soda ash. Only .85 ppm of Caustic Soda (Sodium Hydroxide, Lye,  $\text{NaOH}$ ) would be needed to neutralize 1 ppm of  $\text{CO}_2$ . Caustic Soda should only be used commercially by qualified personnel as it is far more dangerous to work with than Soda Ash and a failure in the pumping system can cause dangerously high pH levels in the plumbing. Use the chart below as a good starting point to raise the pH of your water.

Using the Econ-FP with a meter is preferred over non metered injection systems if the water flow rate can vary.

4 pounds of soda ash into 5 gallons of clean water makes a 100,000 ppm solution

1 Pound of soda ash =  $\approx 3/4$  cup.

### Soda Ash Injection Chart 150 ppm\*

| Well pump GPM | Gallons of Water | Pounds of Soda Ash | Pump GPD | Set pump % | Tank Size Gallons |
|---------------|------------------|--------------------|----------|------------|-------------------|
| 5             | 5                | 4                  | 23.5     | 45         | 30                |
| 10            | 5                | 4                  | 23.5     | 90         | 30                |
| 15            | 5                | 4                  | 40       | 80         | 30                |

### Citric Acid Injection\*

| Well pump GPM | Gallons of Water | Ounces of Citric Acid | Pump GPD | Set pump % | Tank Size Gallons |
|---------------|------------------|-----------------------|----------|------------|-------------------|
| 5             | 5                | 4                     | 23.5     | 50         | 30                |
| 10            | 5                | 4                     | 23.5     | 100        | 30                |
| 15            | 5                | 4                     | 40       | 75         | 30                |

### Chlorine Reduction with Sodium Metabisulfite (SMBS)

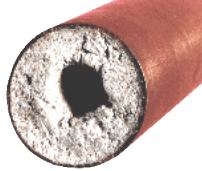
Injecting 1.5-3 PPM of SMBS for each PPM of chlorine is an effective way to reduce chlorine in larger commercial applications. A 5% solution of SMBS is common and would be 4.2 pounds of SMBS into 10 gallons of clean water. This would make a 50,000 ppm solution. For water flow rates up to 50 GPM a 16 GPD injection pump is typically adequate. SMBS solutions have a finite shelf life once mixed. We recommend no longer than 3-4 weeks of solutions should be made at a time.

Iron, manganese and hydrogen sulfide reduction is typically accomplished with simple injection systems. Hydrogen Peroxide ( $\text{H}_2\text{O}_2$ ) is recommended over chlorine for most applications as contact time is not as critical and harmful byproducts are less likely to occur. Residual levels are also less critical. Chlorine residuals should never exceed 4 ppm, 1 ppm is the desired level.  $\text{H}_2\text{O}_2$  residual levels under 15 ppm are considered desirable. A simple static mixer may be beneficial when using  $\text{H}_2\text{O}_2$  especially in lower pH water. If bacterial issues are present then high residuals of hydrogen peroxide may be necessary (>25 PPM) so chlorine may be a better choice. Contact time is important for chlorine to be effective so retention tanks should be considered and dechlorination systems including backwashing GAC tanks become an important part of your water quality improvement program. GAC will reduce chlorine and  $\text{H}_2\text{O}_2$  levels to near zero.

| Contaminant      | ( $\text{H}_2\text{O}_2$ ) Hydrogen Peroxide            | Chlorine                                     |
|------------------|---------------------------------------------------------|----------------------------------------------|
| Iron             | 1 ppm iron = .5 ppm $\text{H}_2\text{O}_2$              | 1 ppm iron = 1 ppm $\text{Cl}_2$             |
| Manganese        | 1 ppm manganese = 1 ppm $\text{H}_2\text{O}_2$          | 1 ppm manganese = 2 ppm $\text{Cl}_2$        |
| Hydrogen Sulfide | 1 ppm hydrogen sulfide = 1.5 ppm $\text{H}_2\text{O}_2$ | 1 ppm hydrogen sulfide = 3 ppm $\text{Cl}_2$ |



# Chemicals



Specialized chemicals are needed for difficult water treatment applications. Our experienced team is able to help you solve the most difficult water problems!

| Item #                                         | Automatic & liquid Resin Cleaners                                            |
|------------------------------------------------|------------------------------------------------------------------------------|
| 18-RF                                          | (1) Res-Up Feeder .4 oz Per Day (For Low Levels of Iron)                     |
| 18-RF1                                         | Res-Up Feeder 1 oz Per Day (For Higher Levels of Iron)                       |
| 18-R4                                          | (2) Res-Up 1 Gallon (4 per Case)                                             |
| 18-R1                                          | (3) Res-Up Quart (12 per Case)                                               |
| Powdered Resin Cleaner                         |                                                                              |
| 18P-RTP15                                      | (4) Rust Out 1-1/2 lb. Bottle                                                |
| Item #                                         | Powdered Resin Cleaner & Alkaline Water neutralizer                          |
| 18P-CDP01                                      | (5) Ban-T Citric Acid 1.5 lb. Bottle                                         |
| 18P-CDP04                                      | (6) Ban-T Citric Acid 4 lb. Bottle                                           |
| 18P-CDP45                                      | (7) Ban-T Citric Acid 45 lb. Bucket                                          |
| Acid Water Neutralizer                         |                                                                              |
| 18P-SDP5                                       | (8) "Neutra 5" 40 lb. Bucket, Sodium Carbonate (Soda Ash)                    |
| 18P-SDP7                                       | (9) "Neutra 7" 40 lb. Bucket, Sodium Carbonate (Soda Ash) w/ Scale Inhibitor |
| Polyphosphate                                  |                                                                              |
| 18P-PG01                                       | (10) Poly Guard Liquid, 1 Gallon (Typical 10 ppm injection)                  |
| 18P-PG05                                       | (11) Poly Guard Liquid, 5 Gallon Pail (Typical 10 ppm injection)             |
| Pot Perm Plus                                  |                                                                              |
| 18P-PTP05                                      | (12) 76 oz. Bottle Pot Perm Plus                                             |
| Cleaners, Sanitizers, Oxidizers, Disinfectants |                                                                              |
| 18P-NS05                                       | (13) 7% Hydrogen Peroxide (Stabilized) Neutra Sul 5 gal.                     |
| 18P-SSP                                        | (14) Sani-System Water Softener Sanitizer .5 fl. oz.                         |
| 18P-RSP                                        | (15) Sani-System RO Sanitizer .25 fl. oz.                                    |
| Membrane Antiscalant, Inject 4-6 PPM           |                                                                              |
| 18-ASP04                                       | (1) 4 Lbs. Powdered Antiscalant (Treats ≈520,000 Gallon)                     |
| 18-ASP25                                       | 25 Lbs. Powdered Antiscalant (Treats ≈3,333,200 Gallon)                      |
| 18-AS25                                        | 5 Gal. Liquid Antiscalant (Treats ≈1,000,000 Gallons)                        |
| 18-AS25C                                       | 5 Gal. Liquid 8X Concentrate, (Treats ≈8,000,000 Gallons)                    |
| 18-AS25-55                                     | 55 Gal. Drum (Treats ≈11,000,000 Gallons)                                    |
| 18-AS25C-55                                    | (17) 55 Gal Drum 8X Concentrate, (Treats ≈88,000,000 Gallons)                |



Raising the pH of acidic water and adding polyphosphate is often used to protect plumbing components.



# Pilot Testing

Pilot testing can mean the difference between success and failure. Many water contaminants are difficult to remove, and pilot testing eliminates the guesswork while saving time and money. Tannins are a clear example—treatment options vary widely, and no single method works in every situation. Options include ultrafiltration, tannin-selective anion resin, Eco-Mix, chlorination, fine-mesh catalytic carbon, and others. A properly designed pilot test that simulates real-world conditions lets you move forward with confidence.

| Part #         | Description                                                                  |
|----------------|------------------------------------------------------------------------------|
| 85SC-2510P-202 | Eco-Mix pilot test simulates 4 GPM on a 12x52 tank (tannin, iron, softening) |
| 85SC-2510-184  | Tannin selective resin                                                       |
| 60-SD2105      | 5 micron sediment filter (simulates clinoptilolite backwashing filter)       |
| 85SC-2510-160  | Softening cartridge                                                          |
| 85SC-2510-505  | Calcite cartridge for acidic water neutralization and remineralizing         |
| 85SC-2510-180  | Nitrate selective resin                                                      |
| 85SC-2510-182  | Arsenic, uranium, (SBG2 resin)                                               |
| 85SC-2510-640  | Titanium Oxide, metals and arsenic reduction                                 |
| 85SC-2510-210  | Fine mesh catalytic carbon                                                   |
| 85SC-2510-670  | Bone char for fluoride reduction                                             |
| 85SC-2510-610  | Activated alumina for fluoride reduction                                     |
| 60U-D21U       | Sub micron Ultra-D, simulates Enpress cartridge tank with Nano-Al filter     |
| UF-E-PT        | Pilot test stick simulates Enpress UF system                                 |



85SC-21P-185 is a complete kit including the filter housing, garden hose connector, flow restrictor and an Eco-Mix cartridge. Add the cartridges above that will meet the needs of your water treatment pilot testing. Pilot test simulated 4 GPM on a 12x52 tank. Many more filter options available.



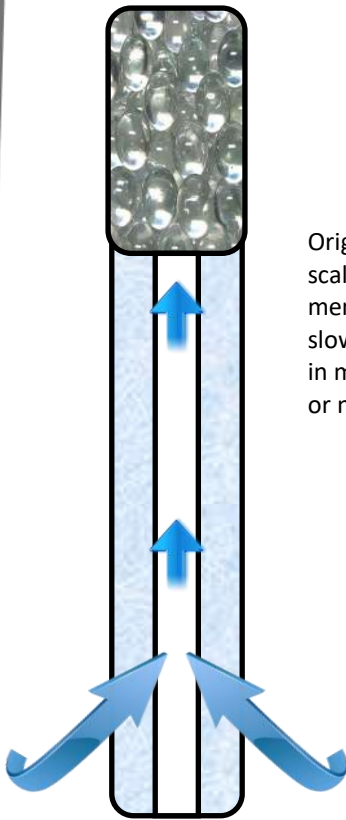


# Scaliminator

Tankless heaters require higher-quality water than traditional tank heaters. Our multi-gradient depth filtration removes particles as small as 5 microns, and the Scaliminator chamber introduces polyphosphate that reduces hardness effects and inhibits scale formation and creates protective coating resists corrosion from acidity, alkalinity, and mineral salts that can damage plumbing components.



The **Scaliminator** scale-prevention cartridge is designed so water cannot simply bypass the media, as it can in other designs. Water first flows through a 5-micron, high-flow, USA-made sediment cartridge, then enters a scale-reduction chamber that holds two to three times more media than typical competing products. Our forced-flow chamber provides superior dissolution of the scale-reduction media. Demand the original **Scaliminator**.



Original **Scaliminator** cartridges are a superior replacement for most scale reduction systems. High capacity multi gradient USA made sediment filter cartridge and nearly a full pound of a specially formulated slowly dissolving polyphosphate provide 6 months to a year of service in most applications. Replace when the media level drops below 40% or no less than annually.

| Scaliminator Filter System |                                     |
|----------------------------|-------------------------------------|
| Item #                     | Description                         |
| FSS-2212U                  | 10" Blue 3/4" 8 GPM                 |
| FSS-2212C                  | 10" Clear 3/4" 8 GPM                |
| FSS-2212U                  | 20" Blue 3/4" 10 GPM                |
| FSS-2212C                  | 20" Clear 3/4" 10 GPM               |
| FSS-2216U                  | 20" Blue 1" 12 GPM                  |
| FSS-2216C                  | 20" Clear 1" 12 GPM                 |
| 78-XPG-K                   | Pressure Gauge kit for Scaliminator |



| Replacement Cartridge |               |
|-----------------------|---------------|
| Item #                | Description   |
| FSS-C10               | 10" Cartridge |
| FSS-C20               | 20" Cartridge |

Original Scaliminator cartridges are a superior replacement for most scale reduction systems. Replace approximately every 6-12 months



# Reverse Osmosis Comparison

"WE WILL NOT COMPETE IN THE RACE TO THE BOTTOM."



The



## Name Brand Filter Housings

We use Pentek®, Omnipure® and Atlas Filtri®. Cheap filter housings are the most common cause of catastrophic failures resulting in millions of dollars in water damage every year. Is this really a component you want to go cheap on? The use of name brand manufacturers decreases your liability!

## Filter Housings from the lowest bidder

Most RO assemblers will not name the housings they use in order to be able to switch to a lower priced housing in order to save a few dollars. In our 30 year of working the field, we have seen hundreds of failed housings. This type of catastrophic failure can put a company out of business.



## John Guest, Parker, Mur-Lok

Only the best will do! Cheap fittings or tubing by the lowest bidder from what country? Fittings may seem simple but anyone who has worked the field for a decade will tell you this is a critical component that must be made to the highest standards!

## Generic Fittings and Tubing

No name fittings from multiple low cost manufacturers with little or no quality control. We have seen it all. Missed welds, cheap O-rings, material that is out of specification and much more. The fittings can be as much as 30% of a systems total cost.



## USA Made Filter Cartridges

The best names in the industry including Hydro-Flow, Omnipure, Hydro-Cure and more. The majority of our filter cartridges are made in the USA ensuring the highest quality!

## Low Quality Imported Filter Cartridges

Made by the lowest bidder, do you really trust these companies to use high quality materials and substitute lower cost components whenever possible? This is not worth the risk!



## Critical Components

USA made Auto-Shut-Off Valve by Hydronamic, GA Murdock check valve, Axion flow restrictors. Stainless hardware and other high end components are used in IWP RO systems!

## Cheapest Components

Failed ASV's, noisy check valves, inaccurate flow restrictors, cheap components from the lowest bidder do not make for a high quality RO system.



## The cost of quality vs. the cost of failure

IWP assembles high quality RO systems to meet your demanding needs. We will never be the lowest priced R.O company. Quality components are simply more expensive. Low cost components will eventually cost you far more! Our systems are assembled in the USA!



# Reverse Osmosis Troubleshooting

The ability to troubleshoot a problem with an R.O. system is important! Our Master Water Specialists have decades of experience in residential, commercial and industrial R.O. systems. Below are some common problems and their potential solutions.

**Airy/milky water:** This has been a problem with RO's since their inception. One way to mitigate this is to not use inline post filters in a horizontal configuration as this leaves a compressed air pocket in the top of the post filter that tends to introduce air for an extended length of time after the installation. Carbon can harbor trillions of microscopic air bubbles that can take a while to get out of the system. Just like a soda bottle, when the cap is removed (faucet opened) the water suddenly become depressurized allowing the dissolved gasses in the water to suddenly come out of solution potentially giving the water a cloudy/milky look. Turning the post filter vertically to allow the small air pocket to purge out can help alleviate this. We have never come up with a sure fire way to prevent this problem After installation, advise the customers that this may occur before leaving the installation and explain that it is just compressed air and will usually go away in a few weeks, but may also come back on occasion . If the city gets some air in the lines, this will go right into the RO starting the process over again.

**High TDS:** Possible causes include a bad/torn membrane, worn ASV (Auto Shutoff Valve), post filtration problems, low water use, low feed water pressure, TDS creep.

**Possible Solutions:** Test the membrane performance by removing the membrane permeate water line from the membrane housing and testing the water after allowing the water to run for several minutes. The production and rejection rates should meet specification based on incoming TDS, pressure (at membrane inlet) and temperature. Older membranes will see these numbers degrade over time. If the membrane tests good, the cause could be a torn seal in the ASV. If the ASV is over 5 years old it should be replaced. A torn ASV seal can cause the untreated water to blend with the treated water. Post filters can impart TDS. If the membranes tests good, try running water out of the faucet through the post filter for 15 minutes with the tank turned off. The TDS should drop to the same as the membrane. If the TDS remains high, then you may have a remineralizing filter or a filter that is imparting TDS. If the TDS drops after 15 minutes then it is likely the system is simply being under utilized. Regular flushing of the system should be done. Weekly is usually considered acceptable.

**Vibration:** This is one of the most frustrating problems and most difficult to correct. Vibration can be caused by many factors, none of which are easy to determine. Common causes include air in the system, harmonics, ASV, tank pressure, and improper application. The best fix is to remove the ASV altogether and install a permeate pump. This also adds many other benefits to the RO system. Use caution as permeate pumps tend to have a slight "Click" noise.

**Possible Solutions:** Air in the system can be removed by closing the tank ball valve and tilt the unit so that the permeate side of the membrane is up. Open the faucet for 1 minute, then close for 1 minute. Repeat this 4 times. Open the tank and retest the system. If this does not correct the problem, installing a 900 ml/min. flow restrictor on the inlet to the 50 GPD membrane housing may correct the problem. Other solutions include adjusting the feed water pressure lower (PSI must never exceed 80 PSI per UPC code 608.2) and adjusting the tank pressure to 4 PSI. The most common installation error that causes vibration is the installation of an ASV to a mechanical float without a pressurized storage tank. Add a small storage or accumulator tank to eliminate this issue on water coolers or other devices that use a mechanical float.

**Not Enough Water:** R.O. membranes are a consumable item and require regular replacement or testing. Common causes of low water production are low water pressure, temperature, high tds, undersized unit, inadequate incoming water flow, fouled membrane by either scale, floccing, or biologics, missing drain flow restrictor, bad tank.

**Possible Solutions:** Membranes have easily calculable specifications. Please refer to our membrane page for detailed specifications for temperature and pressure ratings. Residential membranes are commonly rated for 50 gpd at 75 PSI and 77°F. Lower pressure or temperature and high TDS can all greatly reduce a membranes performance. Be sure to have a professional way of measuring water production. A simple graduated cylinder is recommended and available from IWP. Fouled membranes are more difficult to determine and can happen very quickly. Scale issues are typically caused by inadequate brine ratios or hard water. Increasing the water to the waste typically reduces this issue. Floccing fouling commonly occurs when municipal supplies add excessive floccing agents to the water supply. Biological fouling is typically caused by improper or infrequent system maintenance and a lack of system sanitizing. A missing drain flow restrictor is another common problem that occurs when the installer reuses the drain line from the old system and inadvertently disposes of the drain line tubing which typically contains the drain flow restrictor. A worn or missing check valve will typically cause the system to cycle on and off.

**These are just a few common problems that can occur with a R.O. system. Please contact IWP for available training seminars where these issues and many more are discussed in a classroom setting.**





# IQ4 Reverse Osmosis

Sanitary quick change filters, highest quality components and made in the USA! Available with or without a water quality/filter monitor. Includes 3 Gallon Tank!

| Model # | 1st Stage Carbon/<br>Sediment | 2nd Stage 50 GPD<br>Membrane | 3rd Stage Carbon/<br>Sediment | 4th Stage Inline<br>Carbon | Monitor |
|---------|-------------------------------|------------------------------|-------------------------------|----------------------------|---------|
| RK-IQ4  | 39S-S3551A-01                 | 39S-S35715A-01               | 39S-S3551A-01                 | 60-ILK2333-KK              | No      |
| RK-IQ4R | 39S-S3551A-01                 | 39S-S35715A-01               | 39S-S3551A-01                 | 60-ILK2333-KK              | Yes     |

Systems include high quality John Guest install kit and a 3 gallon tank. Add a faucet of your choice separately. Customizable with your logo and stickers!



IQ4 systems include a high quality John Guest installation kit.



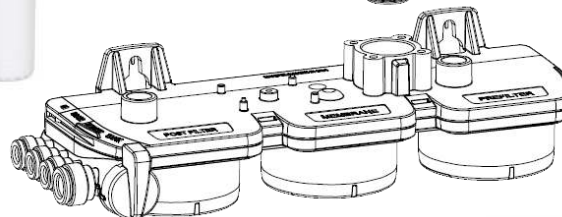
Faucet sold separately.  
58K-i905C shown.



3 gallon tank with John  
Guest 3/8" ball valve  
included.



**39S-01EMPTY**  
Empty Cartridges for  
proper sanitizing of  
the IQ4 RO systems.  
Buy 3.



**68-L14S**  
Leak Detector



**39S-S2K** complete manifold rebuild kit in-  
cludes all parts shown excluding the manifold.



# TFC-400

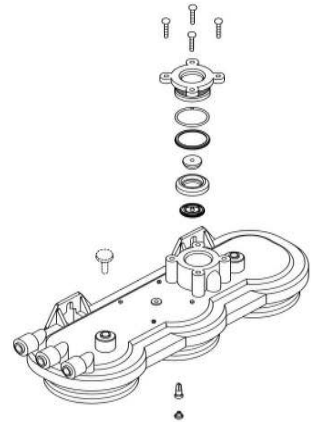
High end budget minded reverse osmosis system includes the RO with filter cartridges only.

| Model #      | 1st Stage<br>Sediment/Carbon | 2nd Stage<br>50 GPD Membrane | 3rd Stage<br>Carbon | 4th Stage<br>Inline Carbon |
|--------------|------------------------------|------------------------------|---------------------|----------------------------|
| RK-TFC400-01 | 39S-S7028                    | 39S-S1229RS                  | 39S-S7025           | 60-ILK2333-KK              |

Add a faucet, tank and install kit of your choice separately. Customizable with your logo and stickers!



**39S-S2K** complete manifold rebuild kit includes all parts shown excluding the manifold.



# TFC-435 Microline

The classis Microline RO system. Includes a tank, faucet and installation kit.

| Model #   | 1st Stage<br>Sediment/Carbon | 2nd Stage<br>50 GPD Membrane | 3rd Stage<br>Carbon | 4th Stage<br>Inline Carbon |
|-----------|------------------------------|------------------------------|---------------------|----------------------------|
| RK-TFC458 | 39S-S7028                    | 39S-S1229RS                  | 39S-S7025           | 60-ILK2333-KK              |



**Optional  
68-L14S  
Leak Detector**



The Microline system includes the faucet, tank and installation kit. Many customers upgrade these parts. Contact IWP for assistance.





# QC Reverse Osmosis

Ideal for most water supplies and large families. IWP "QC" series reverse osmosis system are simple and cost effective. Units include 3/8" delivery lines for maximum flow and performance. Quick change filters make service simple! Most components are made in the USA!

| Model #  | Format | 1st Stage             | 2nd Stage             | 3rd Stage             | 4th Stage             | 5th Stage      | Pump     |
|----------|--------|-----------------------|-----------------------|-----------------------|-----------------------|----------------|----------|
| RQ2150P  | 2x1    | QC 5µ Sediment/Carbon | 50 GPD Membrane       | QC Carbon             | -                     | -              | Permeate |
| RQ3150   | 3x1    | QC 5µ Sediment        | QC Carbon             | 50 GPD "1:1" Membrane | QC Carbon             | -              | -        |
| RQ43150A | 3x1    | QC 5µ Sediment/Carbon | 50 GPD "1:1" Membrane | QC Impact Alkaline    | QC Carbon             | -              | -        |
| RQ2250P  | 2x2    | QC 5µ Sediment        | QC Carbon             | 50 GPD Membrane       | 10" USA Inline        | -              | Permeate |
| RQ3250   | 3x2    | QC 5µ Sediment        | QC Carbon             | QC Carbon             | 50 GPD "1:1" Membrane | 10" USA Inline | -        |
| RQ3150A  | 3x2    | QC 5µ Sediment        | QC Carbon             | 50 GPD "1:1" Membrane | QC Impact Alkaline    | 10" USA Inline | -        |

Most systems are sold less tank and faucet. Choose your desired tank and faucet. 75 and 100 GPD Membranes available. Call for details.



## Compact QC Reverse Osmosis

Our unique filter brackets allow for the most filtration in the least amount

| Model #  | Format | 1st Stage             | 2nd Stage          | 3rd Stage             | 4th Stage             | 5th Stage |
|----------|--------|-----------------------|--------------------|-----------------------|-----------------------|-----------|
| RQ3050   | 3x0    | QC 5µ Sediment/Carbon | 50 GPD QC Membrane | QC Carbon Block       | -                     | -         |
| RQ-4050  | 4x0    | QC 5µ Sediment        | QC Carbon          | 50 GPD QC Membrane    | QC Carbon             | -         |
| RQ-4050A | 4x0    | QC 5µ Sediment/Carbon | 50 GPD QC Membrane | QC Impact Alkaline    | QC Carbon             | -         |
| RQ-4150  | 4x1    | QC 5µ Sediment        | QC Carbon          | QC Carbon             | 50 GPD "1:1" Membrane | QC Carbon |
| RQ-4150A | 4x1    | QC 5µ Sediment        | QC Carbon          | 50 GPD "1:1" Membrane | QC Impact Alkaline    | QC Carbon |

Add a leak detector whenever a system will be installed in a location where water damage can occur.



Most systems include a high quality John Guest angle stop adapter, 3/8" faucet connector, tank ball valve, drain adapter and a color coded tubing kit. Add a tank and faucet of your choice.



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Data herein is provided as a courtesy and is subject to change without notice.



# Traditional Reverse Osmosis

Traditional Reverse Osmosis design. Popular for the ease of modification, customization and the low cost of filter replacement. We assemble all of our traditional RO systems in house using premium fittings and filters. Many more options available!

| Model #   | Format | 1st Stage       | 2nd Stage             | 3rd Stage              | 4th Stage              | 5th Stage      | Pump     |
|-----------|--------|-----------------|-----------------------|------------------------|------------------------|----------------|----------|
| RT2150    | 2x1    | Diamond Flow    | 50 GPD "1:1" Membrane | Carbon                 | -                      | -              | -        |
| RT2150P   | 2x1    | Diamond Flow    | 50 GPD Membrane       | Carbon                 | -                      | -              | Permeate |
| RT2250P   | 2x2    | 5µ Sediment     | Carbon                | 50 GPD Membrane        | Carbon                 | -              | Permeate |
| RT2250    | 2x2    | 5µ Sediment     | Carbon                | 50 GPD Membrane        | Carbon                 | -              | -        |
| RT2250A   | 2x2    | 5µ Diamond Flow | 50 GPD "1:1" Membrane | Impact Alkaline        | Carbon                 | -              | -        |
| RT3150    | 3x1    | 5µ Sediment     | Carbon                | 50 GPD "1:1" Membrane  | Carbon                 | -              | -        |
| RT3150A   | 3x1    | 5µ Diamond Flow | 50 GPD "1:1" Membrane | Impact Alkaline        | Carbon                 | -              | -        |
| RT-31500B | 3x1    | 5µ Sediment     | Carbon                | 500 GPD "1:1" Membrane | -                      | -              | -        |
| RT3250    | 3x2    | 5µ Sediment     | Carbon                | Carbon                 | 50 GPD "1:1" Membrane  | 10" USA Inline | -        |
| RT3150A   | 3x2    | 5µ Sediment     | Carbon                | 50 GPD "1:1" Membrane  | Impact Alkaline        | 10" USA Inline | -        |
| RT3250B   | 3x2    | 5µ Sediment     | Carbon                | Carbon                 | 50 GPD "1:1" Membrane  | 10" USA Inline | Booster  |
| RT32100B  | 3x2    | 5µ Sediment     | Carbon                | Carbon                 | 100 GPD "1:1" Membrane | 10" USA Inline | Booster  |
| RT3250AB  | 3x2    | 5µ Sediment     | Carbon                | 50 GPD "1:1" Membrane  | Impact Alkaline        | 10" USA Inline | Booster  |

Many other sizes, configurations and options available. Call for details.



Custom BLACK systems available!

Most systems include a high quality John Guest angle stop adapter, 3/8" faucet connector, tank ball valve, drain adapter and a color coded tubing kit. Add a tank and faucet of your choice.



John Guest



Booster pump systems use USA Aquatec pumps and are mounted on our unique floor mount bracket. 50-500 GPD options available!

Add a leak detector whenever a system will be installed in a location where water damage can occur.



68-L145



| Permeate Pumps |                        |            |
|----------------|------------------------|------------|
| Item #         | Application            | Connection |
| 75-PP050       | 25-50 GPD w/Clip       | ¼" JG      |
| 75-PP100       | 50-120 GPD w/Clip      | ¼" JG      |
| 75-PPCL        | Clip for Permeate Pump | N/A        |
| 68-ASV9014QC   | 90% ASV for 50 GPD     | 1/4" JG    |



A "Permeate Pump" enhances system performance without electricity by using the kinetic waste water energy to greatly reduce the back pressure from the RO unit's storage tank. This increases the systems efficiency by allowing the tank to fill faster and with more water. The lack of an ASV (recommended) simplifies the systems design and increases the final output pressure. Recommended for any 35-100 GPD RO system with an incoming water pressure of 40 PSI or more. The Permeate Pump can be combined with a booster pump. A 90% ASV should be used in low water use applications.

| Booster Pumps |                                                                            |            |                              |
|---------------|----------------------------------------------------------------------------|------------|------------------------------|
| Item #        | Description/Application                                                    | Connection | Power Supply                 |
| 75-AT6840-01  | Booster Pump (35-50 GPD RO)                                                | ¼" QC      | Add 75-ATTF248 Transformer   |
| 74-AT6840BPK  | Booster Pump Kit with Transformer and Pressure Switch (for 50 GPD, w/ASV)  | ¼" QC      | Included                     |
| 75-AT8851-01  | Booster Pump (Typical for 60-120 GPD RO)                                   | ¾" QC      | Add 75-ATTF24 Transformer    |
| 74-AT8851BPK  | Booster Pump Kit with Transformer and Pressure Switch (for 100 GPD, w/ASV) | ¾" QC      | Included                     |
| 75-AT5853-01  | Booster Pump ≈1.1 GPM (Typical for 200-500 GPD RO)                         | ¾" QC      | Add 75-ATTF24 Transformer    |
| 75-AT5357     | Booster Pump ≈1.4 GPM @ 90 PSI (Typical for 500-1000 GPD RO)               | ¾" QC      | Add 75-ATTF24240 Transformer |

**Booster pumps** are used to boost pressure to the membrane and increase systems performance. Recommended when water pressure is below 40 PSI or below 60 in lower temperature or higher TDS applications or when optimal system performance is desired. Booster pumps are sized to keep a constant 80 psi on the membrane feed.



| Delivery Pumps |                                                                            |              |                    |
|----------------|----------------------------------------------------------------------------|--------------|--------------------|
| Item #         | Description/Application                                                    | Connection   | Power Supply       |
| 75-AT5800VS11  | Delivery Pump, Variable Speed ≈.15-1.1 GPM @60 PSI                         | ¾" QC        | 120V Cord Included |
| 75-AT5502VS33  | Delivery Pump, Variable Speed ≈.25-3.3 GPM @50 PSI (Must Add 2 Connectors) | *(75-AT55F-) | 120V Cord Included |
| 75-AT5852-09   | Delivery Pump ≈.9 GPM @60 PSI                                              | ¾" QC        | 120V Cord Included |
| 75-AT5852-12   | Delivery Pump ≈1.2 GPM @60 PSI                                             | ¾" QC        | 120V Cord Included |
| 75-AT5853-17   | Delivery Pump ≈1.7 GPM @60 PSI                                             | ¾" QC        | 120V Cord Included |
| 75-AT5513-35   | Delivery Pump ≈3.5 GPM @60 PSI                                             | ½" FPT       | 120V Cord Included |
| 75-AT5503-35   | Delivery Pump ≈3.5 GPM @60 PSI No Pressure Switch (Must add 2 Connectors)  | *(75-AT55F-) | 120V Cord Included |
| 75-AT5513-50   | Delivery Pump ≈4.9 GPM @60 PSI                                             | ½" FPT       | 120V Cord Included |

**Delivery Pumps** are used to increase pressure and/or flow to the outlet of the system. Delivery pumps include a built in pressure switch and can be fed from either an atmospheric or pressurized tank. For applications with inconsistent flow rates use a variable speed pump or add an accumulator tank.

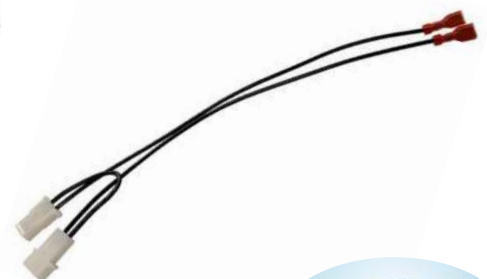
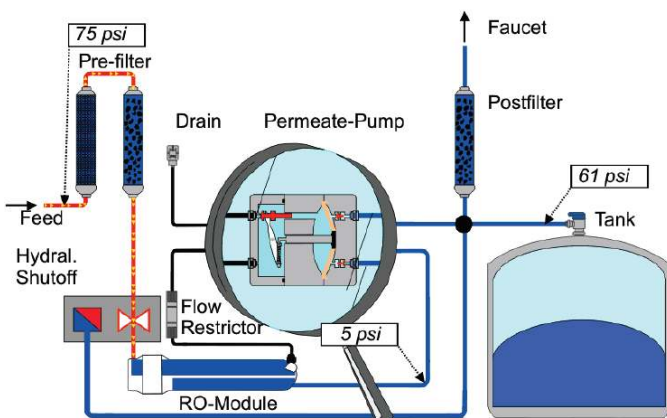
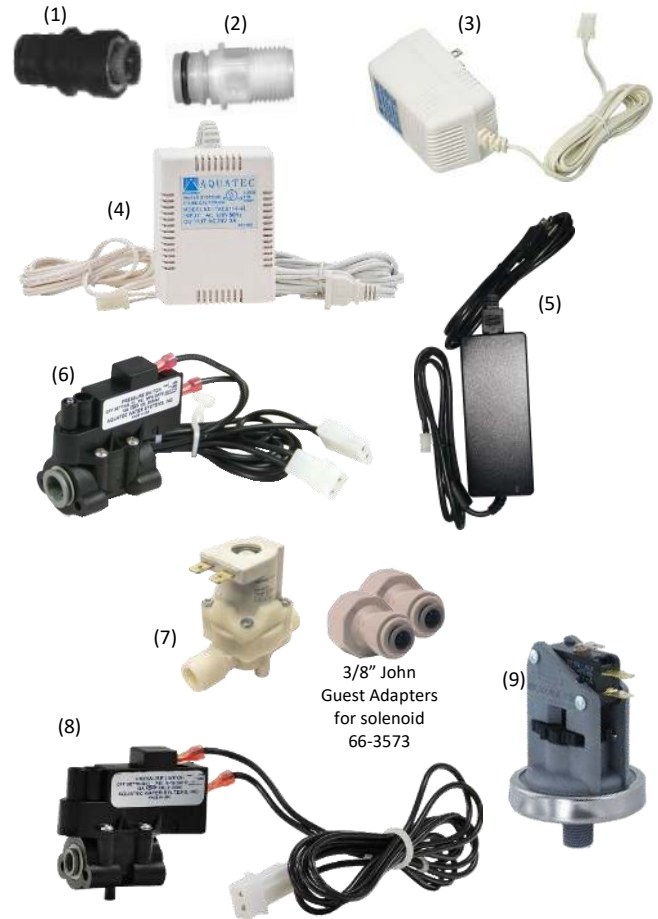
\*Must order connection fittings separately



# Aquatec Accessories



| Item #        | Description/Application                       | Connection |
|---------------|-----------------------------------------------|------------|
| 75-AT55F-38JG | (1) Fitting, 3/8" MPT (2 Required)            | 3/8 QC     |
| 75-AT55F-12M  | (2) Fitting, 1/2" MPT (2 Required)            | 1/2" MPT   |
| 75-AT55F-12JG | Fitting, 1/2" QC (2 Required)                 | 1/2" QC    |
| 75-ATTF248    | (3) Transformer, .8 Amp 120/24VAC             | Mate-N-Lok |
| 75-ATTF248230 | Transformer, .8 Amp 230V 50 Hz/24VAC          | Mate-N-Lok |
| 75-ATTF24     | (4) Transformer, 2 Amp 120/24VAC              | Mate-N-Lok |
| 75-ATTF24230  | Transformer, 2 Amp 230 50Hz/24VAC             | Mate-N-Lok |
| 75-ATTF24240  | (5) Transformer 6.7 Amp 100-240/24VAC         | Mate-N-Lok |
| 75-ATPS340    | (6) Tank Pressure Switch 20-40 PSI with Wire  | 3/8" QC    |
| 75-ATPS260    | Tank Pressure Switch 40-60 PSI with Wire      | 3/8" QC    |
| 75-ATPS380    | Tank Pressure Switch 60-80 PSI with Wire      | 3/8" QC    |
| 75-AT26187    | (7) Solenoid 3 GPM 24VAC add (2)66-3573?      | 3/8" MBSP  |
| 75-ATPS220    | (8) Low Pressure Switch 20 PSI with Wire      | 1/4" QC    |
| 75-ATLPS340G  | (9) Low Pressure Switch 5 PSI with Wire       | 1/8" MPT   |
| 75-AT8R       | (10) Auto Flush Timer 800ml/min (100-500 GPD) | 1/4" QC    |
| 75-AT25181    | (11) Strainer, 50 Mesh For QC Pumps           | Aquatec QC |
| 75-AT25183    | (12) Strainer, 50 Mesh SS to 2 GPM 3/8" FPT   | 3/8" FPT   |
| 75-AT25185    | (13) Strainer, 50 Mesh SS to 5 GPM 1/2" FPT   | 1/2" FPT   |
| 75-AT820Q     | (14) Accumulator Tank ~9"x5" 28 Ounces        | 3/8" QC    |
| 75-AT2XW7     | Double Wiring Harness                         | Mate-N-Lok |
| 75-AT2XW      | Double Wiring Harness 11" for Solenoid        | Mate-N-Lok |
| 75-AT2XW8     | Double Wiring Harness 10" for Switch/Pump/LPS | Mate-N-Lok |





# Wall Mount 500 Reverse Osmosis

The “ELF” 500 GPD wall mount reverse osmosis system is ideal for small commercial applications requiring a consistent supply of high quality water in a simple and compact wall mount package. Featuring genuine Omnipure ELF series quick change filter cartridges, USA made “XL” membrane, original John Guest fittings, Aquatec permeate pump, liquid filled pressure gauges, dual TDS meter, bypass valve, and bulkhead fitting for the cleanest installation. Only the best components are used to manufacture the IWP RO systems! For use with any of our pressurized RO storage tanks. Internal blender can be opened to raise the tds for use with coffee, tea and some combi oven applications.

Part # CR551A



(~20" W x 8" D x 18" H)



## Replacement Filters

| Item #        | Description         |
|---------------|---------------------|
| 60P-EF5SD     | ELF Sediment Filter |
| 60P-EF5CB     | ELF Carbon Block    |
| 60-MM312-500A | 500 GPD Membrane    |

## Steel Pressure Tanks

| Item #    | Total Capacity | ≈Usable Capacity | Diameter ≈ | Height ≈ | Connector Size | Color  |
|-----------|----------------|------------------|------------|----------|----------------|--------|
| 61P-10    | 10 gal.        | 6 gal.           | 13"        | 23"      | 1/4" MNPT      | White  |
| 61P-14W   | 14 gal.        | 8.4 gal.         | 16"        | 29"      | 1/4" MNPT      | White  |
| 61P-20W12 | 20 gal.        | 12 gal.          | 16"        | 35"      | 3/4" MNPT      | White  |
| 61P-40    | 40 gal.        | 24 gal.          | 21"        | 37"      | 1" MNPT        | Almond |



| Item #    | Valve Kits for Tanks                 |
|-----------|--------------------------------------|
| 66-8235   | 1/4" FNPT x 3/8 John Guest           |
| Item #    | Valve Kits for 3/4" Tanks            |
| 61-TKV128 | 3/4" FNPT x 1/2" and 3/8" John Guest |
| Item #    | Valve Kits for 1-1/4" Tanks          |
| 61-TKV208 | 1-1/4" x 1/2" and 3/8" John Guest    |



# Custom Light Commercial Reverse Osmosis

IWP is here to help you create unique custom light commercial RO systems. Call our technical support staff for assistance in designing a solution that meets your specific needs!





# LC Reverse Osmosis

Simple and compact, the “Light Commercial” RO systems produce up to 1000 GPD and can be custom built to meet your specific needs. Designed for floor, wall or tank mounting!



## Standard Features

- ◇ 2.5" x 20" Pre Filters
- ◇ Atlas Filtri Housings
- ◇ High Efficiency Membrane
- ◇ Powder Coated Frame
- ◇ Oil Filled Pressure Gauges
- ◇ Dual TDS Meter

## Options

- ◇ Blending Valve
- ◇ Aquatec Booster Pump
- ◇ Aquatec Permeate Pump
- ◇ 500 or 1000 GPD
- ◇ Luminor UV Upgrade
- ◇ Custom Labeling
- ◇ Integrated 20" post filtration
- ◇ Digital Totalizing Flow Meter

≈ Dimensions 31H x 13"D x 19"W  
Shown with optional totalizing flow meter

| LC RO Systems | ≈ Gallons Per Day | Filter Sumps | Pump Type | Shut off               |
|---------------|-------------------|--------------|-----------|------------------------|
| IWP-LC500B-C  | 500               | Clear/Blue   | Booster   | 40 PSI Pressure Switch |
| IWP-LC500B-B  | 500               | All Blue     | Booster   | 40 PSI Pressure Switch |
| IWP-LC1000B-C | 1000              | Clear/Blue   | Booster   | 40 PSI Pressure Switch |
| IWP-LC1000B-B | 1000              | All Blue     | Booster   | 40 PSI Pressure Switch |
| IWP-LC500P-C  | 500               | Clear/Blue   | Permeate  | Permeate pump          |
| IWP-LC500P-B  | 500               | All Blue     | Permeate  | Permeate pump          |
| IWP-LC500A-C  | 500               | Clear/Blue   | None      | Auto Shut Off Valve    |
| IWP-LC500A-B  | 500               | All Blue     | None      | Auto Shut Off Valve    |





# LC Reverse Osmosis

| Options    | Description           | Notes                                  |
|------------|-----------------------|----------------------------------------|
| IWP-LCXBV  | Blending Valve Adder  | Only Available on Booster Pump Systems |
| IWP-LCXUV  | UV Luminor 80-LB4-031 | Usually Mounts inside the Frame        |
| IWP-LCXFM  | Totalizing Flow Meter | Panel Mounted, Battery Operated        |
| IWP-LCXPF  | 2.5"x20" Post Filter  | Add a Post Filter of Your Choice       |
| IWP-LCXWMB | Wall Mount Bracket    | "Z" Rail Aluminum bracket              |

| Atmospheric & Delivery |                                                            |
|------------------------|------------------------------------------------------------|
| IWP-A100-DT2           | 100 Gallon Atmospheric Tank w/ DT2                         |
| IWP-A100-DT3           | 100 Gallon Atmospheric Tank w/ DT3                         |
| IWP-A300-DT2           | 300 Gallon Atmospheric Tank w/ DT2                         |
| IWP-A300-DT3           | 300 Gallon Atmospheric Tank w/ DT3                         |
| IWP-LCMFK              | Mechanical Float Kit w/Accumulator 1/2" Bulkhead for Above |



| Pressure Tanks |                                                      |
|----------------|------------------------------------------------------|
| 61P-10         | RO Tank White 1/4 MPT 9 Gallon/~6 Actual, ~13x23"    |
| 61P-14U        | RO Tank Blue 1/4 MPT 15 Gallon/~9.5 Actual, ~16x29"  |
| 61P-20U12      | RO Tank Blue 3/4 MPT 21 Gallon/~12.6 Actual, ~16x35" |
| 61P-40         | RO Tank Almond 1" MPT 40 Gallon/~24 Actual, ~21x37"  |
| 61F-TS44       | RO Tank Gray 1.25" FPT 40 Gallon/~30 Actual, ~21x31" |
| 61F-TS80       | RO Tank Gray 1.25" FPT 85 Gallon/~57 Actual, ~26x45" |
| IWP-LCXTM      | Tank Mounting Kit For 61F-TS44/80 Tanks Only         |

| Replacement Parts | Description                       | Notes                |
|-------------------|-----------------------------------|----------------------|
| 60-MM500D         | 1:1 500 GPD Membrane              | High Efficiency      |
| 60-MM1000U        | 1:1 1000 GPD Membrane             | High Efficiency      |
| 60-SD2205         | 2.5"x20" 5 Micron Sediment Filter | Pre-Filter           |
| 60H-CB22          | 2.5"x20" Carbon Block             | Pre or Post Filters  |
| 60i-AC22          | 2.5"x20" Alkaline Filter          | Optional Post Filter |
| 85SC-2520-505     | 2.5"x20" Calcite Filter           | Optional Post Filter |
| 85SC-2520-130     | 2.5"x20" DI Filter                | Optional Post Filter |
| 80-RL-290         | Replacement UV Lamp               | Replace Annually     |
| 80-RQ-290         | Replacement Quartz Sleeve         | Replace as Needed    |



# WP - 12k



The WP-12K light commercial RO from Impact is a compact high production RO system with many advanced features. Designed for line pressure or add the optional booster pump. Wall mount hardware included.

## Features

- ☀ 65 PSI Reverse Osmosis Membrane(s)
- ☀ Powder Coated Steel Frame
- ☀ Liquid Filled Pressure Gauges
- ☀ Fixed Concentrate
- ☀ Computer Controlled
- ☀ Low Pressure Protection
- ☀ Stainless Solenoid Valve
- ☀ Digital Product Water Flow Meter/Totalizer
- ☀ Dual TDS Monitoring
- ☀ 120v/60hz Standard, 220V Optional
- ☀ High Capacity Pre-Filtration
- ☀ Fiberglass Membrane Housing
- ☀ Float Kit for Atmospheric Tank
- ☀ Adjustable Pressure Switch for Pressure Tanks
- ☀ Wall/Floor Mount kit included
- ☀ Future Proof: Upgrade from 1000 GPD to 2000 GPD
- ☀ Future Proof: Add Booster Pump Later if Needed

Float included for atmospheric tank systems



## Options

- ☀ Multi-Stage Booster Pump
- ☀ Blending Valve
- ☀ Permeate flush kit
- ☀ Antiscalant Injection System
- ☀ Computer Control
- ☀ Tank Mount Option (Shown)

No more rotameter cleaning! Our digital flow meter also acts as a totalizer.



**Add the Tank Mount Option!**  
**Pt# IWP-12KTM**  
**Includes 5/8", 1/2" and 3/8"**  
**Outlet Connections**

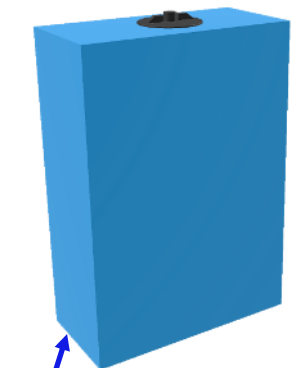


## 8 models to choose from to meet your application

| Model #    | ≈Gallons Per Day | 4" x 21" Membranes | Booster Pump | Water Storage Type | Pressure Gauges |
|------------|------------------|--------------------|--------------|--------------------|-----------------|
| IWP-12K1A  | 1000             | 1                  | No           | Atmospheric        | 2               |
| IWP-12K2A  | 2000             | 2                  | No           | Atmospheric        | 2               |
| IWP-12K1P  | 1000             | 1                  | No           | Pressure Tank      | 3               |
| IWP-12K2P  | 2000             | 2                  | No           | Pressure Tank      | 3               |
| IWP-12K1AB | 1000             | 1                  | Yes          | Atmospheric        | 3               |
| IWP-12K2AB | 2000             | 2                  | Yes          | Atmospheric        | 3               |
| IWP-12K1PB | 1000             | 1                  | Yes          | Pressure Tank      | 4               |
| IWP-12K2PB | 2000             | 2                  | Yes          | Pressure Tank      | 4               |

### IWP-24K Options and Accessories

| Part # | Description                                                                               |
|--------|-------------------------------------------------------------------------------------------|
| 1      | IWP-24KX02X 115V Anti Scalant Injection System (Includes 1 Gallon 18-AS102X)              |
| 2      | 18-AS102X 1 Gallon 2X Concentrate Antiscalant, Treats approximately 400,000 Gal.          |
| 3      | IWP-24KXBV Blending Valve Installed                                                       |
| 4      | IWP-24KXPF Permeate Flush Kit Installed                                                   |
| 5      | 61A-R095 95 Gallon Rectangular Water Tank 47"x16"x33" (requires support)                  |
|        | 61A-R095C 95 Gallon Tank Support                                                          |
|        | 61A-01RU 100 Gallon Round Atmospheric Water Tank 23"x64"                                  |
| 6      | 61A-03RU 300 Gallon Round Atmospheric Water Tank 35"x85"                                  |
| 7      | 61P-40 40 Gallon RO Pressure Tank (Many more Sizes Available)                             |
| 8      | 75-D10 (5) E.SYBOX Mini 3: ≈10 GPM @ 60 PSI, ≈22 GPM at 40 PSI, 22 GPM Max 115V           |
| 9      | 75-D20 (6) ESYBOX: ≈18 GPM @ 60 PSI, ≈15 GPM at 40 PSI, 31 GPM Max 220V                   |
|        | 75-DT2 DTRON 2: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max 115V     |
| 10     | 75-DT3 (7) DTRON 3: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max 115V |
|        | 75-DVS7 ezybox Diver: ≈15GPM @ 75PSI, ≈20 GPM @ 55PSI, 31.7 GPM Max 220V                  |







# WP - 24k



The WP-24K light commercial RO from Impact is a compact high production RO system with many advanced features. Designed for line pressure or add the optional booster pump. Wall mount hardware included.

No more rotameter cleaning! Our digital flow meter also acts as a totalizer.



Float included for atmospheric tank systems



≈Dimensions  
13" x 13" x 52"  
24" x 13" x 52" w/pump



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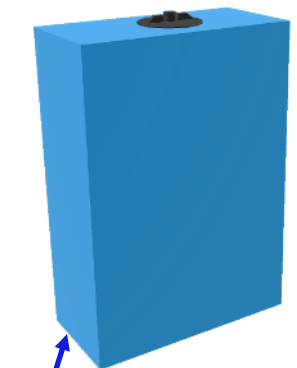
Data herein is provided as a courtesy and is subject to change without notice.

## 8 models to choose from to meet your application

| Model #    | ≈Gallons Per Day | 4" x 40" Membranes | Booster Pump | Water Storage Type | Pressure Gauges |
|------------|------------------|--------------------|--------------|--------------------|-----------------|
| IWP-24K1A  | 2000             | 1                  | No           | Atmospheric        | 2               |
| IWP-24K2A  | 4000             | 2                  | No           | Atmospheric        | 2               |
| IWP-24K1P  | 2000             | 1                  | No           | Pressure Tank      | 3               |
| IWP-24K2P  | 4000             | 2                  | No           | Pressure Tank      | 3               |
| IWP-24K1AB | 2000             | 1                  | Yes          | Atmospheric        | 3               |
| IWP-24K2AB | 4000             | 2                  | Yes          | Atmospheric        | 3               |
| IWP-24K1PB | 2000             | 1                  | Yes          | Pressure Tank      | 4               |
| IWP-24K2PB | 4000             | 2                  | Yes          | Pressure Tank      | 4               |

### IWP-24K Options and Accessories

| Part # | Description                                                                               |
|--------|-------------------------------------------------------------------------------------------|
| 1      | IWP-24KX02X 115V Anti Scalant Injection System (Includes 1 Gallon 18-AS102X)              |
| 2      | 18-AS102X 1 Gallon 2X Concentrate Antiscalant, Treats approximately 400,000 Gal.          |
| 3      | IWP-24KXBV Blending Valve Installed                                                       |
| 4      | IWP-24KXPF Permeate Flush Kit Installed                                                   |
| 5      | 61A-R095 95 Gallon Rectangular Water Tank 47"x16"x33" (requires support)                  |
|        | 61A-RO95C 95 Gallon Tank Support                                                          |
|        | 61A-01RU 100 Gallon Round Atmospheric Water Tank 23"x64"                                  |
| 6      | 61A-03RU 300 Gallon Round Atmospheric Water Tank 35"x85"                                  |
| 7      | 61P-40 40 Gallon RO Pressure Tank (Many more Sizes Available)                             |
| 8      | 75-D10 (5) E.SYBOX Mini 3: ≈10 GPM @ 60 PSI, ≈22 GPM at 40 PSI, 22 GPM Max 115V           |
| 9      | 75-D20 (6) ESYBOX: ≈18 GPM @ 60 PSI, ≈15 GPM at 40 PSI, 31 GPM Max 220V                   |
|        | 75-DT2 DTRON 2: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max 115V     |
| 10     | 75-DT3 (7) DTRON 3: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max 115V |
|        | 75-DVS7 ezybox Diver: ≈15GPM @ 75PSI, ≈20 GPM @ 55PSI, 31.7 GPM Max 220V                  |



# "N1" Series 2,000-16,000 GPD

N1 – Series Reverse Osmosis Systems are designed for overall superior performance, high recovery rates, minimal energy consumption and offer great savings with low maintenance and operation costs. These systems feature high quality components including a programmable computer controller with many built in standard features, a stainless steel booster pump for high performance and corrosion resistance, extra low energy membranes and fiberglass membrane housings for enhanced performance and durability. Sizes range from 2,000-16,000 GPD.

## Standard Features

- ◆ Computer controller UL/CUL 508a
- ◆ 1/2" chemical injection port
- ◆ Back lit LCD display with pre-treatment lockout
- ◆ High pressure switch or float controlled
- ◆ Low pressure inlet monitoring and alarm
- ◆ Outlet temperature and TDS monitoring, optional inlet TDS.
- ◆ Permeate flow meter
- ◆ Concentrate and recycle flow meters with integrated stainless needle valve
- ◆ Pre-filter 0-100 psi panel mounted glycerin filled gauges
- ◆ Pump discharge 0-300 psi panel mounted glycerin filled gauges
- ◆ 5 micron sediment pre filter
- ◆ HE4 extra low energy 100 PSI membranes standard
- ◆ Fiberglass membrane housings
- ◆ 20" Big Grey cartridge housings
- ◆ Multi-stage stainless steel booster pump
- ◆ Compatible with atmospheric tanks (with electric or mechanical float switch) or pressure tanks.
- ◆ Designed for simple servicing
- ◆ 220V SJO cord included

## Specifications

- ◆ Min/Max Feed Temperature: 40°F-85°F
- ◆ Min/Max Feed Pressure: 45-85 PSI
- ◆ Maximum SDI: <3
- ◆ Maximum TDS: 2000 ppm
- ◆ Maximum Hardness: 0 GPG
- ◆ Min/Max Operating pH: 2-11
- ◆ Min/Max Cleaning pH: 1-13
- ◆ Maximum Turbidity NTU: 1

Add kit 84-N1X-AS04 or 84-N1X-AS25 for effective membrane protection and extended life. Kits include antiscalant powder and a low dose chemical injection pump and tank. An effective anti-scalant specially formulated for feed water with the highest levels of metal oxides, silica and scale forming minerals. It inhibits polymerization of reactive silica and disperses colloidal (non reactive) silica. It is effective over a wide range of concentrations and does not flocculate dissolved polymers such as residual coagulants, iron or aluminum rich silica.



Permeate flow rates and salt rejection based on the following test conditions: 550 ppm, filtered and dechlorinated municipal tap water, 77° F / 25°C, 15% recovery, 7.0 pH and the specified operating pressure for membrane element type. Data taken after 60 minutes of operation.

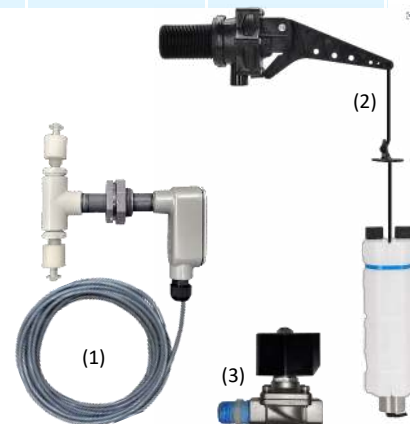




Systems come standard with Extra Low Energy 100 PSI membranes which provide an excellent balance of high TDS rejection, low energy use and long membrane life. Available with Ultra Low Energy 80 PSI, NF3 and NF4 membranes. Ultra Low Energy membranes are ideal for low temperature water and can provide 20% more flow.

| Model                     | 84-N102         | 84-N104         | 84-N106         | 84-N108         | 84-N112         | 84-N116         |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| GPD Production Rate       | 2,000           | 4,000           | 6,000           | 8,000           | 12,000          | 16,000          |
| Standard Recovery Rate    | 32%             | 48%             | 58%             | 65%             | 58%             | 65%             |
| ≈Permeate Flow Rate (GPM) | 1.4             | 2.75            | 4.2             | 5.6             | 8.3             | 11.1            |
| Recycle Flow Rate         | Up to 2 GPM     | Up to 5 GPM     | Up to 5 GPM     | Up to 5 GPM     | Up to 5 GPM     | Up to 5 GPM     |
| 4" x 40" Membranes        | 1               | 2               | 3               | 4               | 6               | 8               |
| Pump HP                   | 1.5             | 1.5             | 2               | 2               | 2               | 2               |
| ≈Amp Draw                 | 8.5             | 8.5             | 11              | 11              | 11              | 11              |
| ≈Dimensions (D x W x H)   | 16" x 25" x 55" | 16" x 25" x 55" | 24" x 32" x 55" | 24" x 32" x 55" | 24" x 32" x 55" | 24" x 32" x 55" |
| ≈Shipping Weight          | 120 Lbs.        | 130 Lbs.        | 180 Lbs.        | 210 Lbs.        | 240 Lbs.        | 270 Lbs.        |

| Options & Accessories |                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------|
| Part #                | Description                                                                           |
| 84-N1X-AS04           | Antiscalant pump, tank and 4 pounds antiscalant powder (Treats ≈520,000 Gal)          |
| 84-N1X-AS25           | Antiscalant pump, tank and 25 pounds antiscalant powder (Treats ≈3,333,200 Gal)       |
| 18-ASP04              | 4 pounds antiscalant powder (Treats ≈520,000 Gal) Typical for 2000-6000 GPD RO's      |
| 18-AS1110X            | 25 pounds antiscalant powder (Treats ≈3,333,200 Gal) Typical for 8000-16,000 GPD RO's |
| 83F-FK                | (1) Dual level Float Kit (Not for Tanks with Ozone)                                   |
| 83F-FK3               | (1) Dual level Float Kit (Ozone Compatible Floats)                                    |
| 86-1211               | (2) Dual Level Float Mechanical Float (For Remote Located Tanks, Needs Accumulator)   |
| 84-N1X-IT             | Add an Inlet TDS Sensor to the N1                                                     |
| 84-N1X-BV             | Blending Valve Option                                                                 |
| 84-N1X-PF             | (3) Permeate Flush Kit Installed                                                      |
| 61A-01RU              | 100 Gallon Blue Atmospheric Tank                                                      |
| 61A-03RU              | (4) 300 Gallon Blue Atmospheric Tank                                                  |
| 75-D10                | (5) E.SYBOX Mini 3: ≈10 GPM @ 60 PSI, ≈22 GPM at 40 PSI, 22 GPM Max 115V              |
| 75-D20                | (6) ESYBOX: ≈18 GPM @ 60 PSI, ≈15 GPM at 40 PSI, 31 GPM Max 220V                      |
| 75-DT2                | DTRON 2: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max 115V        |
| 75-DT3                | (7) DTRON 3: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max 115 V   |



# "R1" Series 1,800 GPD-21,600 GPD

R1 – Series Reverse Osmosis Systems feature a new, innovative design. These systems feature only the highest quality components, including a programmable computer controller with many built-in standard features, a stainless steel booster pump for high performance and corrosion resistance, ultra low energy membranes and fiberglass membrane housings for enhanced performance and durability. Designed for capacities ranging from 1,800-21,600 gallons per day. High recovery rates, minimal energy consumption and customizable. Ideal for use with "EDI" Electrodeionization.



## Standard Features

- ◆ S - 150 Computer controller
- ◆ Chemical Injection Port
- ◆ LCD backlit Display w/Pre-Treatment Lockout
- ◆ Tank Level Input adapts to any standard float switch
- ◆ Low Pressure Monitoring and Alarm
- ◆ TDS Monitoring
- ◆ Feed Flush
- ◆ Hour Meter
- ◆ Permeate and Concentrate Flow Meters
- ◆ Concentrate Recycle with Flow Meter/Needle Valve
- ◆ Permeate Sample Valves
- ◆ Panel Mounted Glycerin Filled Gauges
- ◆ 5 - Micron Sediment Pre Filter
- ◆ HF5 Ultra Low Energy Membranes
- ◆ FRP Membrane Housings
- ◆ Multi-Stage SS Booster Pump
- ◆ Composite Feed Solenoid Valve
- ◆ 220V, 60Hz 1 PH
- ◆ Systems up to 5,400 GPD are 26"x26"x60"
- ◆ Systems from 7,200-10,800 GPD are 32"x26"x60"
- ◆ Systems from 14,400-21,600 GPD are 32"x50"x60"
- ◆ Recycle Flow Rates up to 5 GPM

## Feed Water Requirements

- ◆ Min/Max Feed Temperature: 40°F/85°F
- ◆ Min/Max Feed Pressure: 45/85 psi
- ◆ Maximum SDI: <3
- ◆ Maximum Feed Chlorine: 0 ppm
- ◆ Maximum Hardness: 0 GPG
- ◆ Min/Max operating pH: 2-11
- ◆ Min/Max pH Cleaning: 0-13
- ◆ Maximum Turbidity (NTU): 1

Test Parameters: 550 TDS Filtered (5 – Micron), Dechlorinated, Municipal Feedwater, 65 psi / 4.50 bar Feed Pressure, 80 psi / 5.5 bar Operating Pressure, 77°F / 25°C, Recovery as

| Model                      | 84-R01 | 84-R02 | 84-R03 | 84-R04 | 84-R05 | 84-R06 | 84-R08 | 84R-R10 | 84R-R12 |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| ≈Standard Recovery         | 29%    | 45%    | 56%    | 63%    | 68%    | 56%    | 63%    | 68%     | 71%     |
| ≈Permeate Flow Rate GPD    | 1,800  | 3,600  | 5,400  | 7,200  | 9,000  | 10,800 | 14,400 | 18,000  | 21,600  |
| ≈Permeate Flow Rate GPD    | 1.25   | 2.5    | 3.75   | 5      | 6.25   | 7.5    | 10     | 12.5    | 15      |
| Min. Concentrate Flow Rate | 3      | 3      | 3      | 3      | 3      | 6      | 6      | 6       | 6       |
| 4"x40" Membranes           | 1      | 2      | 3      | 4      | 5      | 6      | 8      | 10      | 12      |
| Pump HP                    | 1.5    | 1.5    | 1.5    | 1.5    | 3      | 3      | 3      | 3       | 3       |
| ≈Amp Draw                  | 8.8    | 8.8    | 8.8    | 8.8    | 16     | 16     | 16     | 16      | 16      |
| ≈Weight Lbs.               | 250    | 290    | 330    | 370    | 430    | 470    | 510    | 550     | 590     |



# "EDI" Series

**EDI – Series Electrodeionization Systems** are a superior option to conventional mixed-bed deionization. EDI does not require regeneration and there are no chemicals used for operation. Ultrapure water is processed by taking reverse osmosis permeate water and feeding it into the EDI system which uses electricity to continuously drive ions through deionization resins and ion selective membranes producing a small concentrate stream. Four sizes available, ideal for "Ultrapure" applications. Designed to work in conjunction with the R1 Series RO.

## Standard Features & Benefits

- ◆ Simple Design with Minimal Instrumentation
- ◆ 2 MΩ DI Sensor with Red/Green Indicator Lights
- ◆ Compact Skid Design
- ◆ Operates Independently from the RO system
- ◆ Internal Flow Orifices
- ◆ Includes 5 Micron Pre-Filter
- ◆ No Operator Flow Settings; Flow Control is internal
- ◆ Reliable, Uninterrupted 24/7 Operation
- ◆ Efficient Design, Low Energy Consumption
- ◆ Greatly Reduces Disruptive Customer Site Visits
- ◆ Ideal for Remote Locations
- ◆ Chemical Free, Environmentally Friendly
- ◆ No More Swapping Tanks and Constantly Monitoring Inventory
- ◆ Typical 90% Recovery
- ◆ 220V input
- ◆ Dimensions: 26" x 26" x 60"
- ◆ 3/4" Feed and Product
- ◆ On/Off Switch

## Feed Water Requirement

- ◆ Operating Pressure 40-70 PSI
- ◆ Feed Conductivity 1 Optimum FCE <9μS/cm Max FCE 33μS/cm
- ◆ Total CO<sub>2</sub> + HCO<sub>3</sub> < 5 mgn CO<sub>2</sub> + HCO<sub>3</sub> (Optimum < 2 mg/l CO<sub>2</sub> + HCO<sub>3</sub>)
- ◆ Hardness < 1.0 ppm @ 90% recovery (ask about higher hardness)
- ◆ Organics < 0.5 ppm TOC
- ◆ Metals < 10 ppb
- ◆ Feed Temp Optimum: 15° C – 30° C Range: (5° C – 35° C)
- ◆ Feed pH Optimum: 7.0 – 7.5 Range: 5.0 – 9.5
- ◆ Feed Chlorine ND
- ◆ Silica, SiO<sub>2</sub> < 0.5 ppm

**Note:** EDI Systems must have a reverse osmosis permeate feed at 30 – 40 psi and a flow rate that is 10% greater than the rated product flow of the EDI.



| Model                    | 84-EDI1         | 84-EDI3         | 84-EDI5         | 84-EDI7         |
|--------------------------|-----------------|-----------------|-----------------|-----------------|
| Recommended with         | 84-R11          | 84-R13          | 84R-R14         | 84-R6           |
| ≈Capacity (GPM)          | 1               | 3               | 5               | 7               |
| Operating Pressure (PSI) | 40-75           | 2.78 GPM        | 5.56 GPM        | 8.34 GPM        |
| ≈Concentrate Flow Rate   | .1              | .3              | .5              | .7              |
| ≈Power Usage/Maximum     | 200W/800W       | 300w/1200W      | 400W1600W       | 600W/1600W      |
| 4"x40" Membranes         | 1               | 2               | 4               | 6               |
| Pump HP                  | 1               | 1               | 2               | 2               |
| ≈Amp Draw                | 8               | 8               | 11              | 11              |
| ≈Dimensions (L x W x H)  | 15" x 22" x 56" | 15" x 22" x 56" | 23" x 28" x 56" | 23" x 28" x 56" |
| ≈Weight (lbs)            | 125             | 137             | 145             | 161             |

**Our EDI technology does not require a concentrate recirculation or brine injection system. Reduced maintenance and scaling with the patented Excellion membrane!**



# "M1" Series 12,000 to 36,000 GPD

**AXEON**  
WATER TECHNOLOGIES

## Features

- ◆ Stainless Concentrate Globe Valve
- ◆ Bag Pre-Filter
- ◆ HF-5 Ultra Low Energy Membranes
- ◆ Multi-Stage Booster Pump
- ◆ Low Pressure Switch
- ◆ CIP Ports
- ◆ FRP Membrane Housings
- ◆ Powder Coated Aluminum Frame
- ◆ Crated for Shipping
- ◆ Glycerin Filled Pressure Gauges

## Features M1-4240, M1-6240, M1-8240

- ◆ S-150 Computer Controller
- ◆ Pre-Treatment Lockout
- ◆ Tank Level Input
- ◆ Low Pressure Alarm
- ◆ Hour Meter
- ◆ Feed Flush

## Additional Features M1-102400, M1-12240

- ◆ S-200 Computer Controller
- ◆ Digital Flow Meters x 3
- ◆ Rejection Percentage
- ◆ Recovery Percentage

## Options and Upgrades

- ◆ Xeon NF3—Nanofiltration
- ◆ Axeon NF4 Nanofiltration
- ◆ ORP Meter
- ◆ pH Meter
- ◆ Dual TDS Monitor
- ◆ Chemical Pump Outlet
- ◆ Blending Valve
- ◆ High Pressure Tank Switch
- ◆ Caster Wheels
- ◆ Permeate Divert



# "M1" Series Specifications

| Product Specifications                         |                                                   |                                                   |                                                   |                                                     |                                                     |
|------------------------------------------------|---------------------------------------------------|---------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Models                                         | M1 – 4240                                         | M1 – 6240                                         | M1 – 8240                                         | M1 – 10240                                          | M1 – 12240                                          |
| <b>Design</b>                                  |                                                   |                                                   |                                                   |                                                     |                                                     |
| Configuration                                  | Single Pass                                       | Single Pass                                       | Single Pass                                       | Single Pass                                         | Single Pass                                         |
| Feedwater Source†                              | TDS <2,000 ppm                                    | TDS <2,000 ppm                                    | TDS <2,000 ppm                                    | TDS <2,000 ppm                                      | TDS <2,000 ppm                                      |
| Standard Recovery Rate %                       | 50 – 75                                           | 50 – 75                                           | 50 – 75                                           | 50 – 75                                             | 60 – 75                                             |
| <b>Rejection and Flow Rates†††</b>             |                                                   |                                                   |                                                   |                                                     |                                                     |
| Nominal Salt Rejection %                       | 98.5                                              | 98.5                                              | 98.5                                              | 98.5                                                | 98.5                                                |
| Permeate Flow (gpm / lpm)                      | 8.30 / 31.42                                      | 12.50 / 47.32                                     | 16.70 / 63.22                                     | 20.80 / 78.74                                       | 25.00 / 94.63                                       |
| Minimum Feed Flow (gpm / lpm)                  | 14.30 / 54.00                                     | 18.50 / 70.00                                     | 22.70 / 85.93                                     | 26.80 / 101.45                                      | 31.00 / 117.35                                      |
| Maximum Feed Flow (gpm / lpm)                  | 28.00 / 106.00                                    | 28.00 / 106.00                                    | 42.00 / 159.00                                    | 42.00 / 159.00                                      | 42.00 / 159.00                                      |
| Minimum Concentrate Flow (gpm / lpm)           | 6.00 / 22.70                                      | 6.00 / 22.70                                      | 6.00 / 22.70                                      | 6.00 / 22.70                                        | 6.00 / 22.70                                        |
| <b>Connections</b>                             |                                                   |                                                   |                                                   |                                                     |                                                     |
| Feed (in)                                      | 1.5 FNPT                                          | 1.5 FNPT                                          | 1.5 FNPT                                          | 1.5 FNPT                                            | 1.5 FNPT                                            |
| Permeate (in)                                  | 1 FNPT                                            | 1 FNPT                                            | 1 FNPT                                            | 1.5 FNPT                                            | 1.5 FNPT                                            |
| Concentrate (in)                               | 1 FNPT                                            | 1 FNPT                                            | 1 FNPT                                            | 1.5 FNPT                                            | 1.5 FNPT                                            |
| CIP (in)                                       | 1 FNPT                                            | 1 FNPT                                            | 1 FNPT                                            | 1 FNPT                                              | 1 FNPT                                              |
| <b>Membranes</b>                               |                                                   |                                                   |                                                   |                                                     |                                                     |
| Membrane(s) Per Vessel                         | 2                                                 | 2                                                 | 2                                                 | 2                                                   | 2                                                   |
| Membrane Quantity                              | 8                                                 | 12                                                | 16                                                | 20                                                  | 24                                                  |
| Membrane Size                                  | 4040                                              | 4040                                              | 4040                                              | 4040                                                | 4040                                                |
| <b>Vessels</b>                                 |                                                   |                                                   |                                                   |                                                     |                                                     |
| Vessel Array                                   | 2:2                                               | 2:2:2                                             | 3:3:2                                             | 3:3:2:2                                             | 3:3:2:2:2                                           |
| Vessel Quantity                                | 4                                                 | 6                                                 | 8                                                 | 10                                                  | 12                                                  |
| <b>Pumps</b>                                   |                                                   |                                                   |                                                   |                                                     |                                                     |
| Pump Type                                      | Multi-Stage                                       | Multi-Stage                                       | Multi-Stage                                       | Multi-Stage                                         | Multi-Stage                                         |
| Motor HP                                       | 3                                                 | 3                                                 | 5                                                 | 7.5                                                 | 7.5                                                 |
| RPM @ 60 Hz                                    | 3450                                              | 3450                                              | 3450                                              | 3450                                                | 3450                                                |
| RPM @ 50 Hz                                    | 2900                                              | 2900                                              | 2900                                              | 2900                                                | 2900                                                |
| <b>System Electrical</b>                       |                                                   |                                                   |                                                   |                                                     |                                                     |
| Standard Voltage + Amp Draw                    | 220V, 60Hz, 3PH, 9A**                             | 220V, 60Hz, 3PH, 9A**                             | 220V, 60Hz, 3PH, 14.2A**                          | 220V, 60Hz, 3PH, 19.5A**                            | 220V, 60Hz, 3PH, 19.5A**                            |
| Voltage Options + Amp Draw                     | 220V, 50Hz, 3PH, 10.6A**<br>460V, 60Hz, 3PH, 5A** | 220V, 50Hz, 3PH, 10.6A**<br>460V, 60Hz, 3PH, 5A** | 220V, 50Hz, 3PH, 16.1A**<br>460V, 60Hz, 3PH, 7A** | 220V, 50Hz, 3PH, 22.9A**<br>460V, 60Hz, 3PH, 9.7A** | 220V, 50Hz, 3PH, 22.9A**<br>460V, 60Hz, 3PH, 9.7A** |
| <b>Systems Dimensions</b>                      |                                                   |                                                   |                                                   |                                                     |                                                     |
| Approximate Dimensions*<br>L x W x H (in / cm) | 31 x 100 x 64 /<br>78.74 x 254 x 162.56           | 31 x 100 x 64 /<br>78.74 x 254 x 162.56           | 31 x 100 x 64 /<br>78.74 x 254 x 162.56           | 31 x 100 x 64 /<br>78.74 x 254 x 162.56             | 31 x 100 x 64 /<br>78.74 x 254 x 162.56             |
| Approximate Weight (lbs / kg)                  | 1060 / 480.81                                     | 1150 / 476.27                                     | 1260 / 571.53                                     | 1350 / 612.35                                       | 1450 / 657.71                                       |

**Test Parameters:** 550 TDS Filtered (5 – Micron), Dechlorinated, Municipal Feedwater, 65 psi / 4.50 bar Feed Pressure, 80 psi / 5.5 bar Operating Pressure, 77°F / 25°C, Recovery as stated, 7.0 pH. Data taken after 60 minutes of operation.

\* Does not include operating space requirements.

\*\* Varies with motor manufacturer.

## Array Specifications

| Model      | Vessel Array | Vessel Size | Vessel Quantity | Membrane Size | Membrane Quantity |
|------------|--------------|-------------|-----------------|---------------|-------------------|
| M1 – 4240  | 2:2          | 4080        | 4               | 4040          | 8                 |
| M1 – 6240  | 2:2:2        | 4080        | 6               | 4040          | 12                |
| M1 – 8240  | 3:3:2        | 4080        | 8               | 4040          | 16                |
| M1 – 10240 | 3:3:2:2      | 4080        | 10              | 4040          | 20                |
| M1 – 12240 | 3:3:2:2:2    | 4080        | 12              | 4040          | 24                |



# "X1" Series 30,000-180,000 GPD

**AXEON**  
WATER TECHNOLOGIES

## X1 – Series Reverse Osmosis Systems

### X1 – Series Reverse Osmosis

Systems are designed as a cost-effective solution to the growing demand of tap and well water for applications in food and beverage, pharmaceutical, healthcare, microelectronics, power, chemicals and agriculture.



**X1 – 6480**  
Industrial Reverse Osmosis System

With models ranging from 20 to 125 gallons per minute (30,000 to 180,000 gallons per day), the smart, clean utilitarian industrial design of the X1 – Series allows for convenient installation, user-friendly operation and ease of maintenance. These skid-mounted, package systems are pre-plumbed and pre-wired on a powder-coated steel frame complete with a pre-programmed computer controller, TDS probes and panel-mounted pressure gauges and flow instrumentation, allowing for straight forward system monitoring and control. The X1 – Series Systems utilize energy-efficient ultra low energy membranes with 10% greater membrane surface area than standard 8-inch reverse osmosis elements, thus producing more pure water.

Systems of this size and types are engineered specific to the application. A comprehensive and detailed water report is required prior to system design and implementation. Contact IWP for assistance in providing a successful large scale water quality improvement project.





# "S3" Series Desal 600-2000 GPD

**AXEON**  
WATER TECHNOLOGIES

## Sea Water RO

### S3 – Series Reverse Osmosis Systems

#### AXEON S3 – Series Reverse

**Osmosis Systems** are engineered and manufactured for seawater applications specifically tailored for capacities ranging from 600 to 2,200 gallons per day. The **S3 – Series Reverse Osmosis Systems** feature a unique and innovative compact design that allows for easy installation in any size area.



**S3 – 4125**  
Reverse Osmosis System

The S3 – Series is also equipped with premium components, which include a 316L SS plunger-type pump for high performance, a high grade corrosion resistant aluminum frame, a programmable computer controller with many built-in features and fiberglass membrane housings for durability.

### T3 – Series Reverse Osmosis Systems

**AXEON T3 – Series Reverse Osmosis Systems** are designed and manufactured for seawater applications requiring capacities of 3,000 to 7,000 gallons per day.

**AXEON T3 – Series Reverse Osmosis Systems** are equipped with premium components, which include a 316L plunger-type pump for high performance and corrosion resistance, a high grade corrosion resistant aluminum frame, a programmable computer controller with many built-in features and fiberglass membrane housings for durability.

**T3 – 6140**  
Reverse Osmosis System



# Commercial RO Components

| Atmospheric Tanks |          |                 |     |        |            |
|-------------------|----------|-----------------|-----|--------|------------|
| Model#            | ≈Gallons | ≈Dimensions     | Lid | Top    | Bottom     |
| 61A-R095          | 95       | 33" x 16" x 47" | 8"  | 1" FPT | 1" FPT     |
| 61A-01RU          | 100      | 23" x 64"       | 16" | 1" FPT | 1-1/2" FPT |
| 61A-03RU          | 300      | 34" x 80"       | 16" | 1" FPT | 1-1/2" FPT |

| Electronic Float Kits |                                      |            |
|-----------------------|--------------------------------------|------------|
| Model #               | Description                          | Used On    |
| 83F-FK                | Dual Level Float Kit .17 Amp         | N1, R1, X1 |
| 83F-FK3               | Dual Level Float Kit (Ozone) .17 Amp | N1, R1, X1 |
| 83F-PNC2              | Piggy Back Float Only 15 Amp         | Various    |
| 83F-PK                | Piggy Back Float 15 Amp Complete Kit | Various    |

| Mechanical Float |                                      |                |
|------------------|--------------------------------------|----------------|
| Model #          | Description                          | Used On        |
| 86-1211          | 1" MIP Dual Level Float Only         | N1, R1, X1, LC |
| IWP-LCMFK        | 1/2" Float Kit with Accumulator Tank | Various        |
| 68-FV8           | 1/2" Float only                      | Various        |

## Tank Bulkheads

| Model # | Size   |
|---------|--------|
| 58-BK08 | 1/2"   |
| 58-BK12 | 3/4"   |
| 58-BK16 | 1"     |
| 58-BK24 | 1-1/2" |
| 58-BK32 | 2"     |



| PRESSURE SWITCHES |                                                                    |
|-------------------|--------------------------------------------------------------------|
| Item #            | Description                                                        |
| 75-ATP220         | (2) 10-20 PSI NO/NC Pressure Switch 1/4" Push to Connect           |
| 75-ATPS340        | (3) 20-40 PSI NC High Pressure Switch 3/8" Push to Connect         |
| 84-NL02X1         | (4) Low Pressure Switch with 110v Cord (Retrofit for Anti-Scalant) |
| 84A-200906        | (1) 15-30 PSI NO Low Pressure Switch 1/4" FPT                      |
| 84A-200907        | (1) 40-60 PSI NC High Pressure Switch 1/4" FPT                     |



| 3/8" Solenoid Parts |                                        |
|---------------------|----------------------------------------|
| 75-AT2XW            | Double Wiring Harness 11" for Solenoid |
| 66-3573             | 3/8" FPT x 3/8" JG Fittings            |

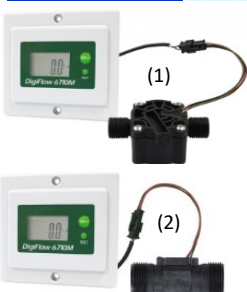
| Solenoid Valves |      |           |       |
|-----------------|------|-----------|-------|
| Item #          | Size | Material  | Volts |
| 75-AT26187      | 3/8" | Composite | 24VAC |
| 84A-208789      | 1"   | Composite | 220V  |
| 48A-S0811       | 1/2" | Stainless | 110V  |
| 48A-S1211       | 3/4" | Stainless | 110V  |
| 48A-S1611       | 1"   | Stainless | 110V  |
| 48A-S0822       | 1/2" | Stainless | 220V  |
| 48A-S1222       | 3/4" | Stainless | 220V  |
| 48A-S1622       | 1"   | Stainless | 220V  |



# Commercial RO Components

## PRESSURE GAUGES

| Item #          | Size | Mount      | Body        | MPT  | Range     | Filled   |
|-----------------|------|------------|-------------|------|-----------|----------|
| 68-PGKD1518-100 | 1.5" | Back       | Black Steel | 1/8" | 0-100 PSI | Dry      |
| 84A-202436      | 1.5" | Panel Back | Stainless   | 1/8" | 0-160 PSI | Glycerin |
| 84A-205802      | 2"   | Bottom     | Stainless   | 1/4" | 0-100 PSI | Glycerin |
| 84A-201702      | 2"   | Panel Back | Stainless   | 1/4" | 0-100 PSI | Glycerin |
| 84A-201703      | 2"   | Panel Back | Stainless   | 1/4" | 0-300 PSI | Glycerin |
| 68-PG100        | 2.5" | Bottom     | Stainless   | 1/4" | 0-100     | Glycerin |
| 68-PGK100       | 2.5" | Panel Back | Stainless   | 1/4" | 0-100     | Glycerin |
| 68-PG300        | 2.5" | Bottom     | Stainless   | 1/4" | 0-300     | Glycerin |
| 68-PGK300       | 2.5" | Panel Back | Stainless   | 1/4" | 0-300     | Glycerin |
| 68-PGRED        | 2.5" | Hose Bib   | Steel       | FGHT | 0-300     | Dry      |

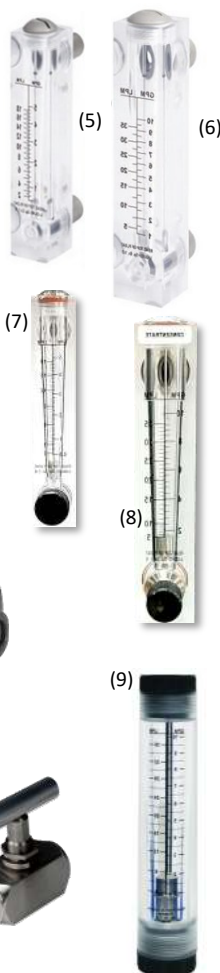


Panel mount digital flow meters add an upscale look to your system. Current flow rate and resettable totalizer with a capacity of 99,999 gallons. Uses a simple battery pack or a 3 volt transformer.



## FLOW METERS

| Item #      | Panel Mount Digital Flow Meter                    |
|-------------|---------------------------------------------------|
| 17S-DVTF06P | (1) 3/8" MPT .25-4 GPM                            |
| 17S-DVTF08P | (2) 1/2" MPT 0.4-6.6 GPM                          |
| 17S-DVTF12P | 3/4" MPT 0.5-16 GPM                               |
| 17S-DVTF16P | 1" MPT 0.8-26 GPM                                 |
| 17S-671     | (3) Battery Holder (Less 2 AA Batteries)          |
| 17S-DF673   | (4) 3V DC Power Adapter 100V-240V for Flow Meters |
| Item #      | Panel Mount Rotameter                             |
| 84A-209245  | Panel Mount 85 GPH, 1/4" MNPT x 1/4" MNPT         |
| 84A-203849  | Panel Mount 0.1-1 GPM, 1/2" MNPT x 1/2" MNPT      |
| 84A-200897  | Panel Mount 0.2-2 GPM, 1/2" MNPT x 1/2" MNPT      |
| 84A-200898  | (5) Panel Mount , 1-5 GPM, 1/2" MNPT x 1/2" MNPT  |
| 84A-200899  | (6) Panel Mount 1-10 GPM, 1" MNPT x 1" MNPT       |
| 84A-200900  | Panel Mount 2-20 GPM, 1" MNPT x 1" MNPT           |
| 84A-209329  | Panel Mount 2.5-25 GPM, 1" MNPT X 1" MNPT         |
| 84A-209330  | Panel Mount 5-45 GPM, 2" MNPT X 2" MNPT           |
| 84A-209030  | Panel Mount 7-70 GPM/LPM, 2" MNPT                 |
| Item #      | Rotameter with Stainless Needle Valve             |
| 84A-209246  | Panel Mount 85 GPH, SS VALVE, 1/4" MNPT           |
| 84A-205103  | Panel Mount 0.2-2 GPM, SS VALVE, 1/2" MNPT        |
| 84A-205104  | (7) Panel Mount 1-5 GPM, SS VALVE, 1/2" MNPT      |
| 84A-205105  | (8) Panel Mount , 1-10 GPM, SS VALVE, 1" MNPT     |
| 84A-205106  | Panel Mount 2-20 GPM, SS VALVE, 1" MNPT X 1" MNPT |
| Item #      | Inline Rotameter                                  |
| 84A-204246  | (9) Inline 1-10 GPM, 1" FNPT x 1" FNPT            |
| 84A-204271  | Inline 1-20 GPM, 1" FNPT x 1" FNPT                |
| 84A-208775  | Inline 5-40 GPM, 1" FNPT x 1" FNPT                |
| 84A-208776  | Inline 20-60 GPM, 1" FNPT x 1" FNPT               |
| 84A-204272  | Inline 4-40 GPM, 1-1/2" FNPT x 1-1/2" FNPT        |
| 84A-204273  | Inline 4-60 GPM, 1-1/2" FNPT x 1-1/2" FNPT        |



## Multi-Stage Booster Pumps with Motor

| Item #     | HP  | Common Use                          |
|------------|-----|-------------------------------------|
| 75-DE30506 | 3/4 | (1-2) 4" x 21" Membranes 80-125 PSI |
| 75-DE40506 | 1.1 | (1-2) 4" x 40" Membranes 80-125 PSI |
| 75-DE30806 | 1.3 | (2-4) 4" x 40" Membranes 80-125 PSI |
| 75-DE40806 | 1.5 | (4-8) 4" x 40" Membranes 80-125 PSI |

## Grundfos

|            |     |                                       |
|------------|-----|---------------------------------------|
| 84A-211657 | 3/4 | (1-2) 4" x 40" Membranes 80 PSI       |
| 84A-211008 | 1.5 | (1-2) 4" x 40" PSI Membranes 100-150  |
| 84A-211007 | 2   | (3-8) 4" x 40" PSI Membranes 100-150  |
| 84A-200799 | 3   | (5-12) 4" x 40" PSI Membranes 100-225 |



## Globe Valves

| Item #     | MPT    |
|------------|--------|
| 84A-202270 | 1/2"   |
| 84A-200994 | 3/4"   |
| 84A-200995 | 1"     |
| 84A-200996 | 1-1/2" |



## Needle Valves

| Item #     | MPT  |
|------------|------|
| 84A-201004 | 1/4" |
| 84A-201005 | 3/8" |
| 84A-201006 | 1/2" |
| 84A-203296 | 3/4" |







Continuous ozone injection for traditional well designs using a pressure tank and a 40/60 switch or an atmospheric tank. Simply wire the unit into the pressure switch or use a flow switch to activate the ozone generator. Kit includes an adjustable schedule 80 venturi injection assembly with liquid filled pressure gauges, Kynar injector, a high capacity color changing desiccant filter, tube kit and a corona discharge 220/440 mg/hr ozone generator. Ideal for wells producing between 5-40 GPM.

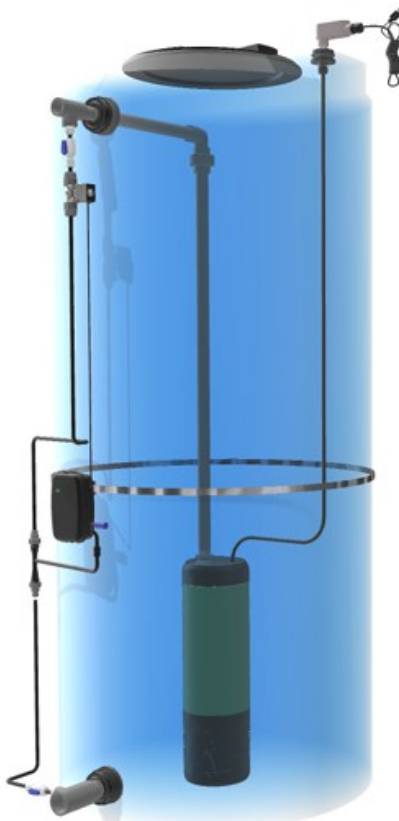
| Model #   | Description                                      |
|-----------|--------------------------------------------------|
| 79i-O3K05 | 5+ GPM Complete 220/440 mg/hr Well Ozone System  |
| 79i-O3K12 | 10+ GPM Complete 220/440 mg/hr Well Ozone System |
| 79i-DSC21 | Replacement Desiccant Filter Cartridge           |
| 79T-47035 | Replacement Kynar Check valve                    |
| 79T-47044 | CD Cell Cleaning Kit                             |

#### Ideal for the following water quality problems

- ♦ Iron up to 20 ppm
- ♦ Manganese up to 1 ppm
- ♦ Bacteria (Secondary)
- ♦ Hydrogen Sulfide up to 20 ppm
- ♦ Bad tastes

#### Atmospheric Tank Recirculating Ozone

79T-R3K includes an ozone generator, solenoid, check valve and a simple timer. Intermittent recirculating ozone helps keep an atmospheric storage tank sanitary by periodically circulating tank water through an ozone injection loop instead of relying on a continuous chemical residual. As ozonated water returns to the tank, dissolved ozone oxidizes bacteria, viruses, and organic material and helps limit biofilm on tank walls and fittings. Because ozone quickly reverts to oxygen, short timed recirculation cycles can maintain sanitary conditions without leaving a lasting taste or odor.



| Model #   | Description                                              |
|-----------|----------------------------------------------------------|
| 79T-R3K   | Recirculating Ozone Kit                                  |
| 79K-3X    | Stainless Tank Mounting Kit for Up to 36" Diameter Tanks |
| 79i-DRY   | Optional Desiccant Filter (For Humid Areas)              |
| 79i-DSC21 | Replacement Desiccant Filter Cartridge                   |
| 79T-47035 | Replacement Kynar Check valve                            |
| 79T-47044 | CD Cell Cleaning Kit                                     |



# Resin Capacity Chart

| Resin Volume ft <sup>3</sup>  | Typical Media Tank | ≈Grains @ 2 LB/ft <sup>3</sup> | ≈Grains @ 4 LB/ft <sup>3</sup> | ≈Grains @ 6 LB/ft <sup>3</sup> | ≈Grains @ 8 LB/ft <sup>3</sup> | ≈Grains @ 10 LB/ft <sup>3</sup> | ≈Grains @ 15 LB/ft <sup>3</sup> | ≈Grains @ 20 LB/ft <sup>3</sup> |
|-------------------------------|--------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1                             | 9x48               | 10,000                         | 17,000                         | 21,000                         | 24,000                         | 26,000                          | 30,000                          | 32,000                          |
| 1.5                           | 10x54              | 15,000                         | 25,500                         | 31,500                         | 36,000                         | 39,000                          | 45,000                          | 48,000                          |
| 2                             | 12x52              | 20,000                         | 34,000                         | 42,000                         | 48,000                         | 52,000                          | 60,000                          | 64,000                          |
| 2.5                           | 13x54              | 25,000                         | 42,500                         | 52,500                         | 60,000                         | 65,000                          | 75,000                          | 80,000                          |
| 3                             | 14x65              | 30,000                         | 51,000                         | 63,000                         | 72,000                         | 78,000                          | 90,000                          | 96,000                          |
| 3                             | 16x53              | 30,000                         | 51,000                         | 63,000                         | 72,000                         | 78,000                          | 90,000                          | 96,000                          |
| 4                             | 16x65              | 40,000                         | 68,000                         | 84,000                         | 96,000                         | 104,000                         | 120,000                         | 128,000                         |
| 5                             | 18x65              | 50,000                         | 85,000                         | 105,000                        | 120,000                        | 130,000                         | 150,000                         | 160,000                         |
| 6                             | 21x62              | 60,000                         | 102,000                        | 126,000                        | 144,000                        | 156,000                         | 180,000                         | 192,000                         |
| 7                             | 24x60              | 70,000                         | 119,000                        | 147,000                        | 168,000                        | 182,000                         | 210,000                         | 224,000                         |
| 8                             | 24x60              | 80,000                         | 136,000                        | 168,000                        | 192,000                        | 208,000                         | 240,000                         | 256,000                         |
| 9                             | 24x72              | 90,000                         | 153,000                        | 189,000                        | 216,000                        | 234,000                         | 270,000                         | 288,000                         |
| 10                            | 24x72              | 100,000                        | 170,000                        | 210,000                        | 240,000                        | 260,000                         | 300,000                         | 320,000                         |
| 14                            | 30x72              | 140,000                        | 238,000                        | 294,000                        | 336,000                        | 364,000                         | 420,000                         | 448,000                         |
| 15                            | 30x72              | 150,000                        | 255,000                        | 315,000                        | 360,000                        | 390,000                         | 450,000                         | 480,000                         |
| 18                            | 36x72              | 180,000                        | 306,000                        | 378,000                        | 432,000                        | 468,000                         | 540,000                         | 576,000                         |
| 20                            | 36x72              | 200,000                        | 340,000                        | 420,000                        | 480,000                        | 520,000                         | 600,000                         | 640,000                         |
| 25                            | 42x72              | 250,000                        | 425,000                        | 525,000                        | 600,000                        | 650,000                         | 750,000                         | 800,000                         |
| 30                            | 48x72              | 300,000                        | 510,000                        | 630,000                        | 720,000                        | 780,000                         | 900,000                         | 960,000                         |
| 35                            | 63x86              | 350,000                        | 595,000                        | 735,000                        | 840,000                        | 910,000                         | 1,050,000                       | 1,120,000                       |
| 40                            | 63x86              | 400,000                        | 680,000                        | 840,000                        | 960,000                        | 1,040,000                       | 1,200,000                       | 1,280,000                       |
| 50                            | 63x86              | 500,000                        | 850,000                        | 1,050,000                      | 1,200,000                      | 1,300,000                       | 1,500,000                       | 1,600,000                       |
| 60                            | 63x116             | 600,000                        | 1,020,000                      | 1,260,000                      | 1,440,000                      | 1,560,000                       | 1,800,000                       | 1,920,000                       |
| 100                           | 63x144             | 1,000,000                      | 1,700,000                      | 2,100,000                      | 2,400,000                      | 2,600,000                       | 3,000,000                       | 3,200,000                       |
|                               |                    |                                |                                |                                |                                |                                 |                                 |                                 |
| Hardness Reduction Efficiency |                    | ≈5000 Grains per pound         | ≈4200 Grains per pound         | ≈3500 Grains per pound         | ≈3000 Grains per pound         | ≈2600 Grains per pound          | ≈2000 Grains per pound          | ≈1600 Grains per pound          |
| Hardness Leakage              |                    | ≈40 PPM                        | ≈15 PPM                        | ≈10 PPM                        | ≈6 PPM                         | ≈3 PPM                          | ≈1 PPM                          | ≈1 PPM                          |
| Water Quality                 |                    | Poor                           | Fair                           | Good                           | Better                         | Better                          | Best                            | Best                            |
| Salt Efficiency               |                    | Best                           | Better                         | Better                         | Better                         | Fair                            | Poor                            | Poor                            |

\*Estimated primarily calcium hardness capacity for 8% crosslinked cation softening resin at influent water temperature of >50F, TDS of <500 ppm.

\*Calculations assume proper distribution, bed depth, and system design to mitigate channeling.

# Commercial Membrane Housings

## Fiberglass & Stainless Membrane Housings

The ultimate in performance and safety. Fiberglass housings are designed for higher pressure applications. Stainless have a clean look.



### 2.5" Fiberglass Membrane Housings

| Item #     | Length | Permeate | Concentrate | Max PSI |
|------------|--------|----------|-------------|---------|
| 84A-208417 | 21"    | 1/4"     | 1/4"        | 300     |
| 84A-208418 | 40"    | 1/4"     | 1/4"        | 300     |
| 84A-208422 | 21"    | 1/4"     | 1/4"        | 1000    |
| 84A-208423 | 40"    | 1/4"     | 1/4"        | 1000    |

### 4" Fiberglass Membrane Housings

| Item #      | Length | Permeate | Concentrate | Max PSI |
|-------------|--------|----------|-------------|---------|
| 84A-208416  | 21"    | 1/2"     | 1/2"        | 300     |
| 84A-208419  | 40"    | 1/2"     | 3/4"        | 300     |
| 84A-211845* | 40"    | 1/2"     | 3/4"        | 300     |
| 84A-208420  | 80"    | 1/2"     | 3/4"        | 300     |
| 84A-208424  | 40"    | 1/4"     | 1/4"        | 1000    |

### 8" Fiberglass Membrane Housings

| Item #     | Length | Permeate | Concentrate      | Max PSI |
|------------|--------|----------|------------------|---------|
| 84A-211546 | 40"    | 1" MNPT  | 1-1/2" Victaulic | 300     |
| 84A-210615 | 80"    | 1" MNPT  | 1-1/2" Victaulic | 300     |
| 84A-201616 | 120"   | 1" MNPT  | 1-1/2" Victaulic | 300     |

\*4"x40" Housing in **BLACK**



### 2.5" 304 S.S. Membrane Housings

| Item #     | Length | Permeate | Concentrate | Max PSI |
|------------|--------|----------|-------------|---------|
| 84A-208237 | 21"    | 3/8"     | 3/8"        | 250     |
| 84A-208238 | 40"    | 3/8"     | 3/8"        | 250     |

### 4" 304 S.S. Membrane Housings

| Item #     | Length | Permeate | Concentrate | Max PSI |
|------------|--------|----------|-------------|---------|
| 84A-208239 | 21"    | 1/2"     | 1/2"        | 250     |
| 84A-208240 | 40"    | 1/2"     | 1/2"        | 250     |
| 84A-208241 | 40"    | 1/2"     | 3/4"        | 250     |
| 84A-208242 | 80"    | 1/2"     | 3/4"        | 250     |

### 2.5" Fiberglass Membrane Housings Parts

| Item #     | Description              |
|------------|--------------------------|
| 84A-208909 | O-Ring for End Cap, EPDM |
| 84A-208912 | O-Ring for Membrane 1/2" |
| 84A-208904 | End Cap 1/4" X 1/4" ABS  |
| 84A-208907 | Stainless Cap Clip       |
| 84A-206843 | Stainless Strap          |
| 84A-208917 | Rubber Mount             |

### 4" Fiberglass Membrane Housings Parts

| Item #     | Description              |
|------------|--------------------------|
| 84A-208911 | O-Ring for End Cap, EPDM |
| 84A-208912 | O-Ring for Membrane 1/2" |
| 84A-209527 | End Cap 1/2" x 1/2" ABS  |
| 84A-208906 | End Cap 1/2" x 3/4" ABS  |
| 84A-208908 | Stainless Cap Clip       |
| 84A-207003 | Stainless Strap          |
| 84A-206849 | Rubber Mount             |

### 8" Fiberglass Membrane Housings Parts

| Item #     | Description               |
|------------|---------------------------|
| 84A-210654 | O-Ring for Victaulic Port |
| 84A-210649 | O-Ring for ABS Adapter    |
| 84A-210655 | O-Ring For End Cap        |





# Commercial RO Electronics

Building a new commercial RO or is your old RO controller giving you problems?  
Does your system have all mechanical controls? Time to update!

| Single phase RO Controllers |                     |                   |                   |                      |                   |                      |                                |                                     |
|-----------------------------|---------------------|-------------------|-------------------|----------------------|-------------------|----------------------|--------------------------------|-------------------------------------|
| Item #                      | Low Pressure Switch | Pre-Treat Lockout | Tank Level Switch | High Pressure Switch | Feed/Permeate TDS | Motor Contactor Type | Motor HP VAC                   | Dimensions                          |
| Inputs                      |                     |                   |                   |                      |                   | Outputs              |                                |                                     |
| 17C-C (1)                   | ✓                   | ✓                 | Single            |                      |                   | Relay                | 1 HP @ 110V,<br>2HP @ 208-240V | 5" Tall, 7" Wide,<br>2.375" Deep    |
| 17C-CV (2)                  | ✓                   | ✓                 | Single            |                      |                   | Relay                | 1 HP @ 110V,<br>2HP @ 208-240V | 7" Tall, 7" Wide,<br>4" Deep        |
| 17C-R2H (3)                 | ✓                   | ✓                 | Single/<br>Dual   |                      | ✓                 | Relay                | 1 HP @ 110V,<br>2HP @ 208-240V | 7" Tall, 7" Wide,<br>4" Deep        |
| 17C-320 (3)                 | ✓                   | ✓                 | Single/<br>Dual   | ✓                    | ✓                 | DP Contactor         | 3HP @ 208-240V                 | 7" Tall, 7" Wide,<br>4" Deep        |
| 17C-340 (3)                 | ✓                   | ✓                 | Single/<br>Dual   | ✓                    | ✓                 | DP Contactor         | 5HP @ 208-240V                 | 7" Tall, 7" Wide,<br>4" Deep        |
| 3 Phase RO Controller       |                     |                   |                   |                      |                   |                      |                                |                                     |
| 17C-3P03 (4)                | ✓                   | ✓                 | Single/<br>Dual   | ✓                    | ✓                 | IEC                  | 3HP@208V<br>7.5HP @ 460V       | 11.5" Tall, 9.3" Wide,<br>6.7" Deep |
| 17C-3P10 (4)                | ✓                   | ✓                 | Single/<br>Dual   | ✓                    | ✓                 | IEC                  | 10HP@208V<br>15HP @ 460V       | 11.5" Tall, 9.3" Wide,<br>6.7" Deep |
| 17C-3P15 (4)                | ✓                   | ✓                 | Single/<br>Dual   | ✓                    | ✓                 | IEC                  | 15HP@208V<br>30HP @ 460V       | 11.5" Tall, 9.3" Wide,<br>6.7" Deep |
| 17C-3P25(4)                 | ✓                   | ✓                 | Single/<br>Dual   | ✓                    | ✓                 | IEC                  | 25HP@208V<br>60HP @ 460V       | 11.5" Tall, 9.3" Wide,<br>6.7" Deep |



(1)



(2)



(3)



(4)

17C-CP1



Add 1-2 Probes as desired

**Panel Mount Flow/Totalizer** displays real time flow rates or total volume used. Remote meters available from 1/4" to 1". Requires 3 volt DC power supply or battery pack.

| Item #          | Flow Rate  | Size     |
|-----------------|------------|----------|
| 17S-DVTF06P(5)  | .25-4 GPM  | 3/8" MPT |
| 17S-DVTF08P     | .4-6.6 GPM | 1/2" MPT |
| 17S-DVTF12P     | .5-16 GPM  | 3/4" MPT |
| 17S-DVTF16P (6) | .8-26 GPM  | 1" MPT   |

17S-DF673



17S-D671



(5)



(6)

**Volume Totalizer & Flow Rate Indicator** displays real time flow rates or total volume used. Remote meters available from 1/4" to 1". Battery operated with audible low battery alarm. Ideal for RO and filter systems.

| Item #          | Description               | Size      |
|-----------------|---------------------------|-----------|
| 17S-DFM08R      |                           |           |
| 17S-DVTF06 (4)  | Integrated Meter .4-3 GPM | 3/8" FNPT |
| 17S-DVTF08R     | Remote Meter .4-6 GPM     | 1/2" MNPT |
| 17S-DVTF12R     | Remote Meter .5-15 GPM    | 3/4" MNPT |
| 17S-DVTF16R (5) | Remote Meter 1-25 GPM     | 1" MNPT   |



(5)



(4)



DAB E.SYBOX MINI 3 (DAB 10), ESYBOX (DAB 20) and ESYBOX-MAX pumps use an integrated electronic system equipped with intelligent controls to provide consistent water pressure to your application. Used as a delivery or booster pump, the “All in One” DAB pumps have proven themselves to be the leaders in high tech quality pumping. Integrated pressure transducer, temperature sensors, flow sensor, expansion tank all work together to provide exceptionally consistent flow and pressure! Integrated freeze protection, easily serviced check valve, vertical, horizontal and wall mount capable are just a few of the innovative design features of the DAB series pumps!



| Item #  | Accessories                |
|---------|----------------------------|
| 75-DX38 | D10 Splash Cover           |
| 75-DX37 | D20 Splash Cover           |
| 75-DX42 | D10 or D20 Wall Mount Kit  |
| 75-DD1  | D60 Single Docking Station |
| 75-DD2  | D60 Double Docking Station |
| 75-DD3  | D60 Triple Docking Station |

| Item # | Description/≈Flow Rates                                         | Voltage                          | HP  | NPT       | Notes                        |
|--------|-----------------------------------------------------------------|----------------------------------|-----|-----------|------------------------------|
| 75-D10 | E.SYBOX Mini 3: ≈10 GPM @ 60 PSI, ≈22 GPM at 40 PSI, 22 GPM Max | 115 V with Plug/220, Change Plug | 1.1 | 1"        | 45 Decibels, Quiet!          |
| 75-D20 | ESYBOX: ≈18 GPM @ 60 PSI, ≈15 GPM at 40 PSI, 31 GPM Max         | 220V with Plug                   | 2.1 | 1"        | Up to 4 can be used together |
| 75-D60 | ESYBOX Max: 60/≈55 GPM @ 60 PSI, ≈46 GPM at 40 PSI, 76 GPM Max  | 208-220V with Plug, Add Dock     | 3.6 | 1-1/4"-2" | Up to 4 can be used together |

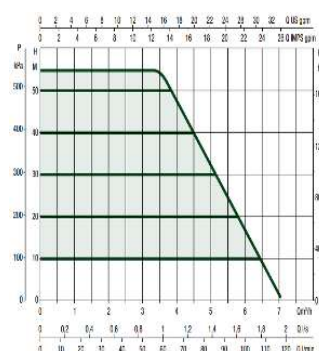
## DTRON esybox DIVER

DTRON automated submersible pumps are ideal for most residential and light commercial applications.

DTRON2: Simple and reliable. No external controls, just consistent 50 PSI to the application

DTRON3: Same as the DTRON2 with a controller that can be used to troubleshoot and adjust the pumps pressure.

ESYBOX DIVER: Integrated inverter for precise water pressure control and maximum energy efficiency! Simple and intuitive app for checking water usage, flow rates, alarms and so much more!



| Item # | Description/≈Flow Rates                                                   | Voltage            | HP  | FNPT   | Notes                     |
|--------|---------------------------------------------------------------------------|--------------------|-----|--------|---------------------------|
| 75-DT2 | DTRON 2: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max | 110V with 49' Plug | 0.8 | 1-1/4" | 50 PSI Non adjustable     |
| 75-DT3 | DTRON 3: ≈5GPM @ 50 PSI, ≈10 GPM at 45PSI, 20 GPM at 30 PSI, 31.7 GPM Max | 110V with 49' Plug | 0.8 | 1-1/4" | Adjustable from 22-65 PSI |
| 75-DTD | Esybox Diver: ≈15GPM @ 75 PSI, 31.7 GPM Max IOT App Controlled            | 220V with 49' Plug | 1.3 | 1-1/4" | Variable speed drive      |



# Pressure Tanks

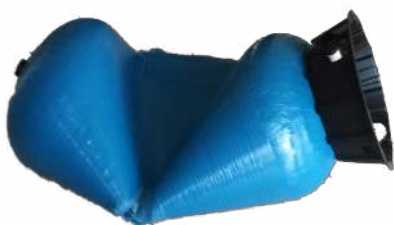
| Steel Pressure Tanks |                    |               |                 |             |           |          |
|----------------------|--------------------|---------------|-----------------|-------------|-----------|----------|
| Steel Part #         | ≈Total Tank Volume | Usable Volume | ≈Dimensions WxH | Connection  | Color     | Type     |
| 61P-01               | 1 gal.             | .6 gal.       | 7"x12"          | 1/4" MNPT   | White     | Import   |
| 61P-02               | 2 gal.             | 1.2 gal.      | 8"x14"          | 1/4" MNPT   | White     | Import   |
| 61P-03               | 3 gal.             | 1.9 gal.      | 9"x16"          | 1/4" MNPT   | White     | Import   |
| 61P-03PS             | 3 gal.             | 1.9 gal.      | 10"x17"         | 1/4" MNPT   | White     | Import   |
| 61P-04               | 4 gal.             | 2.8 gal.      | 11"x16"         | 1/4" MNPT   | White     | Import   |
| 61P-04S              | 4 gal.             | 2.8 gal.      | 11"x16"         | 1/4" MNPT   | Stainless | Import   |
| 61P-04U              | 4 gal.             | 2.8 gal.      | 11"x16"         | 1/4" MNPT   | Blue      | Import   |
| 61P-04K              | 4 gal.             | 2.8 gal.      | 11"x16"         | 1/4" MNPT   | Black     | Import   |
| 61P-06               | 6 ga.              | 3.3 gal.      | 12"x18"         | 1/4" MNPT   | White     | Import   |
| 61P-10               | 9 gal.             | 6 gal.        | 13"x23"         | 1/4" MNPT   | White     | Import   |
| 61P-14W              | 14 gal.            | 9.5 gal.      | 16"x29"         | 1/4" MNPT   | White     | Import   |
| 61P-20W12            | 20 gal.            | 12.6 gal.     | 16"x35"         | 3/4" MNPT   | White     | Import   |
| 61P-40               | 40 gal.            | 24 gal.       | 21"x37"         | 1" MNPT     | Almond    | Import   |
| 61F-TS44             | 44 gal.            | 29.5 gal.     | 37"x21"         | 1-1/4" FNPT | Grey      | FlexWave |
| 61F-TS80             | 85 gal.            | 56.9 gal.     | 44.5"x26"       | 1-1/4" FNPT | Grey      | FlexWave |



The use of a vacuum break is required anytime negative pressure may occur!



1/2" MPT Vacuum Break  
56-VAC



| Pentair RoMate Composite Pressure Tanks |           |                        |                                             |
|-----------------------------------------|-----------|------------------------|---------------------------------------------|
| Item #                                  | Capacity  | Dimensions/ Connection | Capacity @ 10PSI Pre-charge, 60 PSI Shutoff |
| 61-TKR-020                              | 19.8 gal  | 16"x32"/1" MPT         | ≈13.25 gallons                              |
| 61-TKR-040                              | 40.3 gal  | 16"x57"/1" MPT         | ≈26.97 gallons                              |
| 61-TKR-080                              | 86.7 gal  | 24"x55.25"/1-1/4" MPT  | ≈53.55 gallons                              |
| 61-TKR-120                              | 119.7 gal | 24"x74.25"/1-1/4" MPT  | ≈79.65 gallons                              |

| Tank Accessories |                                                               |
|------------------|---------------------------------------------------------------|
| 66-8231          | 1/4" FNPT x 1/4" John Guest Tank Ball Valve                   |
| 66-8235          | 1/4" FNPT x 3/8" John Guest Tank Ball Valve                   |
| 61-TKV128        | 1/2" and 3/8" John Guest Ball valve kit for 3/4" MNPT Tanks   |
| 61-TKV168        | 1/2" and 3/8" John Guest Ball valve kit for 1" MNPT Tanks     |
| 61-TKV208        | 1/2" and 3/8" John Guest Ball valve kit for 1-1/4" MNPT Tanks |
| 61-TKV208F       | 1/2" and 3/8" John Guest Ball valve kit for 1-1/4" FNPT Tanks |
| 56-VAC           | 1/2" MPT Vacuum Break                                         |

1"x1/2" & 3/8"  
61-TKV168



1-1/4"x1/2" & 3/8"  
61-TKV208



Tested and Certified by the Water Quality Association (WQA) to NSF/ANSI Standard 61 section 8 and NSF/ANSI 372 for lead free compliance







# ATLAS FILTRI®

improving water

The DP and DP Big are offered as a full range of water filter housings. Designed to work with standard 10" and 20" filter cartridges. The double and triple molded manifolds are patented and make one of the most advanced filter systems available. The "Sanic" series antimicrobial filter housings are ideal for well water applications and anywhere bacteria is a concern.



## DP Accessories

| Item #    | Description          |
|-----------|----------------------|
| 78-XT251W | Single White Bracket |
| 78-XT252W | Double White Bracket |
| 78-XT253W | Triple White Bracket |
| 78-XT251U | Single Blue Bracket  |
| 78-XT252U | Double Blue Bracket  |
| 78-XT253U | Triple Blue Bracket  |
| 78-XW25   | Plastic Wrench       |
| 78-XPG    | Pressure Gauge       |

Popular configurations shown. Most filter systems are available in 5", 7", 10" and 20" lengths. Single, dual, triple in ¼", ½", ¾", and 1" FPT available in some configurations. "Sanic" available in DP. Contact IWP for more details.

## "DP" Filter Housings

| Item #    | Housing Type     | FPT | Box Qty. |
|-----------|------------------|-----|----------|
| 78-2140C  | 10" Clear Single | ¼"  | 12       |
| 78-2112C  | 10" Clear Single | ¾"  | 12       |
| 78-2116C  | 10" Clear Single | 1"  | 12       |
| 78-2212C  | 20" Clear Single | ¾"  | 12       |
| 78-2216C  | 20" Clear Single | 1"  | 12       |
| 78-2104C2 | 10" Clear Dual   | ¼"  | 6        |
| 78-2112C2 | 10" Clear Dual   | ¾"  | 6        |
| 78-2116C2 | 10" Clear Dual   | 1"  | 6        |
| 78-2212C2 | 20" Clear Dual   | ¾"  | 3        |
| 78-2216C2 | 20" Clear Dual   | 1"  | 3        |
| 78-2104C3 | 10" Clear Triple | ¼"  | 4        |
| 78-2112C3 | 10" Clear Triple | ¾"  | 4        |
| 78-2116C3 | 10" Clear Triple | 1"  | 4        |
| 78-2212C3 | 20" Clear Triple | ¾"  | 1        |
| 78-2216C3 | 20" Clear Triple | 1"  | 1        |
| 78-2104U  | 10" Blue Single  | ¼"  | 12       |
| 78-2112U  | 10" Blue Single  | ¾"  | 12       |
| 78-2116U  | 10" Blue Single  | 1"  | 12       |
| 78-2212U  | 20" Blue Single  | ¾"  | 12       |
| 78-2216U  | 20" Blue Single  | 1"  | 12       |
| 78-2104U2 | 10" Blue Dual    | ¼"  | 6        |
| 78-2112U2 | 10" Blue Dual    | ¾"  | 6        |
| 78-2116U2 | 10" Blue Dual    | 1"  | 6        |
| 78-2212U2 | 20" Blue Dual    | ¾"  | 3        |
| 78-2216U2 | 20" Blue Dual    | 1"  | 3        |
| 78-2104U3 | 10" Blue Triple  | ¼"  | 4        |
| 78-2112U3 | 10" Blue Triple  | ¾"  | 4        |
| 78-2116U3 | 10" Blue Triple  | 1"  | 4        |
| 78-2212U3 | 20" Blue Triple  | ¾"  | 1        |
| 78-2216U3 | 20" Blue Triple  | 1"  | 1        |
| 78-2104W  | 10" White Single | ¼"  | 12       |
| 78-2104W2 | 10" White Dual   | ¼"  | 6        |
| 78-2104W3 | 10" White Triple | ¼"  | 1        |
| 78-2204W  | 20" White Single | ¼"  | 12       |
| 78-2204W2 | 20" White Dual   | ¼"  | 6        |
| 78-2204W3 | 20" White Triple | ¼"  | 1        |
| 78-2212W  | 20" White Single | ¾"  | 12       |
| 78-2212W2 | 20" White Dual   | ¾"  | 6        |
| 78-2212W3 | 20" White Triple | ¾"  | 1        |





# ATLAS FILTRI®

improving water

## “DP” Big Filter Housings

| Item #    | Housing Type     | FPT |
|-----------|------------------|-----|
| 78-4116C  | 10" Clear Single | 1"  |
| 78-4124C  | 10" Clear Single | 1½" |
| 78-4216C  | 20" Clear Single | 1"  |
| 78-4224C  | 20" Clear Single | 1½" |
| 78-4116C2 | 10" Clear Dual   | 1"  |
| 78-4124C2 | 10" Clear Dual   | 1½" |
| 78-4216C2 | 20" Clear Dual   | 1"  |
| 78-4224C2 | 20" Clear Dual   | 1½" |
| 78-4116C3 | 10" Clear Triple | 1"  |
| 78-4124C3 | 10" Clear Triple | 1½" |
| 78-4216C3 | 20" Clear Triple | 1"  |
| 78-4224C3 | 20" Clear Triple | 1½" |
| 78-4116U  | 10" Blue Single  | 1"  |
| 78-4124U  | 10" Blue Single  | 1½" |
| 78-4216U  | 20" Blue Single  | 1"  |
| 78-4224U  | 20" Blue Single  | 1½" |
| 78-4116U2 | 10" Blue Dual    | 1"  |
| 78-4124U2 | 10" Blue Dual    | 1½" |
| 78-4216U2 | 20" Blue Dual    | 1"  |
| 78-4224U2 | 20" Blue Dual    | 1½" |
| 78-4116U3 | 10" Blue Triple  | 1"  |
| 78-4124U3 | 10" Blue Triple  | 1½" |
| 78-4216U3 | 20" Blue Triple  | 1"  |
| 78-4224U3 | 20" Blue Triple  | 1½" |
| 78-4116G  | 10" Sanic Single | 1"  |
| 78-4124G  | 10" Sanic Single | 1½" |
| 78-4216G  | 20" Sanic Single | 1"  |
| 78-4224G  | 20" Sanic Single | 1½" |
| 78-4116G2 | 10" Sanic Dual   | 1"  |
| 78-4124G2 | 10" Sanic Dual   | 1½" |
| 78-4216G2 | 20" Sanic Dual   | 1"  |
| 78-4224G2 | 20" Sanic Dual   | 1½" |
| 78-4116G3 | 10" Sanic Triple | 1"  |
| 78-4124G3 | 10" Sanic Triple | 1½" |
| 78-4216G3 | 20" Sanic Triple | 1"  |
| 78-4224G3 | 20" Sanic Triple | 1½" |

Many more filter housing configurations available including “Sanic Clear.” call IWP for your specific needs.

The DP Big 4.5" housings are offered in clear or blue with a 120 PSI rating (NSF/ ANSI IAMPO Certified.) Housings are available in 1" or 1½" FPT connections. Optional features include multiple pressure gauges, drain kits, dual side pressure relief, pre-tapped bracket screw holes and much more. Contact IWP for a full list of options and features.



## DP Big Accessories

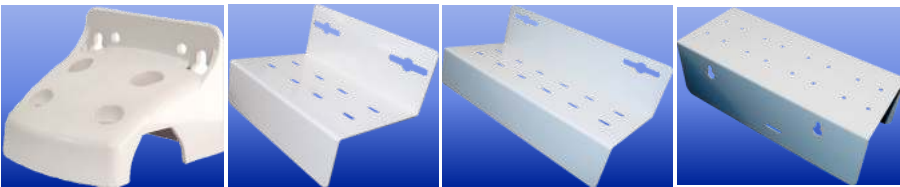
| Item #      | Description                    |
|-------------|--------------------------------|
| 68I-KT-BB1X | Universal Single Bracket (USA) |
| 68I-KT-BB2X | Universal Double Bracket (USA) |
| 68I-KT-BB3X | Universal Triple Bracket (USA) |
| 68I-BB10X   | 10" Legs (USA)                 |
| 68I-BB20X   | 20" Legs (USA)                 |
| 68X-02      | Impact Wrench (USA)            |
| 78-XW45     | Plastic Wrench                 |
| 78-XPG      | Pressure Gauge                 |
| 78-XBV      | Blowdown                       |

# QC Sanitary Filter Systems & Components

IWP uses USA made filters and brackets in our quick change filter systems. Only the best components can carry the IWP name! Available in 1-4 stages. Stainless Steel hardware, heavy metal brackets and John Guest fittings ensure consistent quality.



| Item #        | Stage1             | Stage 2 | Stage 3 | Connection     |
|---------------|--------------------|---------|---------|----------------|
| FS-QX-104Q-A2 | Sediment/Carbon    | -       | -       | ¼" JG 90°      |
| FS-QX-106Q-A2 | Sediment/Carbon    | -       | -       | ⅜" JG 90°      |
| FS-QX-104Q-A1 | Carbon             | -       | -       | ¼" JG 90°      |
| FS-QX-106Q-A1 | Carbon             | -       | -       | ⅜" JG 90°      |
| FS-QX-204Q-A1 | Sediment           | Carbon  | -       | ¼" JG 90°      |
| FS-QX-206Q-A1 | Sediment           | Carbon  | -       | ⅜" JG 90°      |
| FS-QX-304Q-A1 | Sediment           | Carbon  | Carbon  | ¼" JG 90°      |
| FS-QX-306Q-A1 | Sediment           | Carbon  | Carbon  | ⅜" JG 90°      |
| 60I-AKQ12-R   | Alkaline (Post RO) | -       | -       | ¼" & ⅜" JG 90° |



| Filter Brackets |                             |
|-----------------|-----------------------------|
| Item #          | Description                 |
| 68-BKT1HW-QP    | Q Series 1 Stage Plastic    |
| 68-BKT2H2W-Q    | Q Series 2 Stage "Z"        |
| 68-BKT3H2W-Q    | Q Series 3 Stage "Z"        |
| 68-BKT-4HUW-Q   | Q Series 4 Stage "Π" for RO |

| Caps & O-Rings |                     |
|----------------|---------------------|
| Item #         | Description         |
| 60-OPNVH14     | "Q" Series ¼" FNPT  |
| 60-OPNVH14JG   | "Q" Series ¼" JG QC |
| 60-OPNVH38     | "Q" Series ⅜" FNPT  |
| 60-OPQ-ORS     | O-Ring, Large       |
| 60-OPQ-ORL     | O-Ring, Small       |



| Item Number  | 12" Q Series Filters                                                      | Service Life Gal/ Months | Box Qty. |
|--------------|---------------------------------------------------------------------------|--------------------------|----------|
| 60I-AKQ12R   | Impact Alkaline Retrofit Kit                                              | 1500/12 (.07 GPM)        | 1        |
| 60I-AKQ12    | Impact Alkaline                                                           | 1500/12 (.07 GPM)        | 25       |
| 60-OPQ5651SC | 5 Micron Sediment/Carbon Filter                                           | 1000/12                  | 25       |
| 60-OPQ5605   | 5 Micron Sediment Filter                                                  | 1500/12                  | 25       |
| 60-OPQ5621   | 10 Micron Carbon Block Filter                                             | 3000/12                  | 25       |
| 60-OPQ5633   | GAC Carbon Filter                                                         | 3000/12                  | 25       |
| 60-OPQ5651CC | 50% GAC 50% Calcite Filter                                                | 1500/12                  | 25       |
| 60-OPQMM50FV | 50 GPD Encapsulated Membrane w/Integrated Flow Restrictor and Check Valve | NA/36                    | 25       |
| 60-OPQ-EMPTY | "Q" Series Empty Cartridge for Sanitization                               | N/A                      | 1        |

60I-AKQ12R





Pentek Filter Housings are durable water filter housings manufactured by Pentair for residential and light commercial applications. Available in Slim Line, Standard, and Big Blue series. 5", 10" and 20" Lengths available.

| Slim Line   | Color          | In/Out | Length | PR  |
|-------------|----------------|--------|--------|-----|
| 62-PK158125 | White          | 1/4"   | 10"    | No  |
| 62-PK158739 | White/Flat Cap | 1/4"   | 10"    | No  |
| 62-PK158114 | Black/Blue     | 1/4"   | 10"    | No  |
| 62-PK158117 | Blue/Clear     | 1/4"   | 10"    | Yes |
| 62-PK158120 | Black/Black    | 1/4"   | 10"    | No  |
| 62-PK158098 | White          | 3/8"   | 10"    | No  |
| 62-PK158842 | White          | 3/8"   | 20"    | No  |
| 62-PK158005 | Black/Blue     | 3/8"   | 10"    | Yes |
| 62-PK158006 | Black/Blue     | 3/8"   | 10"    | No  |
| 62-PK158110 | Blue/Clear     | 3/8"   | 5"     | Yes |
| 62-PK158007 | Blue/Clear     | 3/8"   | 10"    | Yes |
| 62-PK158008 | Blue/Clear     | 3/8"   | 10"    | No  |
| 62-PK158195 | Black/Blue     | 1/2"   | 10"    | Yes |
| 62-PK158196 | Black/Blue     | 1/2"   | 10"    | No  |
| 62-PK158204 | Black/Blue     | 1/2"   | 20"    | Yes |
| 62-PK158205 | Black/Blue     | 1/2"   | 20"    | No  |
| 62-PK158216 | Blue/Clear     | 1/2"   | 5"     | Yes |
| 62-PK158214 | Blue/Clear     | 1/2"   | 10"    | Yes |
| 62-PK158215 | Blue/Clear     | 1/2"   | 10"    | No  |
| Standard    | Color          | In/Out | Length | PR  |
| 62-PK150068 | Black/Blue     | 3/4"   | 10"    | No  |
| 62-PK150069 | Black/Blue     | 3/4"   | 20"    | Yes |
| 62-PK150070 | Black/Blue     | 3/4"   | 20"    | No  |
| 62-PK150071 | Blue/Clear     | 3/4"   | 10"    | Yes |
| 62-PK150072 | Blue/Clear     | 3/4"   | 10"    | No  |
| 62-PK150435 | Black/Clear    | 3/4"   | 10"    | Yes |
| 62-PK150437 | Black/Clear    | 3/4"   | 10"    | Yes |
| 62-PK150132 | Natural        | 3/4"   | 10"    | No  |
| 62-PK150141 | Natural        | 3/4"   | 20"    | No  |
| Big Blue    | Color          | In/Out | Length | PR  |
| 62-PK150469 | Black/Blue     | 3/4"   | 10"    | Yes |
| 62-PK150470 | Black/Blue     | 3/4"   | 10"    | No  |
| 62-PK150467 | Black/Blue     | 3/4"   | 20"    | Yes |
| 62-PK150468 | Black/Blue     | 3/4"   | 20"    | No  |
| 62-PK150237 | Black/Blue     | 1"     | 10"    | Yes |
| 62-PK150238 | Black/Blue     | 1"     | 10"    | No  |
| 62-PK150233 | Black/Blue     | 1"     | 20"    | Yes |
| 62-PK150234 | Black/Blue     | 1"     | 20"    | No  |
| 62-PK150235 | Black/Blue     | 1-1/2" | 20"    | Yes |
| 62-PK150236 | Black/Blue     | 1-1/2" | 20"    | No  |



| Item #          | Wrench         |
|-----------------|----------------|
| 68-FHWSLW       | Slim Line Half |
| 62-FW21         | Slim Line Full |
| 62-FW10BB       | 10" Big Blue   |
| 62-FW20BB       | 20" Big Blue   |
| Item #          | O-Ring         |
| 62-PK151121     | Slim Line      |
| 62-PK151120     | Standard       |
| 62-PK151122     | Big Blue       |
| Item #          | Hardware       |
| 94-SMS-1058SS-T | Slim Line      |
| 94-SMS-1475SS-T | Standard       |
| 86-1154         | Big Blue       |



# Commercial Bronco - XL Filters

Omnipure quick change Extra Large Format filters are the popular choice for high capacity and economical commercial grade filter systems. Contact IWP for custom brackets, labels and a marketing strategy to take your company to the next level!

## Single Stage ~8"W x 23"H

| Item # | Application                            | Filter 1                      | ≈Capacity          |
|--------|----------------------------------------|-------------------------------|--------------------|
| 60P-1D | Drinking water, soda, ice tea, cooking | 1 Micron Carbon 60P-EXC       | 20,000 Gal @ 2 GPM |
| 60P-1C | Small ice machine, coffee, espresso    | 1 Micron Carbon/Poly 60P-EXCP | 20,000 Gal @ 2 GPM |

## Two Stage ~13"W x 19"H

| Item #  | Application                                                      | Filter 1                       | Filter 2                       | ≈Capacity                         |
|---------|------------------------------------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
| 60P-2D  | Drinking water, soda, ice tea, cooking                           | 1 Micron Carbon 60P-EXC        | 1 Micron Carbon 60P-EXC        | 40,000 Gal @ 4 GPM                |
| 60P-2C  | Small ice machine, coffee, espresso                              | 1 Micron Carbon/ Poly 60P-EXCP | 1 Micron Carbon/ Poly 60P-EXCP | 40,000 Gal @ 4 GPM                |
| 60P-2CD | Drinking water, small ice machine, coffee, espresso, dual outlet | 1 Micron Carbon/ Poly 60P-EXC  | 1 Micron Carbon/ Poly 60P-EXCP | 20,000 Gal @ 4 GPM at each outlet |

## Three Stage ~16"W x 19"H

| Item #  | Application                                                      | Filter 1                      | Filter 2                      | Filter 3                      | ≈Capacity                                                   |
|---------|------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------------------------------------|
| 60P-3D  | Drinking water, soda, ice tea, cooking                           | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 60,000 Gal @ 4 GPM                                          |
| 60P-3C  | Small ice machine, coffee, espresso                              | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 60,000 Gal @ 4 GPM                                          |
| 60P-3D5 | Drinking water, soda, ice tea in water that has sediment         | 5 Micron Sediment 60P-EX5     | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 40,000 Gal @ 4 GPM                                          |
| 60B-C5  | Medium ice machine, coffee, espresso, in water that has sediment | 5 Micron Sediment 60P-EX5     | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 40,000 Gal @ 4 GPM                                          |
| 60B-3CD | Drinking water, small ice machine, coffee, espresso, dual outlet | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon/Poly 60P-EXC  | 1 Micron Carbon/Poly 60P-EXCP | 40,000 Gal @ 4 GPM Drinking, 20,000 Gal Ice machine @ 4 GPM |



# Commercial Bronco - XL Filters

Available in 1-5 stages to match any application! Finally a properly designed high capacity, high quality filter system for your commercial needs. Fully customizable! Filter systems include inlet shut off valve and filter purge valve. 3/8" John Guest Connections.

## Four Stage ~20W x 19H

| Item #   | Application                                                             | Filter 1                      | Filter 2                      | Filter 3                      | Filter 4                                      | ≈Capacity          |
|----------|-------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------------------------|--------------------|
| 60P-4C   | Large ice machine, coffee espresso                                      | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP                 | 80,000 Gal @ 4 GPM |
| 60P-4CD  | Ice machine, all drinking water, dual outlet                            | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | Poly Filter on Ice Maker outlet only 60P-EXCP | 60,000 Gal @ 4 GPM |
| 60P-4CD5 | Ice machine, all drinking water, dual outlet in water that has sediment | 5 Micron Sediment 60P-EX5     | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | Poly Filter on Ice Maker outlet only 60P-EXP  | 40,000 Gal @ 4 GPM |

## Five Stage ~24W x 19H

| Item #   | Application                                                              | Filter 1                      | Filter 2                      | Filter 3                      | Filter 4                      | Filter 5                                     | ≈Capacity          |
|----------|--------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------------------------------------|--------------------|
| 60P-5C   | Large ice machines, coffee espresso                                      | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP | 1 Micron Carbon/Poly 60P-EXCP                | 80,000 Gal @ 4 GPM |
| 60P-5CD  | Ice machines, all drinking water, dual outlet                            | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | Poly Filter on Ice Maker outlet only 60P-EXP | 80,000 Gal @ 4 GPM |
| 60P-5CD5 | Ice machines, all drinking water, dual outlet in water that has sediment | 5 Micron Sediment 60P-EX5     | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | 1 Micron Carbon 60P-EXC       | Poly Filter on Ice Maker outlet only 60P-EXP | 60,000 Gal @ 4 GPM |





# Ice Maker/Kitchen Faucet Filter Systems

High capacity, high flow quick change carbon filtration with enhanced lead, cyst, Cryptosporidium and Giardia reduction is ideal for ice makers and under counter filtration to feed the cold water side of the kitchen faucet or a standard RO style faucet. All filter kits include the common components needed to connect the plumbing.

## Part # FS-E106QU



High capacity filter kit designed to connect to any standard RO style faucet. Choose your faucet style and finish to complete!



## Part # FS-E106QK



High capacity filter kit designed to connect to most refrigerators. Our kit includes the connections required to easily install the filter system!



## Part # FS-E106QK



High capacity filter kit designed to connect to most 3/8" connection kitchen faucets cold side. No RO style faucet needed!



## Replacement Filter Part # 60P-L5CB

68-L38S



## Specialty Filters

| Item #                  | 2.5"x10" Filters                                        |
|-------------------------|---------------------------------------------------------|
| 62-PK455903             | 2.5" x 10" Fibredyne FloPlus Cyst/Crypto/Giardia        |
| 60-CB21-P               | 2.5" x 10" Diamond Flow Sediment/Carbon Block Cartridge |
| 2.5"x20" Filters        |                                                         |
| 60-CB22-P               | 2.5" x 20" Diamond Flow Sediment/Carbon Block Cartridge |
| 4.5"x20" Filters        |                                                         |
| 62-155141               | 4x10 Radial Flow Carbon 25 micron                       |
| Item # 4.5"x20" Filters |                                                         |
| 62-PK455906             | Fibredyne FloPlus High Flow Carbon/Cyst/Crypto/Giardia  |
| 62-PK155263             | Radial Flow Iron Reduction <3 ppm Iron                  |
| 62-155247               | 4x20 Radial Flow Carbon 25 micron                       |

Add a leak detector whenever a system will be installed in a location where water damage can occur.



# Big Blue & Slim Line Filter Systems

Big Blue filter systems available in 1-3 stages, we use only Stainless Steel hardware, and heavy metal brackets made to our high standards. Custom filter systems for any application including integrated Oxy-Mag modules are available. Call your IWP customer service representative for de-

| 4.5" Filter Assemblies |       |        |         |        |
|------------------------|-------|--------|---------|--------|
| Item #                 | Color | Stages | Housing | In/Out |
| FS-41U-116TW           | Blue  | 1      | 10"     | 1"     |
| FS-41U-216TW           | Blue  | 2      | 10"     | 1"     |
| FS-41U-316TW           | Blue  | 3      | 10"     | 1"     |
| FS-42U-116TW           | Blue  | 1      | 20"     | 1"     |
| FS-42U-216TW           | Blue  | 2      | 20"     | 1"     |
| FS-42U-316TW           | Blue  | 3      | 20"     | 1"     |
| FS-42K-116TW           | Black | 1      | 20"     | 1"     |
| FS-42K-216TW           | Black | 2      | 20"     | 1"     |
| FS-42K-316TW           | Black | 3      | 20"     | 1"     |



Optional liquid filled 0-100 PSI pressure gauges can be installed on the inlet and outlet

FS-4PG



Slimline filter systems are available in 1-4 stages. Stainless Steel hardware, and heavy metal brackets ensure the highest quality. Custom filter systems for any application. Call your IWP customer service representative for details.

| Item #       | Color | Stages | Housing | In/Out |
|--------------|-------|--------|---------|--------|
| FS-21SW-104T | White | 1      | 10"     | ¼"     |
| FS-21SW-204T | White | 2      | 10"     | ¼"     |
| FS-21SW-304T | White | 3      | 10"     | ¼"     |
| FS-21SW-404T | White | 4      | 10"     | ¼"     |
| FS-21SW-106T | White | 1      | 10"     | ⅜"     |
| FS-21SW-206T | White | 2      | 10"     | ⅜"     |
| FS-21SW-306T | White | 3      | 10"     | ⅜"     |
| FS-21SW-406T | White | 4      | 10"     | ⅜"     |
| FS-22SW-106T | White | 1      | 20"     | ⅜"     |
| FS-22SW-206T | White | 2      | 20"     | ⅜"     |
| FS-22SW-306T | White | 3      | 20"     | ⅜"     |
| FS-22SW-406T | White | 4      | 20"     | ⅜"     |
| FS-22SW-108T | Blue  | 1      | 20"     | ½"     |
| FS-22SW-208T | Blue  | 2      | 20"     | ½"     |
| FS-22SW-308T | Blue  | 3      | 20"     | ½"     |
| FS-22SW-408T | Blue  | 4      | 20"     | ½"     |

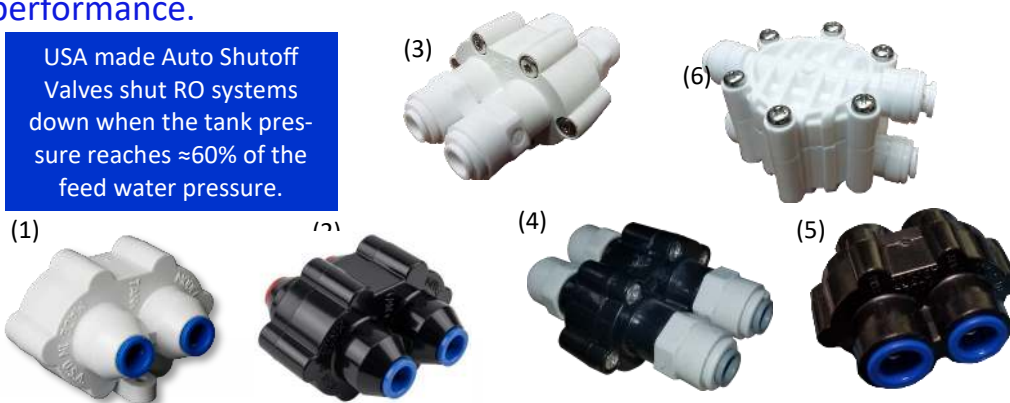


# Residential RO Components

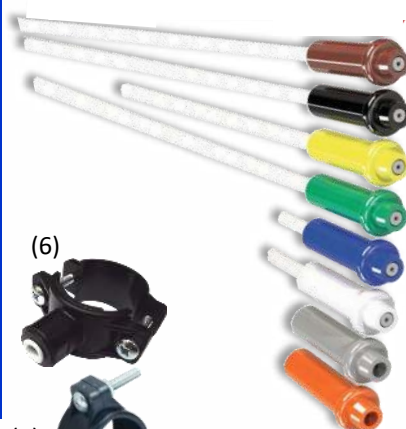
IWP distributes primarily USA made RO components manufactured to our high quality standards ensuring reliability and performance.

| Item #       | Auto Shut Off Valves                           |
|--------------|------------------------------------------------|
| 68-ASV14QC   | (1) 1/4" QC 15-75 GPD                          |
| 68-ASV14QC-K | (2) 1/4" QC 15-75 GPD (Black)                  |
| 68-ASV9014QC | (3) 1/4" QC 15-75 GPD 90% (For Permeate Pumps) |
| 68-ASV14QCHF | (4) 1/4" QC 75-150 GPD                         |
| 68-ASV38QK   | (5) 3/8" QC 150-1000 GPD                       |
| 68-ASVE14    | (6) 1/4" QC 15-100 GPD (Import)                |

USA made Auto Shutoff Valves shut RO systems down when the tank pressure reaches ~60% of the feed water pressure.



Capillary flow restrictors by IWP are highly accurate. Membrane/flow restrictor size is a recommendation based on hard water applications. Soft water or water that is less prone to scaling can allow for increased system efficiencies. The bottom line is that the less water you waste, the shorter the life of the reverse osmosis membrane. The unique "UHE" and "GRO" membranes have proven to successfully exceed traditional membrane efficiencies.



| Item #     | Capillary Restrictors | ~For Membrane               |
|------------|-----------------------|-----------------------------|
| 68-FRC150  | Red ≈150 mL/min       | "1:1" 35 or 50 GPD          |
| 68-FRC200  | Brown ≈189 mL/min     | 18-25 GPD, or "1:1" 75 GPD  |
| 68-FRC275  | Black ≈263 mL/min     | 25-35 GPD or "1:1" 100 GPD, |
| 68-FRC375  | Yellow ≈368 mL/min    | 35-50 GPD,                  |
| 68-FRC500  | Green ≈525 mL/min     | 50-75 GPD                   |
| 68-FRC750  | Blue ≈735 mL/min      | 75-100 GPD                  |
| 68-FRC1000 | White ≈1052 mL/min    | 100-150 GPD                 |
| 68-FRC1500 | Grey ≈1577 mL/min     | 150-500 GPD                 |
| 68-FRC2000 | Orange ≈2000 mL/min   | 200-1000 GPD                |

| Item #    | Drain Clamps                          |
|-----------|---------------------------------------|
| 68-DC14QK | (6) 1/4" Push Connect for 1-1/4" Pipe |
| 68-DC14CK | (7) 1/4" Jaco Style for 1-1/4" Pipe   |
| 68-DC14FK | 1/4" FIPT for 1-1/4" Pipe             |
| 68-DC38CK | (8) 3/8" Jaco Style for 1-1/4"        |
| 68-DC14AC | (9) 1/4" Compression up to 2" Pipe    |
| 68-DC38AC | 3/8" Compression up to 2" Pipe        |



| Item #      | Filter Clips                  | Size          |
|-------------|-------------------------------|---------------|
| 68-CL20W    | (10) Flat Mount w/Holes White | 2"            |
| 68-CL25W    | Flat Mount w/Holes White      | 2-1/2"        |
| 68-CL25K    | (11) Flat Mount w/Holes Black | 2-1/2"        |
| 68-CL2020W  | Double Mount Clip White       | 2"x2"         |
| 68-CL2520W  | Double Mount Clip White       | 2-1/2"x2"     |
| 68-CL2520K  | (12) Double Mount Clip Black  | 2-1/2"x2"     |
| 68-CL2525W  | (13) Double Mount Clip White  | 2-1/2"x2-1/2" |
| 68-MH31212C | (14) 3" Membrane Clip White   | 3"            |

| Item #   | Check Valves                        |
|----------|-------------------------------------|
| 65G-14CV | (15) 1/4" Inline Push Connect       |
| 66-8505  | (16) 3/8" Inline Push Connect Black |
| 68-CV9Y  | (17) 1/8" MPT x 1/4" John Guest 90° |



| Item #     | Membrane Housings                                           |
|------------|-------------------------------------------------------------|
| 62-4004570 | 1.8" x 12" Pentek "Slim" Membrane Housing w/John Guest 1/4" |
| 68-MH2012  | 1.8" x 12" Membrane Housing w/1/8" FNPT                     |

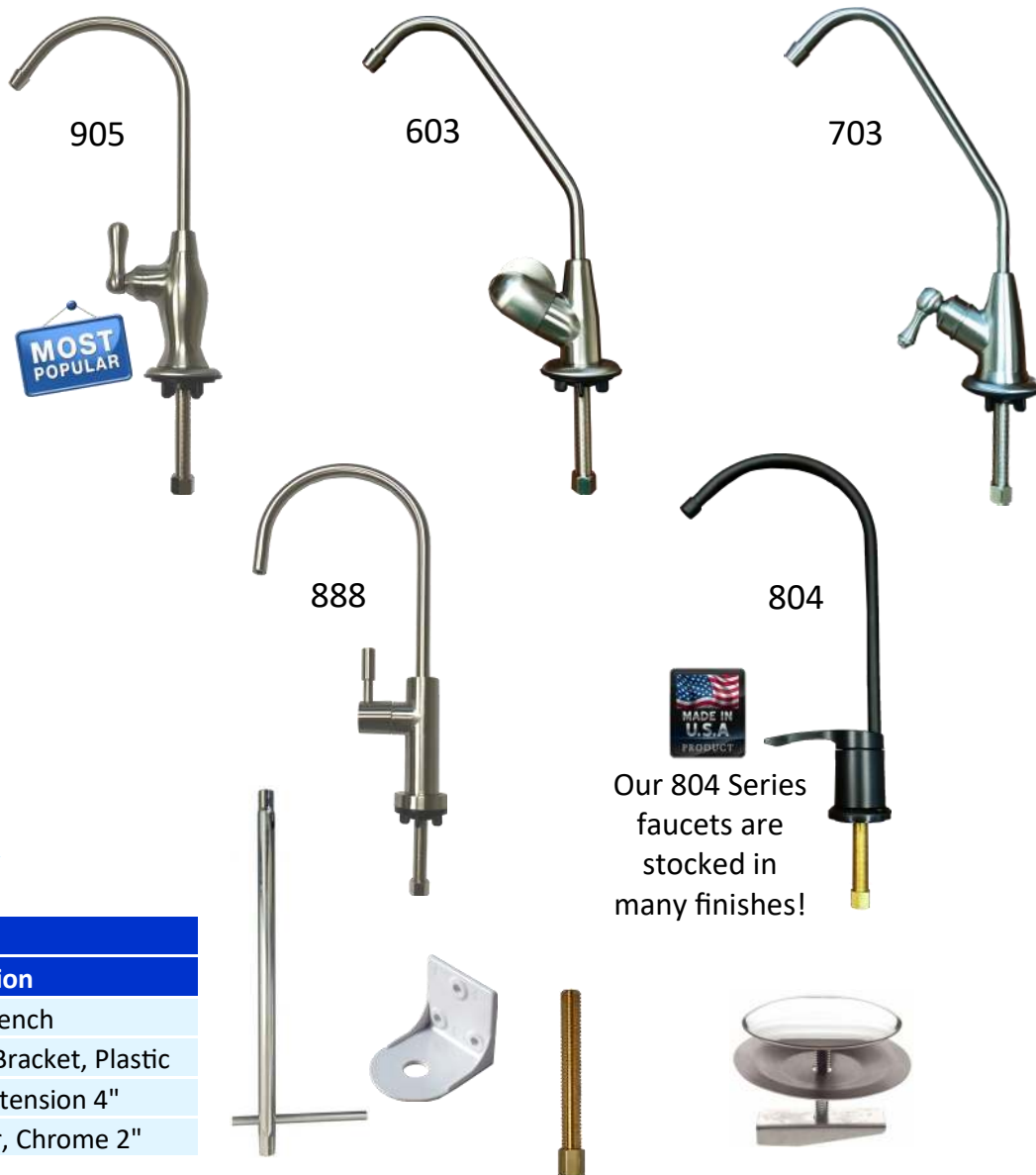




# RO & Drinking Water Faucets

IWP stocks and distributes attractive, high quality faucets for reverse osmosis, water filtration systems and other high purity applications. Our faucets meet stringent lead free requirements and are NSF listed.

| Item #    | Finish            |
|-----------|-------------------|
| 58K-i905C | Chrome            |
| 58K-i905B | Brushed nickel    |
| 58K-i905K | Matte Black       |
| 58K-i905R | Oil Rubbed Bronze |
| 58K-i603C | Chrome            |
| 58K-i603B | Brushed Nickel    |
| 58K-i703C | Chrome            |
| 58K-i703B | Brushed Nickel    |
| 58K-888C  | Chrome            |
| 58K-i888B | Brushed Nickel    |
| 58-804-NP | Brushed Nickel    |
| 58-804-RB | Oil Rubbed Bronze |
| 58-804-CP | Polished Chrome   |
| 58-804-KM | Matte Black       |
| 58-804-WH | White             |



Our 804 Series faucets are stocked in many finishes!

| Service parts |                                    |
|---------------|------------------------------------|
| Item #        | Description                        |
| 58-FC-WR      | Faucet Wrench                      |
| 58-FC-BKT     | Faucet Wall Mount Bracket, Plastic |
| 58-FC-EXT     | Faucet Shank Extension 4"          |
| 58-FHC2       | Faucet Hole Cover, Chrome 2"       |

| Leak detectors and Pressure Reducers |                                          |
|--------------------------------------|------------------------------------------|
| Item #                               | Description                              |
| 68-L00S                              | Leak Sensor, 1/2" MBSP (add 2 Fittings)  |
| 68-L14SK                             | Leak Sensor w/ 1/4" JG Connections       |
| 68-L38S                              | Leak Sensor w/ 3/8" JG Connections       |
| 68-L00H                              | Leak Block Sensor, Add (2) Fittings      |
| 68-L14H                              | Leak Block Sensor w/ 1/4" JG Connections |
| 68-L38S                              | Leak Block Sensor w/ 3/8" JG Connections |
| 68-LP4QK                             | Budget Leak Detector                     |
| 68-LP4Q-RP                           | Budget Leak Detector Replacement Pad     |
| 68-PRV14QC-60                        | 1/4" 60 PSI Pressure Reducer             |
| 68-PRV38QC-60                        | 3/8" 60 PSI Pressure Reducer             |



# Impact Alkaline

Featured in our Alkaline R.O. product line, Impact Alkaline filters offer high quality and great tasting water. Our superior filters provide high pH remineralized water with -ORP. No more “flat” tasting R.O. water! Properly applied, the Impact Alkaline filter can change R.O. water from acidic to an alkaline state in excess of pH 8.0. Our R.O. retrofit kits include ¼” and ⅜” John Guest connectors to make any retrofit easy. IWP stocks filters for applications ranging from 50-1000 plus GPD R.O. systems. Team up with IWP and become a leader in the high pH, low ORP Alkaline market!

| Item #      | Alkaline/pH/ORP                                                    | ≈Rated Flow       | ≈Capacity       |
|-------------|--------------------------------------------------------------------|-------------------|-----------------|
| 60I-AKQ12-R | Retrofit Kit Omnipure 12” QC Series Alkaline Cartridge and Bracket | <.07 GPM/100 GPD  | <1,500Gal.      |
| 60I-AKQ12   | Omnipure QC 12” Alkaline Cartridge                                 | <.07 GPM/100 GPD  | <1,500 Gal.     |
| 60I-AK56K   | 2.5”x12” Inline 3/8” John Guest Connection                         | <.07 GPM/100 GPD  | <1,500 Gal.     |
| 60F-AK56J   | 2.5”x12” Inline 1/4” John Guest Connection                         | <.07 GPM/100 GPD  | <1,500 Gal.     |
| 60I-AK56B   | 2½”x12” Inline 1/4” FIP                                            | <.07 GPM/100 GPD  | <1,500 Gal.     |
| 60I-AC21    | Alkaline 2.5”x9.75” Cartridge Filter (Drop In)                     | <.07 GPM/100 GPD  | <1,500 Gal.     |
| 60I-AC22    | Alkaline 2.5”x20” Cartridge Filter (Drop In)                       | <.15GPM/200 GPD   | <3,000 Gallons  |
| 60I-AC41    | Alkaline 4.5”x10” Cartridge Filter (Drop In Big Blue)              | <.25 GPM/1000 GPD | <3,000 Gallons  |
| 60I-AC42    | Alkaline 4.5”x20” Cartridge Filter (Drop In Big Blue)              | <.5 GPM/1000 GPD  | <6,000 Gallons  |
| CTE-AK      | Alkaline for Clack/Enpress Cartridge                               | <1.25 GPM         | <20,000 Gallons |



17-PH200



| (pH) Pondus Hydrogenii | Examples of Solutions and their Approximate Respective pH |
|------------------------|-----------------------------------------------------------|
| 14                     | Caustic Soda, Drain Cleaner                               |
| 13                     | Oven Cleaner, Bleaches                                    |
| 12                     | Soapy Water                                               |
| 11                     | Ammonia                                                   |
| 10                     | Milk of Magnesia                                          |
| 9                      | Toothpaste                                                |
| 8                      | Baking Soda, Seawater,                                    |
| 7                      | “Pure” Water                                              |
| 6                      | Urine, Milk                                               |
| 5                      | Acid Rain, Black Coffee                                   |
| 4                      | Tomato Juice                                              |
| 3                      | Orange Juice, Soft Drink                                  |
| 2                      | Lemon Juice, Vinegar                                      |
| 1                      | Hydrochloric Acid                                         |
| 0                      | Battery Acid                                              |



# Filter Brackets



| Item #             | Type              | Filters   | Color       | Material |
|--------------------|-------------------|-----------|-------------|----------|
| 60P-ELXKT (1)      | "Q"/ELF Series    | 1         | White       | Plastic  |
| 68-BKT2HZW-Q (2)   | "Q" Series        | 2 "Z"     | White       | Steel    |
| 68-BKT3HZW-Q (3)   | "Q" Series        | 3 "Z"     | White       | Steel    |
| 68-BKT3HUW-Q       | "Q" Series        | 3 "n"     | White       | Steel    |
| 68-BKT4HUW-Q (4)   | "Q" Series        | 4 "n"     | White       | Steel    |
| 68-BKT-EX2         | "ELF" Series      | 2 "n"     | White       | Steel    |
| 68-BKT-EX3         | "ELF" Series      | 3 "n"     | White       | Steel    |
| 68-BKTEX4          | "ELF" Series      | 4 "n"     | White       | Steel    |
| 68-BKTEX5          | "ELF" Series      | 5 "n"     | White       | Steel    |
| 68-BKT1HW-P (5)    | Slim Line         | 1         | White       | Plastic  |
| 68-BKT3HUW-P (6)   | Slim Line         | 3         | White       | Plastic  |
| 68-BKT2HZW (7)     | Slim Line         | 2 "Z"     | White       | Steel    |
| 68-BKT2HUW         | Slim Line         | 2 "n"     | White       | Steel    |
| 68-BKT3HZW-E (8)   | Slim Line         | 3 "Z"     | White       | Steel    |
| 68-BKT3HZK (9)     | Slim Line         | 3 "Z"     | Black       | Steel    |
| 68-BKT3HUW         | Slim Line         | 3 "n"     | White       | Steel    |
| 68-BKT31HLWF       | Slim Line         | 3 Booster | White       | Steel    |
| 68-BKT3A3          | Atlas DP          | 3 "n"     | White       | Steel    |
| 68-BKT3A3K         | Atlas DP          | 3 "n"     | Silver Vein | Steel    |
| 68-BKT-BB1 (10)    | BB Universal      | 1         | Silver Vein | Steel    |
| 68-BKT-UV1 (11)    | BB Universal w/UV | 1         | Silver Vein | Steel    |
| 68-BKT-BB2         | BB Universal      | 2         | Silver Vein | Steel    |
| 68-BKT-BB3 (12)    | BB Universal      | 3         | Silver Vein | Steel    |
| 68-BKT-BBL20S (13) | Legs For BB       | NA        | Silver Vein | Steel    |
| 68-BKT-BB1K (14)   | BB                | 1         | Black       | Steel    |
| 68-BKT-BB1W (15)   | BB                | 1         | White       | Steel    |
| V68-BKT-BB2W (16)  | BB                | 2         | White       | Steel    |
| 68-BKT-BB3W (17)   | BB                | 3         | White       | Steel    |
| 68-BKT-BB4W (18)   | BB                | 4         | White       | Steel    |

| Item #        | Screws For Filters              |               |
|---------------|---------------------------------|---------------|
| 86-1154       | M8-1.25x20 Pan head SS          | For BB        |
| 95-SMS-0637SS | #10x58" Truss Sheet metal Screw | For Slim Line |





# Residential & Light Commercial Membranes



The USA made "Ultra High Efficiency" (UHE) is an encapsulated 1:1 membrane with push to connect color coded connections for reliable and quick installation and include an integrated flow restrictor and check valve. Pentair "GRO" membranes also available.

## 1:1 Encapsulated Membranes

| Item #       | 35-200 GPD Membranes                                                  |
|--------------|-----------------------------------------------------------------------|
| 60-TQMM50FV  | USA 50 GPD "UHE" 60 PSI 1:1 w/Restrictor & Check (Integrated)         |
| 60-TQMM75FV  | USA 75 GPD "UHE" 60 PSI 1:1 w/Restrictor & Check (Integrated)         |
| 60-TQMM75FVK | USA (BLACK) 75 GPD "UHE" 60 PSI 1:1 w/Restrictor & Check (Integrated) |
| 60-TQMM100FV | USA 100 GPD "UHE" 60 PSI 1:1 w/Restrictor & Check (Integrated)        |
| 60-TQMM150FV | USA 150 GPD "UHE" 60 PSI 1:1 w/Restrictor & Check (Integrated)        |
| 60-TQMM200FV | USA 200 GPD "UHE" 60 PSI 1:1 w/Restrictor & Check (Integrated)        |
| 60-MMGR-05   | Pentair "GRO" 50 GPD @ 65 psi                                         |
| 60-MMGR-07   | Pentair "GRO" 75 GPD @ 65 psi                                         |

| Item #         | Specialty Membranes                               |
|----------------|---------------------------------------------------|
| 39S-S35715A-01 | Clack iQ4 Membrane                                |
| 39S-S1227RS    | Clack Microline 25 GPD                            |
| 39S-S1229RS    | Clack Microline 50 GPD                            |
| 39S-S1764RS    | Clack TFC300/400 Membrane                         |
| 60-OPQMM50FV   | Omnipure "Q" Series 50 GPD Check/Restrictor       |
| 60-TQMM75FV    | "Q" Series 75 GPD Check/Restrictor                |
| 60P-EX250      | Omnipure "ELF" Series 250 GPD                     |
| 60P-EX500      | Omnipure "ELF" XL Series 500 GPD                  |
| 39S-S35715A-01 | Clack iQ4 Membrane                                |
| 39S-S1227RS    | Clack Microline 25 GPD                            |
| 39S-S1229RS    | Clack Microline 50 GPD                            |
| 60-BG-50       | BevGuard & Cuno SQC 66-4706G1 50 GPD              |
| 62F-655121     | Pentair Feshpoint membrane 50 GPD                 |
| 62F-655122     | Pentair Feshpoint membrane 75 GPD                 |
| 84A-201987     | 600 GPD @ 100 PSI for 20" Pentek Standard Housing |



IWP "Premium" 1.8" x 12" residential membranes consistently achieve up to 98% rejection rates. Sold individually or discounted box of 25.

## Premium Membranes

| Item #     | 35-150 GPD 1.8" x 12"                            |
|------------|--------------------------------------------------|
| 60-MM035A  | ≈35 GPD @ 60 psi Membrane                        |
| 60-MM050A  | ≈50 GPD @ 60 psi Membrane                        |
| 60-MM050C  | ≈50 GPD @ 60 psi Membrane (Economy)              |
| 60-MM075A  | ≈75 GPD @ 60 psi Membrane                        |
| 60-MM100A  | ≈100 GPD @ 60 psi Membrane                       |
| 60-MM150A  | ≈150 GPD @ 60 psi Membrane                       |
| 68-MH2012  | Standard Membrane Housing 1/8" FNPT              |
| 62-4004570 | Pentek "Slim" Membrane Housing w/John Guest 1/4" |



| Item #      | Light Commercial 500-1000 GPD                         |
|-------------|-------------------------------------------------------|
| 60-MM-500D  | 3"x12" Membrane 1:1 (500 GPD @ 65 PSI)                |
| 68-MH312    | 3"x12" Housing 3/8" FPT                               |
| 68-MH31212C | 3" Housing Clip (Uses 2)                              |
| 60-MM1000U  | 3.4"x13" Membrane 1000 GPD @                          |
| 68-MH3414   | 3.4"x13" Housing 1/2" and 3/8" Stem w/ Clips & Wrench |



# Commercial Membranes

IWP commercial and industrial membranes are manufactured to meet stringent standards. IWP Membranes are 100% integrity tested and may also be ordered as individually wet tested. With our large inventory and customizations available, IWP is your membrane source!

## High Quality Reverse Osmosis Membranes

| Item #      | Variable 30-300 PSI, 98% USA                 |
|-------------|----------------------------------------------|
| 84M-421XLP  | 4"x21" 1100 GPD, @ 80 PSI, 2100 GPD @ 150PSI |
| 84M-440XLP  | 4"x40" 2300 GPD, @ 80 PSI, 4400 GPD @ 150PSI |
| Item #      | Ultra Low Energy 100 PSI, 99%                |
| 84M-2514080 | 2.5" x 14" 225 GPD                           |
| 84M-2521080 | 2.5" x 21" 400 GPD                           |
| 84M-2540080 | 2.5" x 40" 850 GPD                           |
| 84M-414080  | 4" x 14" 600 GPD                             |
| 84M-421080  | 4" x 21" 1000 GPD                            |
| 84M-440080  | 4" x 40" 2500 GPD                            |
| Item #      | Extra Low Energy 100 PSI, 99%                |
| 84M-2514100 | 2.5" x 14" 225 GPD                           |
| 84M-2521100 | 2.5" x 21" 400 GPD                           |
| 84M-2540100 | 2.5" x 40" 850 GPD                           |
| 84M-414100  | 4" x 14" 600 GPD                             |
| 84M-421100  | 4" x 21" 1000 GPD                            |
| 84M-440100H | 4" x 40" 2500 GPD                            |
| 84M-840100  | 8" x 40" 11,000 GPD                          |
| Item #      | Low Energy 150 PSI, 99%                      |
| 84M-2514150 | 2.5" x 14" 225 GPD                           |
| 84M-2521150 | 2.5" x 21" 400 GPD                           |
| 84M-2540150 | 2.5" x 40" 1000 GPD                          |
| 84M-414150  | 4" x 14" 600 GPD                             |
| 84M-421150  | 4" x 21" 1000 GPD                            |
| 84M-440150  | 4" x 40" 2500 GPD                            |
| 84M-840150  | 8" X 40" 12,500 GPD                          |
| Item #      | High Rejection 225 PSI, 99.5%                |
| 84M-2514225 | 2.5" x 14" 150 GPD                           |
| 84M-2521225 | 2.5" x 21" 250 GPD                           |
| 84M-2540225 | 2.5" x 40" 650 GPD                           |
| 84M-414225  | 4" x 14" 400 GPD                             |
| 84M-421225  | 4" x 21" 900 GPD                             |
| 84M-440225  | 4" x 40" 2200 GPD                            |
| 84m-840225  | 8" X 40" 9000 GPD                            |



IWP can custom build your membrane based water treatment system. Whole house reverse osmosis, commercial applications, food processing and many other applications can benefit from high quality water!

## High Quality Nano Membranes

| Item #   | Nano 70 PSI, 40-50% |
|----------|---------------------|
| 84M-21N3 | 2.5" x 14" 200 GPD  |
| 84M-22N3 | 2.5" x 21" 350 GPD  |
| 84M-24N3 | 2.5" x 40" 850 GPD  |
| 84M-41N3 | 4" x 14" 400 GPD    |
| 84M-42N3 | 4" x 21" 1000 GPD   |
| 84M-44N3 | 4" x 40" 2500 GPD   |
| Item #   | Nano 70 PSI, 80-90% |
| 84M-21N4 | 2.5" x 14" 200 GPD  |
| 84M-22N4 | 2.5" x 21" 250 GPD  |
| 84M-24N4 | 2.5" x 40" 680 GPD  |
| 84M-41N4 | 4" x 14" 400 GPD    |
| 84M-42N4 | 4" x 21" 950 GPD    |
| 84M-44N4 | 4" x 40" 2000 GPD   |



Proper pre-treatment, system maintenance and reasonable expectations of the membranes capabilities can greatly reduce common problems with Reverse Osmosis water treatment. Alum, hardness, iron, manganese, silica and many other common contaminants will reduce the life of the membranes.



Test Parameters: 550 TDS filtered (5 micron), de-chlorinated municipal feed water, 77°F, 15% permeate recovery, 6.5-7.0 pH range. Data taken after 30 minutes of operation. Maximum pressure drop for each element is 10 psi. Minimum salt rejection is 96%. Permeate flow for individual elements may vary +/- 20%. Call for more detailed operating parameters

Ratings/estimates herein are based on controlled laboratory conditions. Actual results are expected to vary based on multiple factors.



# Melt Blown Sediment Filters



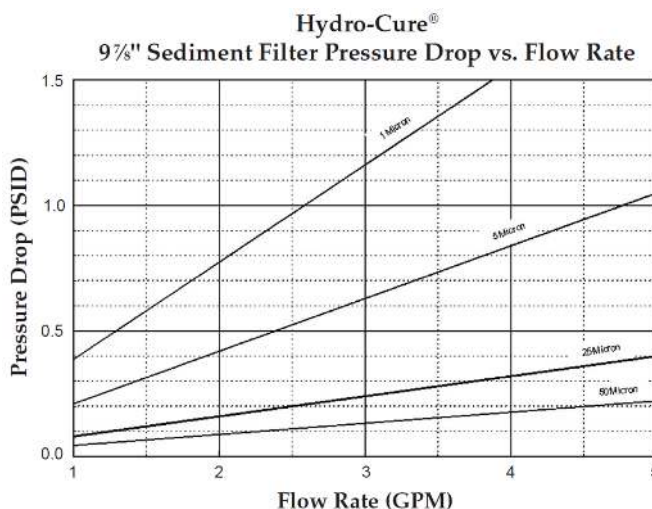
True Multi gradient depth filtration offers superior performance. The inner most fibers form a tight self supporting matrix which eliminates the need for a separate center core and provides exceptional strength. As a depth filter, Hydro-Cure® sediment cartridges trap particles throughout the entire cross section of the filter. Larger particles are trapped on or near the surface of the filter and the smaller particles are trapped throughout the inner layers of the cartridge. The gradient density design allows for optimum dirt holding capacity and minimal change-outs. Hydro-Cure® melt blown filter cartridges are made of polypropylene resin meeting FDA regulation 21CFR177.1520. No binders, lubricants or antistatic agents are used in the manufacturing process. Melt blown polypropylene filters have been tested and certified under NSF/ANSI Standard 42 for material requirements only. The inert polypropylene resin provides exceptional chemical compatibility to handle a wide range of process fluids. The 4.5" filters offer two distinct multi-gradient layers.

## 2.5" True Gradient

| Item #    | Size   | Micron | Case Qty. |
|-----------|--------|--------|-----------|
| 60-SD2101 | 9-7/8" | 1      | 24        |
| 60-SD2105 | 9-7/8" | 5      | 24        |
| 60-SD2125 | 9-7/8" | 25     | 24        |
| 60-SD2150 | 9-7/8" | 50     | 24        |
| 60-SD2201 | 20"    | 1      | 25        |
| 60-SD2205 | 20"    | 5      | 25        |
| 60-SD2225 | 20"    | 25     | 25        |
| 60-SD2250 | 20"    | 50     | 25        |
| 60-SD2301 | 30"    | 1      | 15        |
| 60-SD2305 | 30"    | 5      | 15        |
| 60-SD2325 | 30"    | 25     | 15        |
| 60-SD2350 | 30"    | 50     | 15        |
| 60-SD2401 | 40"    | 1      | 15        |
| 60-SD2405 | 40"    | 5      | 15        |
| 60-SD2425 | 40"    | 25     | 15        |
| 60-SD2450 | 40"    | 50     | 15        |

## 4.5" Dual Gradient

| Item #      | Size   | Micron | Case Qty. |
|-------------|--------|--------|-----------|
| 60-SD412501 | 9-7/8" | 25/1   | 8         |
| 60-SD412505 | 9-7/8" | 25/5   | 8         |
| 60-SD415025 | 9-7/8" | 50/25  | 8         |
| 60-SD422501 | 20"    | 25/1   | 6         |
| 60-SD422505 | 20"    | 25/5   | 6         |
| 60-SD425025 | 20"    | 50/25  | 6         |





# Pleated Sediment Filters

## Pleated Polyester 2.5" x 10"

| Item #          | Type     | Micron | ≈Flow | Box Qty. |
|-----------------|----------|--------|-------|----------|
| 60U-PT-PP21003A | Absolute | 0.35   | 5     | 25       |
| 60U-PT-PP21005A | Absolute | 0.5    | 5     | 25       |
| 60U-PT-PE2101   | Nominal  | 1      | 7     | 25       |
| 60U-PT-PE2105   | Nominal  | 5      | 7     | 25       |
| 60U-PT-PE2110   | Nominal  | 10     | 7     | 25       |
| 60U-PT-PE2120   | Nominal  | 20     | 7     | 25       |
| 60U-PT-PE2130   | Nominal  | 30     | 7     | 25       |
| 60U-PT-PE2150   | Nominal  | 50     | 7     | 25       |
| 60U-PT-PE21100  | Nominal  | 100    | 7     | 25       |

## Pleated Polyester 2.5" x 20" (30" and 40" Available)

|                 |          |      |    |    |
|-----------------|----------|------|----|----|
| 60U-PT-PP22003A | Absolute | 0.35 | 10 | 20 |
| 60U-PT-PP22005A | Absolute | 0.5  | 10 | 20 |
| 60U-PT-PE2201   | Nominal  | 1    | 14 | 20 |
| 60U-PT-PE2205   | Nominal  | 5    | 14 | 20 |
| 60U-PT-PE2210   | Nominal  | 10   | 14 | 20 |
| 60U-PT-PE2220   | Nominal  | 20   | 14 | 20 |
| 60U-PT-PE2230   | Nominal  | 30   | 14 | 20 |
| 60U-PT-PE2250   | Nominal  | 50   | 14 | 20 |
| 60U-PT-PE22100  | Nominal  | 100  | 14 | 20 |

## Pleated Polyester 4.5" x 10"

|                 |          |      |    |   |
|-----------------|----------|------|----|---|
| 60U-PT-PP41003A | Absolute | 0.35 | 10 | 8 |
| 60U-PT-PP41005A | Absolute | 0.5  | 10 | 8 |
| 60U-PT-PE4101   | Nominal  | 1    | 15 | 8 |
| 60U-PT-PE4105   | Nominal  | 5    | 15 | 8 |
| 60U-PT-PE4110   | Nominal  | 10   | 15 | 8 |
| 60U-PT-PE4120   | Nominal  | 20   | 15 | 8 |
| 60U-PT-PE4130   | Nominal  | 30   | 15 | 8 |
| 60U-PT-PE4150   | Nominal  | 50   | 15 | 8 |
| 60U-PT-PE41100  | Nominal  | 100  | 15 | 8 |

## Pleated Polyester 4.5" x 20" (30" Available)

|                 |          |      |    |   |
|-----------------|----------|------|----|---|
| 60U-PT-PP42003A | Absolute | 0.35 | 20 | 6 |
| 60U-PT-PP42005A | Absolute | 0.5  | 20 | 6 |
| 60U-PT-PE4201   | Nominal  | 1    | 30 | 6 |
| 60U-PT-PE4205   | Nominal  | 5    | 30 | 6 |
| 60U-PT-PE4210   | Nominal  | 10   | 30 | 6 |
| 60U-PT-PE4220   | Nominal  | 20   | 30 | 6 |
| 60U-PT-PE4230   | Nominal  | 30   | 30 | 6 |
| 60U-PT-PE4250   | Nominal  | 50   | 30 | 6 |
| 60U-PT-PE42100  | Nominal  | 100  | 30 | 6 |

**USA Made** pleated filter cartridges offer high surface area, capacity and flow rate. Economical, efficient and multi-use, pleated filters are manufactured in media materials including cellulose, polyester and polypropylene. Micron ratings from .1 to 50 nominal, plus various absolute rated versions. Typically stocked with standard "DOE" (Double Open End, Flat Gasket) end caps, many options are available.

**Polyester:** Our most popular and most versatile offers the best mix of quality and cost savings. Chemical and bacterial resistance make this media choice the most common for residential and commercial potable water applications.

**Cellulose:** Used for general water filtration applications where cost is the key issue. Typically not considered a good choice for most applications.

**Polyethylene:** Typically higher cost, used primarily for absolute rated and specialty applications.

**Nominal Cartridge Rating:** ≈85% of particles equal to the nominal rating will be retained.

**Absolute Cartridge Rating:** ≈99.9% (3 Log) of the particles larger than the absolute rating will be retained.



**Different end caps available. Most pleated filters are special order with minimum order quantities. EPDM, Buna-N, Viton, Silicone O-rings available. Core Options include Polypropylene, Tin-Plated Steel, 304 and 316 Stainless.**

# Custom Filled Cartridges

Available in a nearly limitless number of configurations, contact IWP to discuss your custom blend.



| 2.5" x 10"     |                                 |             |                                |                                   |
|----------------|---------------------------------|-------------|--------------------------------|-----------------------------------|
| Item #         | Media                           | ≈Peak GPM   | Capacity                       | Primary Functions                 |
| 85SC-2510-000  | Empty, Add .025 Ft <sup>3</sup> | NA          | 0.025 Cubic Feet Media         | Custom Fill any Media(s)          |
| 85SC-2510-001  | Empty, Add .03 Ft <sup>3</sup>  | NA          | Snap Fit 0.03 Cubic Feet Media | Custom Fill any Media(s)          |
| 60i-AC21       | Alkaline                        | 1           | ≈1500 Gallons @ <.07 GPM       | Alkaline <.07 GPM                 |
| 85SC-2510-130  | Mixed Bed DI Resin              | 1           | ≈1300 Gallons @ 5 ppm          | Deionization                      |
| 85SC-2510-160  | Softening Cation Resin          | 1           | ≈80 Gallons @ 10 GPG           | Hardness                          |
| 85SC-2510-180  | Nitrate Selective Anion Resin   | 1           | ≈250 Gallons @ 20 mg/L         | Nitrate                           |
| 85SC-2510P-202 | Eco-Mix Pilot Test Cartridge    | 300 mL/min. | Pilot test                     | Pilot for Iron, Softening Tannin  |
| 85SC-2510-301  | 0.35 lbs KDF 55 & GAG           | 1           | ≈1,000 Gallons                 | Hydrogen Sulfide/Iron/Chloramines |
| 85SC-2510-451  | Polyphosphate                   | 1           | 3-6 Months Typical             | Corrosion Control                 |
| 85SC-2510-505  | Calcium Carbonate               | 1           | ≈2500 Gallons                  | Neutralization                    |
| 85SC-2510-610  | Activated Alumina               | 1           | ≈350 Gallons @ 4 mg/L          | Fluoride/Bicarbonate              |
| 85SC-2510-640  | Nano Titanium Oxide             | 1           | ≈6000 Gallons @ 40 ug/L        | Arsenic                           |
| 85SC-2510-670  | Bone Char                       | 1           | N/A                            | Fluoride/Chlorine                 |
| 2.5" x 20"     |                                 |             |                                |                                   |
| 85SC-2520-000  | Empty, Add .06 Ft <sup>3</sup>  | NA          | 0.06 Cubic Feet Media          | Custom Fill any Media(s)          |
| 60i-AC22       | Alkaline                        | 1           | ≈3000 Gallons @ <.07 GPM       | Alkaline <.15 GPM                 |
| 85SC-2520-130  | Mixed Bed DI Resin              | 1           | ≈2500 Gallons @ 5 ppm          | Deionization                      |
| 85SC-2520-450  | 2.5 Lb. Polyphosphate 1/2       | 1           | 3-6 Months Typical             | Corrosion Control                 |
| 85SC-2520-451  | 5 Lb. Polyphosphate Full        | 1           | 6-12 Months Typical            | Corrosion Control                 |
| 85SC-2520-505  | Calcium Carbonate               | 1           | ≈5000 Gallons                  | Neutralization                    |
| 4.5" X 10"     |                                 |             |                                |                                   |
| 85SC-4510-000  | Empty, Add .07 Ft <sup>3</sup>  | NA          | 0.07 Cubic Feet Media          | Custom Fill any Media(s)          |
| 60i-AC41       | Alkaline                        | 3           | ≈3000 Gallons @ <.07 GPM       | Alkaline <.25 GPM                 |
| 85SC-4510-130  | Mixed Bed DI Resin              | 3           | ≈2600 Gallons @ 5 ppm          | Deionization                      |
| 85SC-4510-450  | 2.5 Lb. Polyphosphate 1/2       | 3           | 3-6 Months Typical             | Corrosion Control                 |
| 85SC-4510-505  | Calcium Carbonate               | 3           | ≈5000 Gallons                  | Neutralization                    |
| 4.5" X 10"     |                                 |             |                                |                                   |
| 85SC-4520-000  | Empty, Add .16 Ft <sup>3</sup>  | NA          | 0.16 Cubic Feet Media          | Custom Fill any Media(s)          |
| 60i-AC42       | Alkaline                        | 3           | ≈6000 Gallons @ <.07 GPM       | Alkaline <.5 GPM                  |
| 85SC-4520-130  | Mixed Bed DI Resin              | 3           | ≈5200 Gallons @ 5 ppm          | Deionization                      |
| 85SC-4520-160  | Softening Cation Resin          | 3           | ≈500 Gallons @ 10 GPG          | Hardness                          |
| 85SC-4520-210  | Catalytic GAC                   | 3           | 25,000 Gallons for Cl.         | Chlorine Reduction                |
| 85SC-4520-410  | Scale Reduction Media           | 3           | Annual                         | Scale Mitigation                  |
| 85SC-4520-450  | 7 Lb. Polyphosphate 1/2         | 3           | 3-6 Months                     | Corrosion Control                 |
| 85SC-4520-505  | Calcium Carbonate               | 3           | ≈10,000 Gallons                | Neutralization                    |
| 85SC-4520-670  | Bone Char                       | 3           | NA                             | Fluoride/Chlorine                 |

\*Filtration media will react to the influent water chemistry and other factors. Effluent conditions (e.g. pH, hardness, TDS, aggressivity, odor and taste) may be impacted. Recommended peak flow rate and capacities are theoretical estimates only. Actual service flow rates may be significantly lower than the peak flow rate. Your results may vary significantly. Please see media specifications or contact IWP with questions.

2101 E. Francis Street, Ontario, CA USA 91761 • 909-939-8008 • [www.ImpactWaterProducts.com](http://www.ImpactWaterProducts.com)

Data herein is provided as a courtesy and is subject to change without notice.



# Empty Fillable Housings

| Item Number       | Description                                            |
|-------------------|--------------------------------------------------------|
| 60-EC2510T (1)    | 2.5" x 10" Drop In Cartridge Standard Translucent      |
| 60-EC2510W        | 2.5" x 10" Drop In Cartridge Standard White            |
| 60-EC2510T-SF (2) | 2.5" x 10" Drop In Cartridge High Capacity Translucent |
| 60-EC2510W-SF     | 2.5" x 10" Drop In Cartridge High Capacity White       |
| 60-EC2520W (3)    | 2.5" x 20" Drop In Cartridge Standard White            |
| 60-EC4510W (4)    | 4½" x 10" Drop In Cartridge White "BB"                 |
| 60-EC4520W (5)    | 4½" x 20" Drop In Cartridge White "BB"                 |
| Item Number       | Accessories                                            |
| 60-EC25SP         | 2.5" Felt Media Divider                                |
| 60-EC45SP         | 4.5" Felt Media Divider                                |



(1)  
Shown with two medias and separator pad.



(2)  
Shown with alkaline medias. High capacity offers 20% more capacity!



(3)



(4)



(5)

## Inline Filters

| Item #         | Description                  | Size     | Connection    | Max. Service Life Gallons/Months | Box Qty. |
|----------------|------------------------------|----------|---------------|----------------------------------|----------|
| 60I-AK56K      | Impact Alkaline              | 2.5"x12" | 3/8" QC       | Flow <.07/<1500 Gal.             | 25       |
| 60I-AK56J      | Impact Alkaline              | 2.5"x12" | 1/4" QC       | Flow <.07/<1500 Gal.             | 25       |
| 60I-AK56B      | Impact Alkaline              | 2.5"x12" | 1/4" FPT      | Flow <.07/<1500 Gal.             | 25       |
| 80Q-805        | Clarify Quantum Disinfection | 2"x10"   | 3/8" QC       | .5 GPM/12                        | 25       |
| 60-ILK2505-JJ  | 5 Micron Sediment            | 2"x10"   | 1/4" QC       | 1000/6                           | 25       |
| 60-ILK2505-KK  | 5 Micron Sediment            | 2"x10"   | 3/8" QC       | 1000/6                           | 25       |
| 60-ILK2505-SS  | 5 Micron Sediment            | 2"x10"   | 1/4" QC Elbow | 1000/6                           | 25       |
| 60-ILK5605-JJ  | 5 Micron Sediment            | 2.5"x12" | 1/4" QC       | 1000/6                           | 25       |
| 60-IL0633-B    | Acid Washed GAC              | 2"x6"    | 1/4" FPT      | 1000/12                          | 50       |
| 60-ILK2333-KK  | Acid Washed GAC              | 2"x6"    | 3/8" QC       | 1000/12                          | 50       |
| 60-ILK2533-JJ  | Acid Washed GAC              | 2"x10"   | 1/4" QC       | 1500/12                          | 25       |
| 60-ILK2533-SS  | Acid Washed GAC              | 2"x10"   | 1/4" QC Elbow | 1500/12                          | 25       |
| 60-IL1040B     | Acid Washed GAC              | 2"x10"   | 1/4" FNPT     | 1500/12                          | 25       |
| 60-ILK2533-KK  | Acid Washed GAC              | 2"x10"   | 3/8" QC       | 1500/12                          | 25       |
| 60-ILK2533K-KK | "BLACK" Acid Washed GAC      | 2"x10"   | 3/8" QC       | 1500/12                          | 25       |
| 60-ILK2529-KK  | Catalytic GAC                | 2"x10"   | 3/8" QC       | 750/6                            | 25       |
| 60-ILK5633-JJ  | Acid Washed GAC              | 2.5"x12" | 1/4" QC       | 2500/12                          | 25       |
| 60-ILK5633-KK  | Acid Washed GAC              | 2.5"x12" | 3/8" QC       | 2500/12                          | 25       |
| 60-ILK2551-KK  | ½ Calcite & ½ GAC            | 2"x10"   | 1/4" FNPT     | 1000/6                           | 25       |
| 60-ILK5651-BB  | ½ Calcite & ½ GAC            | 2.5"x12" | 1/4" FNPT     | 1000/6                           | 25       |
| 60-ILK2548-JJ  | Calcite                      | 2"x10"   | 1/4" QC       | 1000/6                           | 25       |
| 60-ILK2548-KK  | Calcite                      | 2"x10"   | 3/8" QC       | 1000/6                           | 25       |
| 60-ILK5648-BB  | Calcite                      | 2.5"x12" | 1/4" QC       | 1500/6                           | 25       |
| 60-ILK2586-JJ  | GAC/Phosphate                | 2"x10"   | 1/4" QC       | 750/6                            | 25       |
| 60-ILK5686-KK  | GAC/Phosphate                | 2.5"x12" | 3/8" QC       | 1000/6                           | 25       |
| 60-ILK5655-JJ  | D.I. NRW37                   | 2.5"x12" | 1/4" QC       | 4500 ppm/12                      | 25       |



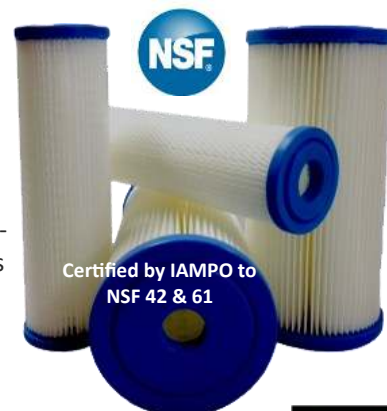




# ULTRA~D™

## SUBMICRON DEPTH FILTRATION

The **Ultra-D Submicron Depth Filtration Series** are manufactured using an electroadsorptive media capable of **removing submicron pathogens and inorganic contaminants through electro-adhesion and ion exchange**. This technology makes it possible for a nonwoven media to produce filtration efficiency comparable to ultra membrane filtration but at a very low pressure drop, with high flow rates and high loading capacity. The media in the **Ultra-D** filter is NSF 42 and 61-approved. This media has been specifically engineered to have an average pore size of 2 microns and a mean flow pore of 0.7 microns. The media in these cartridges efficiently retain inorganic and organic particulates, cell debris, endotoxins, virus, proteins, colloids, bacteria and inorganic submicron particulates.



### The Ultra-D filter reduces the following heavy metals:

- >95% Lead\*
- >80% Ferrous Iron\*
- >95% Arsenic V\*
- >95% Cadmium\*
- >85% Chromium\*
- >75% Selenium\*



### The Ultra-D filter reduces the following pathogens:

- >99.99% viruses (polio, rotavirus, norovirus, etc.)\*
- >99.99% bacteria (e coli, legionella, pseudomonas, etc.)\*



| Ultra-D  |          |           |                                  |                       |           |
|----------|----------|-----------|----------------------------------|-----------------------|-----------|
| Item #   | Size     | ≈Peak GPM | ≈Capacity Gal. (1μ Pre-Filtered) | Media                 | Case Qty. |
| 60U-D21U | 2.5"x10" | 4         | 10,000                           | Micro-D               | 25        |
| 60U-D22U | 2.5"x20" | 8         | 20,000                           | Micro-D               | 20        |
| 60U-D41U | 4.5"x10" | 12        | 30,000                           | Micro-D               | 8         |
| 60U-D42U | 4.5"x20" | 24        | 60,000                           | Micro-D               | 6         |
| 60U-D21R | 2.5"x10" | 4         | 10,000                           | Micro-D Silver        | 25        |
| 60U-D22R | 2.5"x20" | 8         | 20,000                           | Micro-D Silver        | 20        |
| 60U-D41R | 4.5"x10" | 12        | 30,000                           | Micro-D Silver        | 8         |
| 60U-D42R | 4.5"x20" | 24        | 60,000                           | Micro-D Silver        | 6         |
| 60U-D21K | 2.5"x10" | 4         | 10,000                           | Micro-D Carbon        | 25        |
| 60U-D22K | 2.5"x20" | 8         | 20,000                           | Micro-D Carbon        | 20        |
| 60U-D41K | 4.5"x10" | 12        | 30,000                           | Micro-D Carbon        | 8         |
| 60U-D42K | 4.5"x20" | 24        | 60,000                           | Micro-D Carbon        | 6         |
| 60U-D21G | 2.5"x10" | 4         | 10,000                           | Micro-D Silver/Carbon | 25        |
| 60U-D22G | 2.5"x20" | 8         | 20,000                           | Micro-D Silver/Carbon | 20        |
| 60U-D41G | 4.5"x10" | 12        | 30,000                           | Micro-D Silver/Carbon | 8         |
| 60U-D42G | 4.5"x20" | 24        | 60,000                           | Micro-D Silver/Carbon | 6         |

| Ultra-D w/ 5 Micron Wrap |          |           |                                  |                       |           |
|--------------------------|----------|-----------|----------------------------------|-----------------------|-----------|
| Item Number              | Size     | ≈Peak GPM | ≈Capacity Gal. (1μ Pre-Filtered) | Media                 | Case Qty. |
| 60U-D21UE                | 2.5"x10" | 3         | 10,000                           | Micro-D               | 25        |
| 60U-D22UE                | 2.5"x20" | 6         | 20,000                           | Micro-D               | 20        |
| 60U-D41UE                | 4.5"x10" | 9         | 30,000                           | Micro-D               | 8         |
| 60U-D42UE                | 4.5"x20" | 18        | 60,000                           | Micro-D               | 6         |
| 60U-D21RE                | 2.5"x10" | 3         | 10,000                           | Micro-D Silver        | 25        |
| 60U-D22RE                | 2.5"x20" | 6         | 20,000                           | Micro-D Silver        | 20        |
| 60U-D41RE                | 4.5"x10" | 9         | 30,000                           | Micro-D Silver        | 8         |
| 60U-D42RE                | 4.5"x20" | 18        | 60,000                           | Micro-D Silver        | 6         |
| 60U-D21KE                | 2.5"x10" | 3         | 10,000                           | Micro-D Carbon        | 25        |
| 60U-D22KE                | 2.5"x20" | 6         | 20,000                           | Micro-D Carbon        | 20        |
| 60U-D41KE                | 4.5"x10" | 9         | 30,000                           | Micro-D Carbon        | 8         |
| 60U-D42KE                | 4.5"x20" | 18        | 60,000                           | Micro-D Carbon        | 6         |
| 60U-D21GE                | 2.5"x10" | 3         | 10,000                           | Micro-D Silver/Carbon | 25        |
| 60U-D22GE                | 2.5"x20" | 6         | 20,000                           | Micro-D Silver/Carbon | 20        |
| 60U-D41GE                | 4.5"x10" | 9         | 30,000                           | Micro-D Silver/Carbon | 8         |
| 60U-D42GE                | 4.5"x20" | 18        | 60,000                           | Micro-D Silver/Carbon | 6         |

\*Tested by a certified laboratory in the U.S. (testing was



| Water Factory/Cuno SQC Compatible |                                                |            |          |
|-----------------------------------|------------------------------------------------|------------|----------|
| Item #                            | Cartridge Description                          | Cuno #     | Box Qty. |
| 60-BG-5D                          | Water Factor®/Cuno® SQC 5μ Sediment            | 47-55702G2 | 6        |
| 60-BG-5C                          | Water Factor®/Cuno® SQC Sediment /Carbon Block | 47-55706G2 | 6        |
| 60-BG-GC                          | Water Factory®/Cuno® SQC GAC                   | 47-55704G1 | 6        |
| 60-BG-CB                          | Water Factory®/Cuno® SQC 5μ Carbon Block       | 47-55710G2 | 6        |
| 60-BG-50                          | Water Factory®/Cuno® SQC RO Membrane 50 GPD    | 66-4706G2  | 6        |



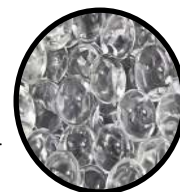
# USA Carbon Block Filters

For over 30 years, Hydro-Flow has stood at the forefront of water filtration engineering, setting the standard for excellence in the industry. When you partner with Hydro-Flow, you're not just working with seasoned professionals—you're collaborating with the very best in the field. As a USA-based company, we possess an in-depth understanding of the filtration sector, rooted in its very inception. Our specialization in Carbon Block Technology sets us apart, enabling us to deliver exceptional solutions tailored to your needs.

| Item #                                                                        | Size     | Micron | ≈Capacity in Gal.              | Case Qty. | Pressure Drop  |
|-------------------------------------------------------------------------------|----------|--------|--------------------------------|-----------|----------------|
| <b>Chlorine (Cl) &amp; CTO Carbon Block</b>                                   |          |        |                                |           |                |
| 60H-CB21                                                                      | 2.5"x10" | ≈5     | Cl 30,000 @ 1 GPM              | 20        | 5 PSI @ 1 GPM  |
| 60H-CB22                                                                      | 2.5"x20" | ≈5     | Cl 60,000 @ 2 GPM              | 26        | 6 PSI @ 2 GPM  |
| 60H-CB41                                                                      | 4.5"x10" | ≈5     | Cl 120,000 @ 3 GPM             | 6         | 7 PSI @ 3 GPM  |
| 60H-CB42                                                                      | 4.5"x20" | ≈5     | Cl 240,000 @ 7 GPM             | 6         | 7 PSI @ 6 GPM  |
| <b>Chloramine (NH2Cl) &amp; VOC Carbon Block</b>                              |          |        |                                |           |                |
| 60H-CB21N                                                                     | 2.5"x10" | ≈0.5   | NH2Cl 2,000/VOC 1,000 @ 1 GPM  | 20        | 10 PSI @ 1 GPM |
| 60H-CB22N                                                                     | 2.5"x20" | ≈0.5   | NH2Cl 4,000/VOC 2,000 @ 2 GPM  | 6         | 10 PSI @ 2 GPM |
| 60H-CB41N                                                                     | 4.5"x10" | ≈0.5   | NH2Cl 6,000/VOC 3,000 @ 1 GPM  | 6         | 7 PSI @ 3 GPM  |
| 60H-CB42N                                                                     | 4.5"x20" | ≈0.5   | NH2Cl 12,000/VOC 4,000 @ 1 GPM | 6         | 7 PSI @ 6 GPM  |
| <b>Carbon Block w/ Scale Inhibitor Carbon Block/Polyphosphate Core</b>        |          |        |                                |           |                |
| 60H-CB21P                                                                     | 2.5"x10" | ≈5     | 30,000 @ 1 GPM/1 Year          | 20        | 4 PSI @ 1 GPM  |
| 60H-CB22P                                                                     | 2.5"x20" | ≈5     | 60,000 @ 2 GPM/1 Year          | 6         | 6 PSI @ 2 GPM  |
| 60H-CB41P                                                                     | 4.5"x10" | ≈5     | 120,000 @ 3 GPM/1 Year         | 6         | 8 PSI @ 3 GPM  |
| 60H-CB42P                                                                     | 4.5"x20" | ≈5     | 240,000 @ 7 GPM/1 Year         | 6         | 10 PSI @ 6 GPM |
| <b>PFAS (PFOA/PFOS) Reduction Carbon Block</b>                                |          |        |                                |           |                |
| 60H-CB21PF                                                                    | 2.5"x10" | ≈1     | FPOA/PFOA 2,000 @ 1 GPM        | 20        | 5 PSI @ 1 GPM  |
| 60H-CB22PF                                                                    | 2.5"x20" | ≈1     | FPOA/PFOA 4,000 @ 2 GPM        | 6         | 6 PSI @ 2 GPM  |
| 60H-CB41PF                                                                    | 4.5"x10" | ≈1     | FPOA/PFOA 5,000 @ 3 GPM        | 6         | 7 PSI @ 3 GPM  |
| 60H-CB42PF                                                                    | 4.5"x20" | ≈1     | FPOA/PFOA 10,000 @ 4 GPM       | 6         | 7 PSI @ 6 GPM  |
| <b>Lead Reduction Carbon Block</b>                                            |          |        |                                |           |                |
| 60H-CB21L                                                                     | 2.5"x10" | ≈0.5   | 1,275 @ 1 GPM                  | 20        | 12 PSI @ 1 GPM |
| 60H-CB22L                                                                     | 2.5"x20" | ≈0.5   | 2,550 @ 2 GPM                  | 6         | 12 PSI @ 2 GPM |
| 60H-CB41L                                                                     | 4.5"x10" | ≈0.5   | 3,600 @ 3 GPM                  | 6         | 14 PSI @ 3 GPM |
| 60H-CB42L                                                                     | 4.5"x20" | ≈0.5   | 7,500 @ 4 GPM                  | 6         | 14 PSI @ 6 GPM |
| <b>KDF 55 and CTO Carbon Block, Bacteriostatic (BS) &amp; Scale Reduction</b> |          |        |                                |           |                |
| 60H-CB21K5                                                                    | 2.5"x10" | ≈10    | BS & CTO 20,000 @ 1 GPM        | 20        | 5 PSI @ 1 GPM  |
| 60H-CB22K5                                                                    | 2.5"x20" | ≈10    | BS & CTO 40,000 @ 2 GPM        | 6         | 6 PSI @ 2 GPM  |
| 60H-CB41K5                                                                    | 4.5"x10" | ≈10    | BS & CTO 60,000 @ 3 GPM        | 6         | 7 PSI @ 3 GPM  |
| 60H-CB42K5                                                                    | 4.5"x20" | ≈10    | BS & CTO 120,000 @ 7 GPM       | 6         | 7 PSI @ 6 GPM  |
| <b>KDF 85 and CTO Carbon Block, Bacteriostatic (BS) &amp; Scale Reduction</b> |          |        |                                |           |                |
| 60H-CB21K8                                                                    | 2.5"x10" | ≈10    | BS & CTO 20,000 @ 1 GPM        | 20        | 5 PSI @ 1 GPM  |
| 60H-CB22K8                                                                    | 2.5"x20" | ≈10    | BS & CTO 40,000 @ 2 GPM        | 6         | 6 PSI @ 2 GPM  |
| 60H-CB41K8                                                                    | 4.5"x10" | ≈10    | BS & CTO 60,000 @ 3 GPM        | 6         | 7 PSI @ 3 GPM  |
| 60H-CB42K8                                                                    | 4.5"x20" | ≈10    | BS & CTO 120,000 @ 7 GPM       | 6         | 7 PSI @ 6 GPM  |



Scale inhibitor core can sequester hardness and inhibit the precipitation and formation of scale deposits. A protective coating provides corrosion protection against acidity, alkalinity, and many other mineral salts which may damage plumbing components.



Pentek Diamond Flow cartridges are a popular choice as a pre-filter for RO systems due to its high dirt holding capacity!



| Other Carbon Blocks 2.5"x10" |                              |
|------------------------------|------------------------------|
| 60-CB21-P                    | Diamond Flow Sediment/Carbon |
| 60-CB21                      | OmniPure Carbon Block        |
| 60m-cb21                     | MATRIKX Carbon Block         |

| Male Adapter Straight |           |         |            |
|-----------------------|-----------|---------|------------|
| Item #                | JG Part # | Tube OD | Thread MPT |
| 66-1101               | PP010821W | 1/4"    | 1/8"       |
| 66-1102               | P010822W  | 1/4"    | 1/4"       |
| 66-1103               | PP010823W | 1/4"    | 3/8"       |
| 66-1104               | PP011222W | 3/8"    | 1/4"       |
| 66-1105               | PP011223W | 3/8"    | 3/8"       |
| 66-1105a              | PP010824W | 1/4"    | 1/2"       |
| 66-1106               | PP011224W | 3/8"    | 1/2"       |
| 66-1107               | PP011623W | 1/2"    | 3/8"       |
| 66-1108               | PP011624W | 1/2"    | 1/2"       |

| Fixed Elbow Male Adapter |              |         |            |
|--------------------------|--------------|---------|------------|
| Item #                   | JG Part #    | Tube OD | Thread MPT |
| 66-1121                  | PP480821W    | 1/4"    | 1/8"       |
| 66-1122                  | PP480822W    | 1/4"    | 1/4"       |
| 66-1124                  | PP480823W    | 1/4"    | 3/8"       |
| 66-1125                  | PP481222W    | 3/8"    | 1/4"       |
| 66-1126                  | PP481223W    | 3/8"    | 3/8"       |
| 65G-FE820816*            | 65G-FE820816 | 1/2"    | 1/2"       |

| Female Adapter |           |         |            |
|----------------|-----------|---------|------------|
| Item #         | JG Part # | Tube OD | Thread FPT |
| 66-1511        | PP450821W | 1/4"    | 1/8"       |
| 66-1512        | PP450822W | 1/4"    | 1/4"       |
| 66-1514        | PP451222W | 3/8"    | 1/4"       |
| 66-1516        | PP451223W | 3/8"    | 3/8"       |

| Faucet/Compression /GHT Adapter |            |         |                                |
|---------------------------------|------------|---------|--------------------------------|
| Item #                          | JG Part #  | Tube OD | Thread                         |
| 66-1501                         | PP3208U7W  | 1/4"    | 7/16"-24 Faucet                |
| 66-1506                         | PP3212U7W  | 3/8"    | 7/16"-24 Faucet                |
| 66-8811                         | PSEI6012U9 | 3/8"    | 9/16-24<br>3/8 F Compression   |
| 65G-1505*                       | -          | 3/8"    | 9/16-24 M<br>3/8 M Compression |
| 66-8881                         | NC2098LF   | 1/4"    | 3/4" GHT                       |
| 66-8841                         | NC2258     | 3/8"    | 3/4" GHT                       |

\*Mur-Lok component, not John Guest

| Male Stem Adapter |           |      |            |
|-------------------|-----------|------|------------|
| Item #            | JG Part # | Stem | Thread MPT |
| 66-1111           | PP050821W | 1/4" | 1/8"       |
| 66-1113           | PP050822W | 1/4" | 1/4"       |
| 66-1115           | PP051222W | 3/8" | 1/4"       |
| 66-1116           | PP051223W | 3/8" | 3/8"       |
| 66-1118           | PI051624S | 1/2" | 1/2"       |

| Stem Reducer |           |      |         |
|--------------|-----------|------|---------|
| Item #       | JG Part # | Stem | Tube OD |
| 66-1301      | PP061208W | 3/8" | 1/4"    |
| 66-1304      | PP061612W | 1/2" | 3/8"    |
| 66-1308      | PP062012W | 5/8" | 3/8"    |
| 66-1309      | PP062016W | 5/8" | 1/2"    |

| Stem Elbow |           |      |         |
|------------|-----------|------|---------|
| Item #     | JG Part # | Stem | Tube OD |
| 66-1311    | PP220808W | 1/4" | 1/4"    |
| 66-1315    | PP221208W | 3/8" | 1/4"    |
| 66-1316    | PP221212W | 3/8" | 3/8"    |
| 66-1318    | PP221616W | 1/2" | 1/2"    |

| Straight Union |           |         |         |
|----------------|-----------|---------|---------|
| Item #         | JG Part # | Tube OD | Tube OD |
| 66-1211        | PP0408W   | 1/4"    | 1/4"    |
| 66-1216        | PP0412W   | 3/8"    | 3/8"    |
| 66-1218        | PP0416W   | 1/2"    | 1/2"    |
| 66-1221        | PP201208W | 3/8"    | 1/4"    |
| 66-1229        | PP201612W | 1/2"    | 3/8"    |

| Union Elbow |           |         |         |
|-------------|-----------|---------|---------|
| Item #      | JG Part # | Tube OD | Tube OD |
| 66-1202     | PP0308W   | 1/4"    | 1/4"    |
| 66-1204     | PP0312W   | 3/8"    | 3/8"    |
| 66-1208     | PP0316W   | 1/2"    | 1/2"    |
| 66-1231     | PP211008W | 5/16"   | 1/4"    |
| 66-1234     | PP211208W | 3/8"    | 1/4"    |
| 66-1238     | PP211612W | 1/2"    | 3/8"    |

| Plug    |           |         |
|---------|-----------|---------|
| Item #  | JG Part # | Tube OD |
| 66-1701 | PP0808W   | 1/4"    |
| 66-1706 | PP0812W   | 3/8"    |
| 66-1708 | PP0816W   | 1/2"    |





**Bulkhead union**

| Item #  | JG Part # | Tube OD | Tube OD    |
|---------|-----------|---------|------------|
| 66-1601 | PP1208W   | 1/4"    | 1/4" White |
| 66-2601 | PP1208E   | 1/4"    | 1/4" Black |
| 66-3615 | PI121208S | 1/4"    | 3/8" Grey  |
| 66-1606 | PP1212W   | 3/8"    | 3/8" White |
| 66-2606 | PP1212E   | 3/8"    | 3/8" Black |
| 66-1608 | PP1216W   | 1/2"    | 1/2" Black |

**Union Tee**

| Item #   | JG Part #   | Tube OD | Tube OD | Branch OD |
|----------|-------------|---------|---------|-----------|
| 66-1401  | PP0208W     | 1/4"    | 1/4"    | 1/4"      |
| 66-1404  | PP0212W     | 3/8"    | 3/8"    | 3/8"      |
| 66-1404K | PP0212E     | 3/8"    | 3/8"    | 3/8"      |
| 66-1408  | PP0216W     | 1/2"    | 1/2"    | 1/2"      |
| 66-1431  | PP30080812W | 1/4"    | 1/4"    | 3/8"      |
| 66-1433  | PP30120812W | 3/8"    | 1/4"    | 3/8"      |
| 66-1436  | PP30121208W | 3/8"    | 3/8"    | 1/4"      |
| 66-1438  | PP301612W   | 1/2"    | 1/2"    | 3/8"      |

**Stem Tee**

| Item #      | JG Part # | Size |
|-------------|-----------|------|
| 66-4421     | CI580808W | 1/4" |
| 65L-T6Q6Q6S | -         | 3/8" |
| 65L-T8Q8Q8S | -         | 1/2" |

**Stack Tee**

| Item #      | JG Part # | Stack Thread |
|-------------|-----------|--------------|
| 66-4411     | CI530808W | 1/4"         |
| 66-1461     | PP531212W | 3/8"         |
| 65L-T8Q8S8Q | -         | 1/2"         |

**MPT Branch Tee**

| Item #      | JG Part # | Tube OD | Tube OD | Branch MPT |
|-------------|-----------|---------|---------|------------|
| 65L-T6Q4Q4T | -         | 1/4"    | 3/8"    | 1/4"       |
| 66-1441     | CI0212W   | 3/8"    | 3/8"    | 3/8"       |

**Two Way Divider**

| Item #  | JG Part # | Inlet | Outlet OD |
|---------|-----------|-------|-----------|
| 66-3411 | PI2308S   | 1/4"  | 1/4"      |
| 66-1425 | PP241208W | 3/8"  | 1/4"      |
| 66-1416 | PP2312W   | 3/8"  | 3/8"      |

**Locking Clips**

| Item #  | JG Part # | Size |
|---------|-----------|------|
| 66-8981 | PIC1808R  | 1/4" |
| 66-8983 | PIC1812R  | 3/8" |
| 66-8984 | PIC1816R  | 1/2" |

**O-Rings**

| Item #  | JG Part # | Size |
|---------|-----------|------|
| 66-8991 | CP-R08I-S | 1/4" |
| 66-8993 | CP-R12I-S | 3/8" |
| 66-899K | CP-R16I-S | 1/2" |

**Tubing By Foot or Roll**

| Item #     | Color  | Size (Roll) |
|------------|--------|-------------|
| 66-T14Y-FT | Yellow | 1/4" (500)  |
| 66-T14W-FT | White  | 1/4" (500)  |
| 66-T14R-FT | Red    | 1/4" (500)  |
| 66-T14U-FT | Blue   | 1/4" (500)  |
| 66-T14K-FT | Black  | 1/4" (500)  |
| 66-T38Y-FT | Yellow | 3/8" (500)  |
| 66-T38W-FT | White  | 3/8" (500)  |
| 66-T38R-FT | Red    | 3/8" (500)  |
| 66-T38U-FT | Blue   | 3/8" (500)  |
| 66-T38K-FT | Black  | 3/8" (500)  |
| 66-T12W-FT | White  | 1/2" (250)  |
| 66-T12U-FT | Blue   | 1/2" (250)  |
| 66-T12K-FT | Black  | 1/2" (250)  |

**Tools**

| Item #  | Description             |
|---------|-------------------------|
| 74-TCG  | Tube Cutter             |
| 66-8955 | 3/8" & 1/4" Collet Tool |



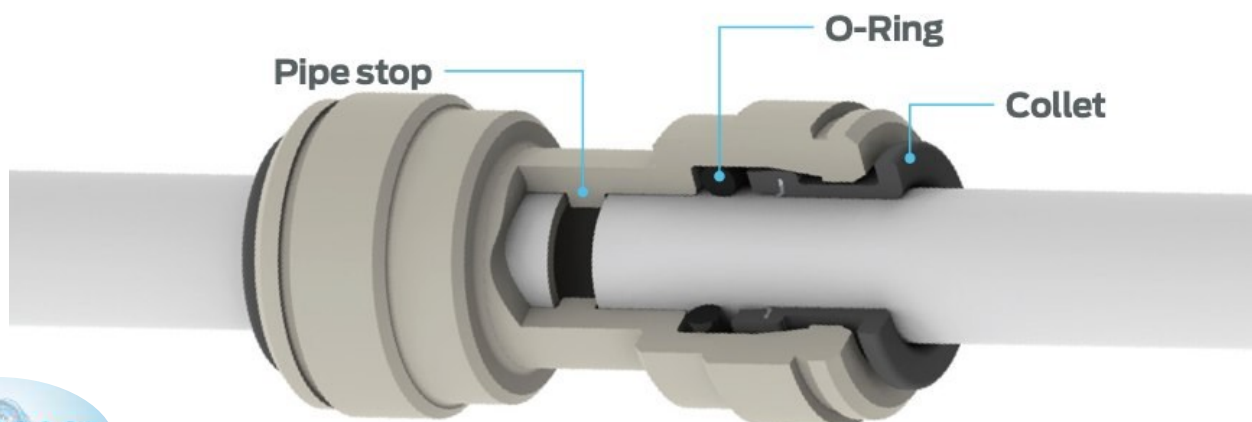
| Angle Stop Adapters |           |                 |             |               |
|---------------------|-----------|-----------------|-------------|---------------|
| Item #              | JG Part # | Angle Stop Size | Tube outlet | Material      |
| 66-8121             | PASVPP1   | 3/8"            | 1/4"        | Plastic       |
| 66-8125             | PASVPP2   | 3/8"            | 3/8"        | Plastic       |
| 66-8131             | PASVPP5   | 1/2" or 3/8"    | 1/4"        | Plastic       |
| 66-8135             | PASVPP6   | 1/2" or 3/8"    | 3/8"        | Plastic       |
| 66-8101             | ASVPP1LF  | 3/8"            | 1/4"        | Plastic/Brass |
| 66-8105             | ASVPP2LF  | 3/8"            | 3/8"        | Plastic/Brass |
| 66-8111             | ASVPP5LF  | 1/2" or 3/8"    | 1/4"        | Plastic/Brass |
| 66-8115             | ASVPP6LF  | 1/2" or 3/8"    | 3/8"        | Plastic/Brass |

| Quick Connect Ball Valves |             |      |
|---------------------------|-------------|------|
| Item #                    | JG Part #   | Size |
| 66-8221                   | PPSV040808W | 1/4" |
| 66-8225                   | PPSV041212W | 3/8" |
| 66-8311                   | PISV0416S   | 1/2" |

| MPT x Quick Connect Ball Valves |             |         |      |            |
|---------------------------------|-------------|---------|------|------------|
| Item #                          | JG Part #   | Tube OD | MPT  | Branch MPT |
| 66-8211                         | PPSV010822W | 1/4"    | 1/4" | 1/4"       |
| 66-8215                         | PPSV011223W | 3/8"    | 3/8" | 3/8"       |

| Tank Ball Valves |             |        |            |
|------------------|-------------|--------|------------|
| Item #           | JG Part #   | Outlet | Thread FPT |
| 66-8231          | PPSV500822W | 1/4"   | 1/4"       |
| 66-8235          | PPSV501222W | 3/8"   | 1/4"       |

| Check Valves    |          |                     |
|-----------------|----------|---------------------|
| Item #          | Inlet    | Outlet              |
| 65G-14CV        | 1/4" QC  | 1/4" QC             |
| 66-8505         | 3/8" QC  | 3/8" QC             |
| 68-CV18M14QE-CW | 1/8" MPT | 1/4" QC Elbow White |
| 66-8501         | 1/8" MPT | 1/4" QC Elbow Grey  |





# How Much Sodium is in Softened Water?

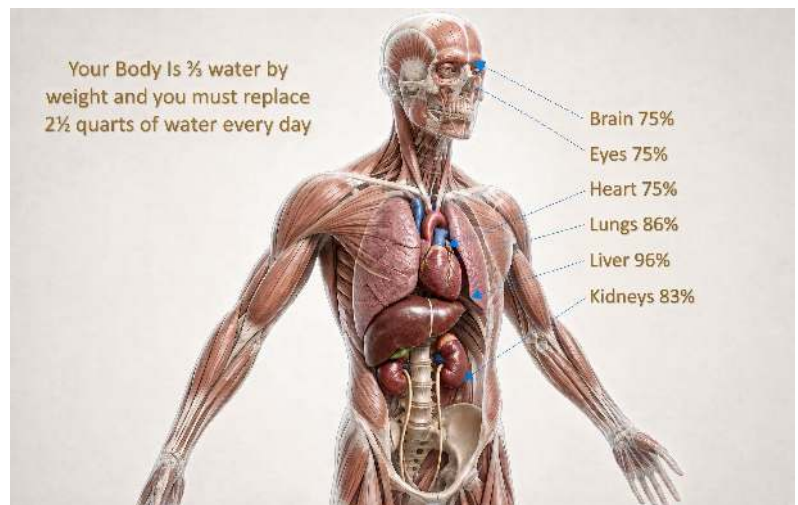
A common question is “How much sodium is in softened water?” The amount of sodium in your water is directly related to your total water hardness. It's easy math, so let's figure it out together. Municipal water supplies tend to be between 5 to 25 grains per gallon of hardness (on average) though far higher and lower levels are not uncommon. Water softeners use ion exchange resin to collect hardness and in return releases a proportional amount of sodium. According to the WQA (Water Quality Association), for every grain of hardness there will be 30mg of sodium in a gallon after it has been softened.

$$\begin{aligned}15 \text{ Grains} \times 30\text{mg} &= 450\text{mg in a Gallon (128oz)} \\450\text{mg Sodium} / 128\text{oz} &= 3.51 \text{ mg per oz} \\3.51\text{mg} \times 8\text{oz} &= 28.12\text{mg}\end{aligned}$$

**An 8oz glass of 15 grain softened water contains ≈28 mg of sodium.**

| Food                           | Serving Size | ≈Sodium Content |
|--------------------------------|--------------|-----------------|
| Glass of 15 GPG Softened Water | 8oz.         | 28mg            |
| Soy Sauce                      | 1tsp         | 1,000mg         |
| Cottage Cheese                 | 1 Cup        | 1,000mg         |
| BBQ Sauce Packet               | Packet       | 300mg           |
| Bagel                          | 1            | 460mg           |
| Veggie Burger                  | 1 Patty      | 500mg           |
| Chicken Noodle Soup            | 1 Cup        | 940mg           |
| Mozzarella Sticks              | 6 Pieces     | 2,500+          |

Some consumers are concerned that drinking softened water will increase the level of sodium in their diet. As demonstrated above this is of little real concern. Softening your water will not result in salty-tasting water. Sodium bicarbonate, which is different from sodium chloride (table salt), is formed through the water softening process and imparts little change to the flavor of the water. If you are on a sodium restricted diet or have excessively high hardness the installation of a Reverse Osmosis drinking water system may be beneficial and recommended.



## NSF Listings Related to the Water Industry

- 5 Water heaters, hot water supply boilers, and heat recovery equipment
- 14 Plastics piping system components and related materials
- 20 Commercial bulk milk dispensing equipment
- 24 Plumbing system components for recreational vehicles
- 25 Vending machines for food and beverages
- 29 Detergent and chemical feeders for commercial spray-type dishwashing machines
- 40 Residential wastewater treatment systems
- 42 Drinking water treatment units – Aesthetic effects
- 44 Residential cation exchange water softeners
- 46 Evaluation of components and devices used in wastewater treatment systems
- 50 Equipment for swimming pools, spas, hot tubs, and other recreational water facilities
- 53 Drinking water treatment units – Health effects
- 55 Ultraviolet microbiological water treatment systems
- 58 Reverse osmosis drinking water treatment systems
- 60 Drinking water treatment chemicals – Health effects
- 61 Drinking water system components – Health effects
- 62 Drinking water distillation systems
- 177 Shower filtration systems – Aesthetic effects
- 184 Residential dishwashers
- 222 Ozone generators
- 245 Wastewater treatment systems - nitrogen reduction
- 330 Glossary of drinking water treatment unit terminology
- 350 Onsite residential and commercial water reuse treatment systems
- 350-1 Onsite residential and commercial graywater treatment systems for subsurface discharge
- 359 Valves for crosslinked polyethylene (PEX) water distribution tubing systems
- 360 Wastewater treatment systems – Field performance verification
- 372 Drinking water treatment system components – Lead content



## CUSTOMIZED DEALER PROGRAMMING MODULES

Customized programming module allows you to add QR codes, custom information, logo, phone number and more. Available on all 5.1 UV systems! We make the module and send it to you! Plug the programmer into the UV controller, power up the system and wait. In less than a minute the color screen display will be reconfigured to your specification! Stop losing annual lamp sales! Best of all, it's FREE! Just place a minimum stocking order and we do the rest! Ensure your customers protection and stop losing lamp sales and service calls. Your company information, custom graphics and much more is available with our dealer programming module!



The 5.1 series and NSF UV systems include the “LIGHTLOCK” Feature! This proprietary encrypted technology eliminates the use of competitive lamps and prevents systems from operating beyond the useful life of the UV lamp. This protects your customers and prevents potential damage to the ballast from starting lamps that are past their useful lifetime. The 5.1 color screen alerts user when it is time to change the lamp and where to buy them from! The 5.1 series includes full diagnostics, warnings, QR codes and the “Infinite Expandability Port” which allows for the addition of remote monitoring devices, flow meters, UV sensors and much more See the accessories page for more details about the available options for the 5.1 series!

**LIGHTLOCK**

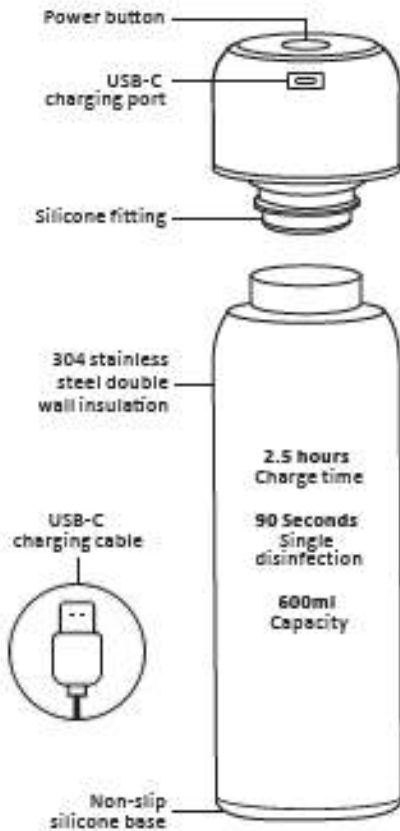




The 4.1 series include a competitively priced controller with a countdown timer and audible/visual lamp change and failure indicator. No lamp key required. The unique splash proof case protects the controller from water damage and the fully potted ballast enhances heat dissipation. The modern case gives the 4.1 series a modern appearance!

## GLACIERUVLED By LUMINOR

**304 Stainless Steel water bottle with a built in UV sanitizing LED. A great way to seal the sale! In 90 seconds, the water is sterilized! Safe water without the need for chemicals! 600 mL capacity double wall insulated!**



Glacier UV LED by LUMINOR offers peace of mind by harnessing the power of UV LED disinfection. This easy to use, environmentally friendly stainless steel reusable water bottle provides on-the-go safe water without the need for harmful chemicals. The 90 second cleaning cycle mode will keep your bottle smelling fresh and clean!

### Features:

304 stainless steel double wall insulation for both hot and cold water! Easy to use disinfection mode with simple push button activation. Reusable eco-friendly alternative to plastic water bottles that will last for years! USB-C charging with long lasting battery! A great way to close a sale!



Filtration followed by sanitizing UV! Ideal for whole house or commercial applications. Featuring 1" Black housings in 10" or 20" configurations. High flow rate UV featuring the 5.1 controller. Fully customizable with minimum order quantities. Attractive heavy duty filter bracket is available with floor mounting legs. Wrench included. Filters are plumbed before the UV unless otherwise specified.

## 20" UV Systems w/1 Micron Filter

80-F152101



**MOST  
POPULAR**



Shown with optional legs

## 10" UV Systems (Add Filters)

| Item #   | Description |
|----------|-------------|
| 80-F1511 | 1 Stage     |
| 80-F1512 | 2 Stage     |
| 80-F1513 | 3 Stage     |

## 20" UV Systems (Add Filters)

| Item #   | Description |
|----------|-------------|
| 80-F1521 | 1 Stage     |
| 80-F1522 | 2 Stage     |
| 80-F1523 | 3 Stage     |

## UV Spec

15 GPM @ 16mj/cm<sup>2</sup>  
8 GPM @ 30mj/cm<sup>2</sup>16  
5.6 GPM @ 40mj/cm<sup>2</sup>  
~Power Usage 25W

## Bypass Adder

80-F15BP



| Item #      | Options/Replacement Parts     |
|-------------|-------------------------------|
| 80-F15BP    | Bypass adder for F152101      |
| 68I-BB10X   | 20" Leg set for 2 and 3 stage |
| 80-RL-420   | Replacement lamp              |
| 80-RQ-420   | Replacement sleeve            |
| 80-RC-B5.01 | Controller 110-220V           |
| 60-SD422501 | 1 Micron sediment filter      |





Our best selling Luminor product made just for IWP! Perfect for residential and light commercial applications. Used exclusively on our 5.1BB product line. A shorter 3.5" chamber for more compact installations! High flow, 1" MNPT threads, color screen, Lightlock technology with flow rates up to 15 gallons per minute. Easily expand this unit with IoT connectivity, UV sensors, cooling fan and much more!

| Item #     | ≈Rated GPM<br>16/30/40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Cham-<br>ber<br>Length | Chamber<br>Diameter | Replace-<br>ment Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|------------|-------------------------------------------|----------------------|------------------------|---------------------|-----------------------|------------------------------|---------------------------|------------------|
| 80-LB5-081 | 15/8/5.6                                  | 1" MNPT              | 20"                    | 3.5"                | 80-RL-420             | 80-RQ-420                    | 80-RC-B5.01               | 25               |

### UV Spec

15 GPM @ 16mj/cm<sup>2</sup>  
 8 GPM @ 30mj/cm<sup>2</sup>  
 5.6 GPM @ 40mj/cm<sup>2</sup>  
 ≈Power Usage 25W



### Popular Options for 80-LB5-081 and all 5.1BB1" Systems

| Part #        | Description                                                       |
|---------------|-------------------------------------------------------------------|
| 80-MOD-APP    | IoT module, App allows monitoring of the UV from anywhere!        |
| 80-MOD-SHERPA | Monitor your UV from inside your home! Simple plug and play!      |
| 80-RS-B3.5    | UV sensor allows real time monitoring of the UV intensity.        |
| 80-LFM-1.0    | 1" Flow meter reduces power during low/no flow conditions.        |
| 80-130014     | Simple fan to keep the water cooler during low/no use conditions. |



# LUMINOR<sup>®</sup> BLACKCOMB Series 4.1

Our best selling UV systems. The 4.1 series are economical, simple and reliable. Axial flow 304 stainless steel reactor chamber with visual sight port for "Lamp-on" verification. Countdown electronic ballast with audible and visual lamp change and failure indicator. Thimble sleeve allows for easy quartz sleeve replacement.

| Item #     | ≈Rated GPM<br>16/30/40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replace-<br>ment Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Lamp & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|------------|-------------------------------------------|----------------------|-------------------|---------------------|-----------------------|------------------------------|------------------------------|---------------------------|------------------|
| 80-LB4-021 | 4/2/1.6                                   | 1/2" FNPT            | 10.3"             | 2.5"                | 80-RL-210             | 80-RQ-210                    | 80-RLQ-210                   | 80-RC-B4.01               | 14               |
| 80-LB4-031 | 6/3/2.4                                   | 1/2" MNPT            | 14.3"             | 2.5"                | 80-RL-290             | 80-RQ-290                    | 80-RLQ-290                   | 80-RC-B4.01               | 60               |
| 80-LB4-061 | 11/6/4.4                                  | 3/4" MNPT*           | 21.3"             | 2.5"                | 80-RL-470             | 80-RQ-470                    | 80-RLQ-470                   | 80-RC-B4.01               | 22               |
| 80-LB4-101 | 20/11/8.3                                 | 3/4" MNPT*           | 35.2"             | 2.5"                | 80-RL-820             | 80-RQ-820                    | 80-RLQ-820                   | 80-RC-B4.01               | 30               |
| 80-LB4-151 | 30/15/12                                  | 1" MNPT              | 40"               | 2.5"                | 80-RL-999             | 80-RQ-999                    | 80-RLQ-999                   | 80-RC-B4.01               | 46               |
| 80-LB4-201 | 39/21/16                                  | 1" MNPT              | 36.1"             | 3.5"                | 80-RL-850             | 80-RQ-850                    | 80-RLQ-850                   | 80-RC-B4.01               | 60               |

\*Add (2) 80-SS 1" x 3/4" stainless steel bushings for applications where 1" threading is preferred.



# LUMINOR<sup>®</sup> BLACKCOMB Series 5.1

The 5.1 Series adds many exciting features to the 4.1 including a full color interface, **LIGHTLOCK** technology for protected lamp sales and the ability to add multiple options including the Sherpa IoT module for use with the UV Concierge App to monitor the UV's performance, ultrasonic flow meter for significant energy savings, UV sensor ensuring consistent UV intensity and much more!

| Item #     | ≈Rated GPM<br>16/30/40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replace-<br>ment Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Lamp & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|------------|-------------------------------------------|----------------------|-------------------|---------------------|-----------------------|------------------------------|------------------------------|---------------------------|------------------|
| 80-LB5-021 | 4/2/1.6                                   | 1/2" FNPT            | 10.3"             | 2.5"                | 80-RL-210             | 80-RQ-210                    | 80-RLQ-210                   | 80-RC-B5.01               | 14               |
| 80-LB5-031 | 6/3/2.4                                   | 1/2" MNPT            | 14.3"             | 2.5"                | 80-RL-290             | 80-RQ-290                    | 80-RLQ-290                   | 80-RC-B5.01               | 60               |
| 80-LB5-061 | 11/6/4.4                                  | 3/4" MNPT*           | 21.3"             | 2.5"                | 80-RL-470             | 80-RQ-290                    | 80-RLQ-470                   | 80-RC-B5.01               | 22               |
| 80-LB5-101 | 20/11/8.3                                 | 3/4" MNPT*           | 35.2"             | 2.5"                | 80-RL-820             | 80-RQ-820                    | 80-RLQ-820                   | 80-RC-B5.01               | 30               |
| 80-LB5-151 | 30/15/12                                  | 1" MNPT              | 40"               | 2.5"                | 80-RL-999             | 80-RQ-999                    | 80-RLQ-999                   | 80-RC-B5.01               | 46               |
| 80-LB5-201 | 39/21/16                                  | 1" MNPT              | 36.1"             | 3.5"                | 80-RL-850             | 80-RQ-850                    | 80-RLQ-850                   | 80-RC-B5.01               | 60               |

\*Add (2) 80-SS 1" x 3/4" stainless steel bushings for applications where 1" threading is preferred.

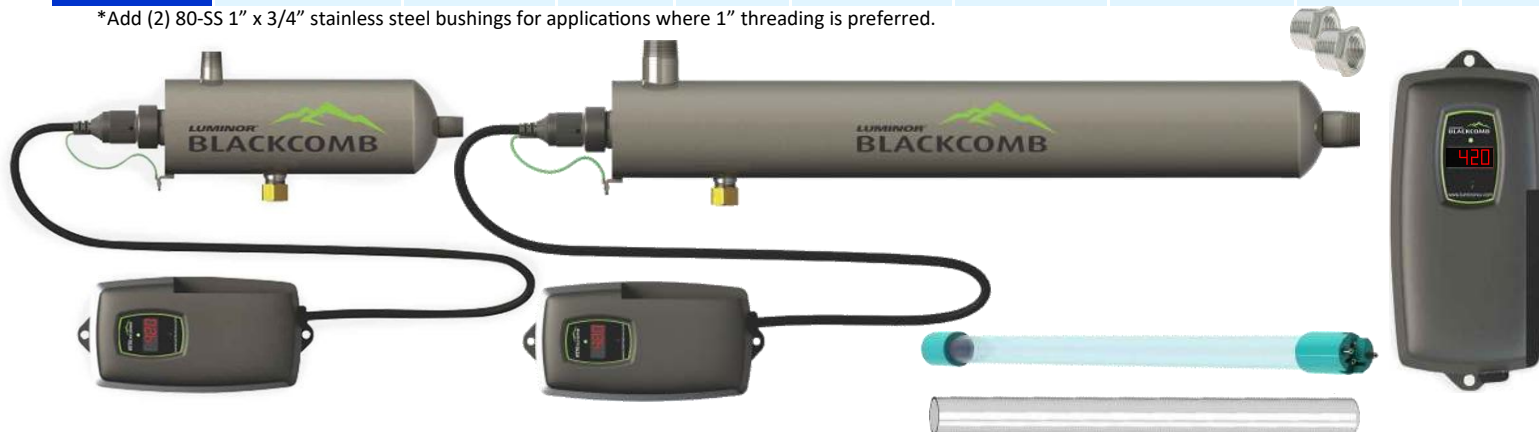


# LUMINOR<sup>™</sup> BLACKCOMB Series 4.1 HO

The 4.1 HO (High Output) series feature an axial flow 316 stainless steel reactor chamber with visual sight port for "Lamp-on" verification and 10,000 hour lamp life. Countdown electronic ballast with audible and visual lamp change and failure indicator. Thimble sleeve allows for easy quartz sleeve replacement.

| Item #      | ≈Rated GPM<br>16/30/40mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz | Replacement<br>Quartz & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|-------------|------------------------------------------|----------------------|-------------------|---------------------|---------------------|-----------------------|--------------------------------|---------------------------|------------------|
| 80-LBH4-051 | 8/5/3                                    | 1/2" MNPT            | 11.7"             | 3.5"                | 80-RL-210HO         | 80-RQ-210             | 80-RLQ-210HO                   | 80-RCHO-4.12              | 20               |
| 80-LBH4-101 | 19/10/7                                  | 3/4" MNPT*           | 16.5"             | 3.5"                | 80-RL-330HO         | 80-RQ-330             | 80-RLQ-330HO                   | 80-RCHO-4.12              | 38               |
| 80-LBH4-151 | 27/15/11                                 | 1" MNPT              | 20"               | 3.5"                | 80-RL-420HO         | 80-RQ-420             | 80-RLQ-420HO                   | 80-RCHO-4.12              | 57               |
| 80-LBH4-251 | 47/25/19                                 | 1" MNPT              | 26.9"             | 3.5"                | 80-RL-600HO         | 80-RQ-600             | 80-RLQ-600HO                   | 80-RCHO-4.12              | 73               |
| 80-LBH4-401 | 78/40/31                                 | 1-1/2" MNPT          | 40.7"             | 3.5"                | 80-RL-950HO         | 80-RQ-950             | 80-RLQ-950HO                   | 80-RCHO-4.12              | 115              |

\*Add (2) 80-SS 1" x 3/4" stainless steel bushings for applications where 1" threading is preferred.

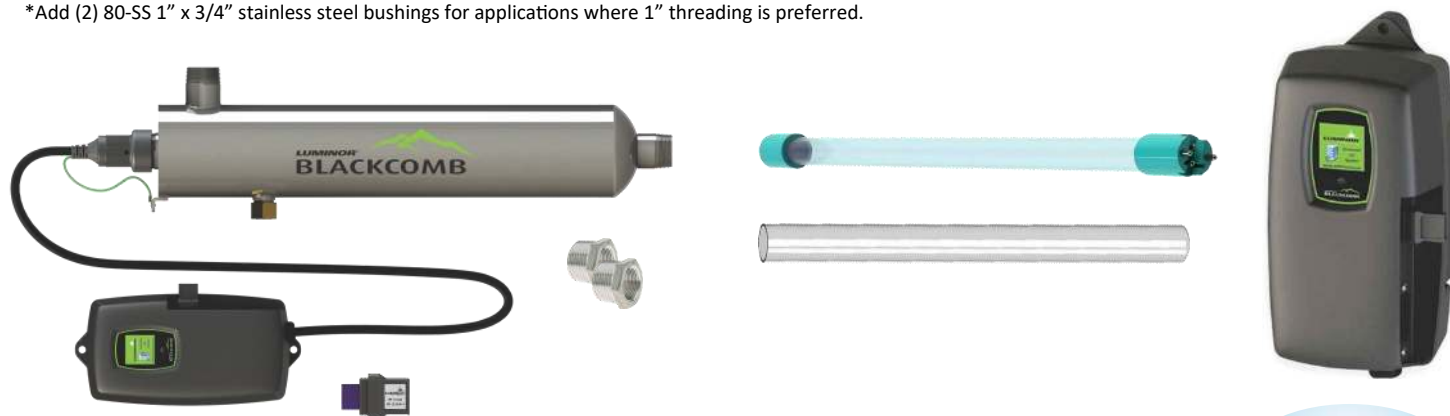


# LUMINOR<sup>™</sup> BLACKCOMB Series 5.1 HO

The 5.1 HO (High Output) Series adds many exciting features to the 4.1 including a full color interface, **LIGHTLOCK** technology for protected lamp sales and the ability to add multiple options including the Sherpa IoT module for use with the UV Concierge App to monitor the UV's performance, ultrasonic flow meter for significant energy savings, UV sensor ensuring consistent UV intensity and much more!

| Item #      | ≈Rated GPM<br>16/30/40mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Quartz & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|-------------|------------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|--------------------------------|---------------------------|------------------|
| 80-LBH5-051 | 8/5/3                                    | 1/2" MNPT            | 11.7"             | 3.5"                | 80-RL-210HO         | 80-RQ-210                    | 80-RLQ-210HO                   | 80-RCHO-56.12             | 20               |
| 80-LBH5-101 | 19/10/7                                  | 3/4" MNPT*           | 16.5"             | 3.5"                | 80-RL-330HO         | 80-RQ-330                    | 80-RLQ-330HO                   | 80-RCHO-56.12             | 38               |
| 80-LBH5-151 | 27/15/11                                 | 1" MNPT              | 20"               | 3.5"                | 80-RL-420HO         | 80-RQ-420                    | 80-RLQ-420HO                   | 80-RCHO-56.12             | 57               |
| 80-LBH5-251 | 47/25/19                                 | 1" MNPT              | 26.9"             | 3.5"                | 80-RL-600HO         | 80-RQ-600                    | 80-RLQ-600HO                   | 80-RCHO-56.12             | 73               |
| 80-LBH5-401 | 78/40/31                                 | 1-1/2" MNPT          | 40.7"             | 3.5"                | 80-RL-950HO         | 80-RQ-950                    | 80-RLQ-950HO                   | 80-RCHO-56.12             | 115              |

\*Add (2) 80-SS 1" x 3/4" stainless steel bushings for applications where 1" threading is preferred.





# LUMINOR<sup>®</sup> BLACKCOMB Series NSF CLASS B

Class B UV systems include a 304 stainless axial flow chamber and an integral flow control. Optional solenoid kit and UV sensor with 4-20 mA output to ensure proper UV dosing of 16 mJ/cm<sup>2</sup> available.

| Item #      | ≈Rated GPM<br>16 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Lamp & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|-------------|-------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|------------------------------|---------------------------|------------------|
| 80-LB5-021B | 2.9                                 | 1/2" FNPT            | 10.3"             | 2.5"                | 80-RL-210           | 80-RQ-210                    | 80-RLQ-210                   | 80-RC-B4.01               | 14               |
| 80-LB5-031B | 5.2                                 | 1/2" MNPT            | 14.3"             | 2.5"                | 80-RL-290           | 80-RQ-290                    | 80-RLQ-290                   | 80-RC-B4.01               | 20               |
| 80-LB5-061B | 7.6                                 | 3/4" MNPT            | 21.3"             | 2.5"                | 80-RL-470           | 80-RQ-470                    | 80-RLQ-470                   | 80-RC-B4.01               | 30               |
| 80-LB5-101B | 13                                  | 3/4" MNPT            | 35.2"             | 2.5"                | 80-RL-820           | 80-RQ-820                    | 80-RLQ-820                   | 80-RC-B4.01               | 49               |
| 80-LB5-151B | 22                                  | 1" MNPT              | 40"               | 2.5"                | 80-RL-999           | 80-RQ-999                    | 80-RLQ-999                   | 80-RC-B4.01               | 62               |

Shown with optional UV sensor.



# LUMINOR<sup>®</sup> BLACKCOMB Series HO NSF CLASS B

Class B HO (High Output) UV systems include a 316 stainless axial flow chamber and an integral flow control. Optional solenoid kit and UV sensor with 4-20 mA output to ensure proper UV dosing of 16 mJ/cm<sup>2</sup> available.

| Item #       | ≈Rated GPM<br>16 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Lamp & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|--------------|-------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|------------------------------|---------------------------|------------------|
| 80-LBH5-051B | 5.4                                 | 1/2" MNPT            | 11.7"             | 3.5"                | 80-RL-210HO         | 80-RQ210                     | 80-RLQ210                    | 80-RC-B5.01               | 20               |
| 80-LBH5-101B | 7.6                                 | 3/4" MNPT*           | 16.5"             | 3.5"                | 80-RL-330HO         | 80-RQ-330                    | 80-RLQ-330                   | 80-RC-B5.01               | 6038             |
| 80-LBH5-151B | 13                                  | 1" MNPT              | 20"               | 3.5"                | 80-RL-420HO         | 80-RQ-420                    | 80-RLQ-420                   | 80-RC-B5.01               | 57               |
| 80-LBH5-251B | 22                                  | 1" MNPT              | 26.9"             | 3.5"                | 80-RL-600HO         | 80-RQ-600                    | 80-RLQ-600                   | 80-RC-B5.01               | 73               |
| 80-LBH5-401B | 28                                  | 1-1/2" MNPT          | 40.7"             | 3.5"                | 80-RL-950HO         | 80-RQ-950                    | 80-RLQ-950                   | 80-RC-B5.01               | 115              |

Shown with optional UV sensor.



# LUMINOR<sup>®</sup> BLACKCOMB Series NSF CLASS A

Class A UV systems include a 304 stainless axial flow chamber, integral flow control and a UV sensor with 4-20 mA output to ensure proper UV dosing of 40 mJ/cm<sup>2</sup>. Optional solenoid kit available.

| Item #          | ≈Rated GPM<br>40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Quartz & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|-----------------|-------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|--------------------------------|---------------------------|------------------|
| 80-LB6-021A     | 1.6                                 | 1/2" FNPT            | 10.3"             | 2.5"                | 80-RL-210           | 80-RQ-210                    | 80-RLQ-210                     | 80-RC-B4.01               | 14               |
| 80-LB6-02A-12V* | 1.6                                 | 1/2" FNPT            | 10.3"             | 2.5"                | 80-RL-210           | 80-RQ-210                    | 80-RLQ-210                     | 80-RC-B4.01               | 14               |
| 80-LB6-031A     | 2.2                                 | 1/2" MNPT            | 14.3"             | 2.5"                | 80-RL-290           | 80-RQ-290                    | 80-RLQ-290                     | 80-RC-B4.01               | 20               |
| 80-LB6-03A-12V* | 2.2                                 | 1/2" MNPT            | 14.3"             | 2.5"                | 80-RL-290           | 80-RQ-290                    | 80-RLQ-290                     | 80-RC-B4.01               | 20               |
| 80-LB6-061A     | 3.4                                 | 3/4" MNPT            | 21.3"             | 2.5"                | 80-RL-470           | 80-RQ-470                    | 80-RLQ-470                     | 80-RC-B4.01               | 30               |
| 80-LB6-06A-12V* | 3.4                                 | 3/4" MNPT            | 21.3"             | 2.5"                | 80-RL-470           | 80-RQ-470                    | 80-RLQ-470                     | 80-RC-B4.01               | 30               |
| 80-LB6-101A     | 6.3                                 | 3/4" MNPT            | 35.2"             | 2.5"                | 80-RL-820           | 80-RQ-820                    | 80-RLQ-820                     | 80-RC-B4.01               | 49               |
| 80-LB6-151A     | 7.9                                 | 1" MNPT              | 40"               | 2.5"                | 80-RL-999           | 80-RQ-999                    | 80-RLQ-999                     | 80-RC-B4.01               | 62               |

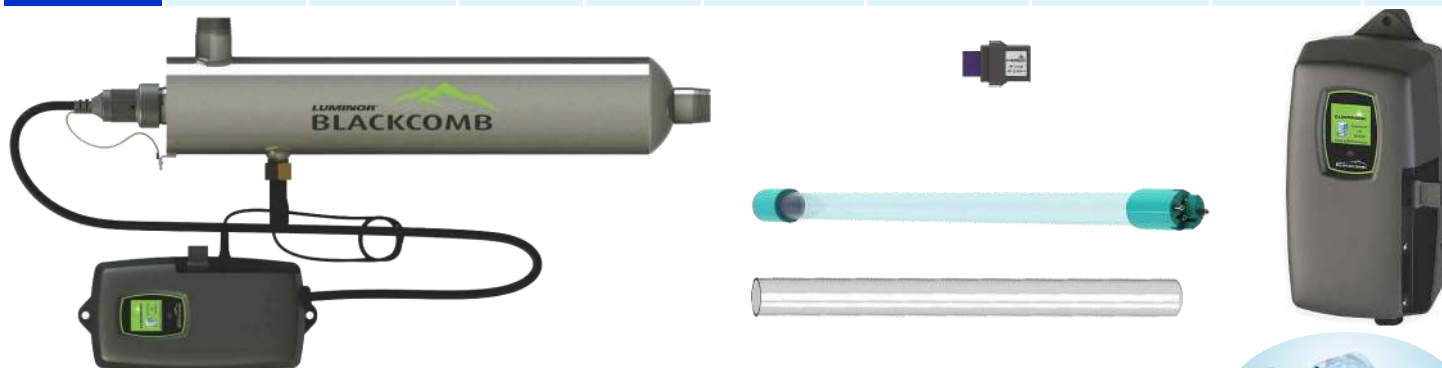
\*12 Volt Available



# LUMINOR<sup>®</sup> BLACKCOMB Series HO NSF CLASS A

Class A UV HO (High Output) systems include a 316 stainless axial flow chamber, integral flow control and a UV sensor with 4-20 mA output to ensure proper UV dosing of 40 mJ/cm<sup>2</sup>. Optional solenoid kit available.

| Item #       | ≈Rated GPM<br>40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | Replacement<br>Quartz & Sleeve | Replacement<br>Controller | ≈Watts<br>System |
|--------------|-------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|--------------------------------|---------------------------|------------------|
| 80-LBH6-051A | 2.2                                 | 1/2" MNPT            | 11.7"             | 3.5"                | 80-RL-210HO         | 80-RQ-210                    | 80-RLQ-210                     | 80-RC-B56.01              | 20               |
| 80-LBH6-101A | 4                                   | 3/4" MNPT            | 16.5"             | 3.5"                | 80-RL-330HO         | 80-RQ-330                    | 80-RLQ-330                     | 80-RC-B56.01              | 38               |
| 80-LBH6-151A | 5.4                                 | 1" MNPT              | 20"               | 3.5"                | 80-RL-420HO         | 80-RQ-420                    | 80-RLQ-420                     | 80-RC-B56.01              | 57               |
| 80-LBH6-251A | 7.9                                 | 1" MNPT              | 26.9"             | 3.5"                | 80-RL-600HO         | 80-RQ-600                    | 80-RLQ-600                     | 80-RC-B56.01              | 73               |
| 80-LBH6-401A | 18                                  | 1-1/2" MNPT          | 40.7"             | 3.5"                | 80-RL-950HO         | 80-RQ-950                    | 80-RLQ-950                     | 80-RC-B56.01              | 115              |



Commercial 110 Volt high flow UV systems with flow rating from 27 to 327 GPM. The chamber is made from 316L stainless steel and is polished and passivated. Also available for special applications including TOC reduction bulbs (185nm) and hot water applications. UV monitor, audible and visual alarms, lamp countdown and many other features are standard. Available in 220 Volt and without monitor (LR5).

| Item #       | ≈Rated GPM<br>16/30/40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | ≈Watts<br>System |
|--------------|-------------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|------------------|
| 80-LR6-351*  | 66/35/27                                  | 1-1/2" FNPT          | 27.2"             | 4"                  | 80-RL-500A          | 80-RQ-500                    | 120              |
| 80-LR6-551*  | 109/58/44                                 | 2" FNPT              | 35.8"             | 4"                  | 80-RL-720A          | 80-RQ-720                    | 170              |
| 80-LR6-851*  | 167/85/67                                 | 2" MNPT              | 46.8"             | 4"                  | 80-RL-1000A         | 80-RQ-1000                   | 220              |
| 80-LR6-1101* | 207/110/84                                | 2-1/2" MNPT          | 35.8"             | 6"                  | 80-RL-720A (2)      | 80-RQ720 (2)                 | 320              |
| 80-LR6-1401* | 263/140/106                               | 3" MNPT              | 40.6"             | 6"                  | 80-RL-843 (2)       | 80-RQ-843 (2)                | 360              |
| 80-LR6-1751* | 327/175/131                               | 4" MNPT              | 46.8"             | 6"                  | 80-RL-1000A (2)     | 80-RQ-1000 (2)               | 430              |

\* Change the "1" to "5" for 220 volt. Also available with European, British and Australian/New Zealand plugs.



Industrial/Municipal UV systems with flow rating from 133 to 1170 GPM. The chamber is made from 316L stainless steel and is polished and passivated. Also available for special applications including TOC reduction bulbs (185nm) and hot water applications. UV monitor, audible and visual alarms, lamp countdown and many other features are standard. 220V Hard wired.

| Item #     | Luminor<br>Model # | ≈Rated GPM<br>16/30/40 mJ/cm <sup>2</sup> | In/Out<br>Connection | Chamber<br>Length | Chamber<br>Diameter | Replacement<br>Lamp | Replacement<br>Quartz Sleeve | ≈Watts<br>System |
|------------|--------------------|-------------------------------------------|----------------------|-------------------|---------------------|---------------------|------------------------------|------------------|
| 80-LK5-A22 | LK6-A22            | 327/174/133                               | 3" Flange            | 10.5"             | 54"                 | 80-RL-1000A (2)     | 80-RQ-K2 (2)                 | 460              |
| 80-LK5-A42 | LK6-A42            | 758/404/303                               | 4" Flange            | 11"               | 54"                 | 80-RL-1000A (4)     | 80-RQ-K2 (4)                 | 900              |
| 80-LK5-A62 | LK6-A62            | 1170/623/467                              | 6" Flange            | 11"               | 54"                 | 80-RL-1000A (6)     | 80-RQ-K2 (6)                 | 1340             |

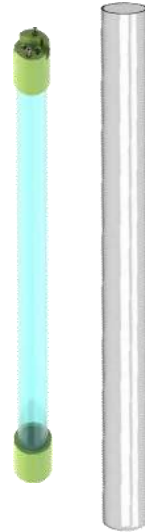




High quality replacement lamps and sleeves for Sterilight®, Viqua®, Trojan®. All Lamps and sleeves include new O-rings and are available in singles, packs of 12 and 30. Quartz sleeves are available in singles or packs of 12 and 24.

## UV Lamps

| Item #    | Sterilight® Model # | ≈Length | Lamp Life Hrs. |
|-----------|---------------------|---------|----------------|
| 80-140140 | S212RL              | 9"      | 9000           |
| 80-140141 | S287RL              | 11.9"   | 9000           |
| 80-140142 | S330RL              | 13.5"   | 9000           |
| 80-140108 | S463RL              | 18.9"   | 9000           |
| 80-140109 | S810RL              | 32.5"   | 9000           |
| 80-140110 | S36RL               | 33.7"   | 9000           |
| 80-140145 | S200RL-HO           | 11.8"   | 10,000         |
| 80-140147 | S320RL-HO           | 16.5"   | 10,000         |
| 80-140148 | S410RL-HO           | 20.1"   | 10,000         |
| 80-140150 | S600RL-HO           | 27.6"   | 10,000         |
| 80-140151 | S740RL-HO           | 33.1"   | 10,000         |
| 80-140152 | S950RL-HO           | 41.3"   | 10,000         |



**NOTE:** The UV lamps offered herein by LUMINOR are offered for sale as a direct replacement for the original equipment manufacturer. These lamps are not manufactured by the original equipment manufacturer and they do not endorse, sponsor, or approve the sale of this direct replacement lamp. Sterilight® is a registered trademark of VIQUA, a Trojan Technologies Company. Lamps are made in the USA!

## Quartz Sleeves

| Item #    | Sterilight® Model # | ≈Length | Fits                                                       |
|-----------|---------------------|---------|------------------------------------------------------------|
| 80-350020 | QS-200              | 13.1"   | SPV-200, SP200-HO, SPV-3.5, SC-200, SCM-200                |
| 80-350026 | QS-212              | 10"     | SQ-PA, VT1                                                 |
| 80-350021 | QS-320              | 17.8"   | SC-320, SCM-320, SP320-HO, SPV-6                           |
| 80-350022 | QS-410              | 21.4"   | VH410, VH410M, VH410-F20, SC-410, SPV-410, SP410-HO, SPV-8 |
| 80-350023 | QS-600              | 28.8"   | SC-600, SCM-600, SPV-600, SP600-HO, SPV-12                 |
| 80-350024 | QS-740              | 34.3"   | SC-740, SCM-740, SPV-740, SP740-HO, SPV-15                 |
| 80-350025 | QS-950              | 42.6"   | SPV-950, SP950-HO, SPV-20                                  |
| 80-350073 | QS-001              | 13"     | S1Q-PA, VH200, SSM-14                                      |
| 80-350074 | QS-330              | 14.8"   | S2Q-PA, VT4, SSM-17                                        |
| 80-350041 | QS-463              | 19.8"   | S5Q-PA, SSM-24                                             |
| 80-350042 | QS-810              | 33.3"   | S8Q-PA, SSM-37                                             |
| 80-350043 | QS-012              | 35"     | S12Q, S24Q, S40Q, SSM-39, SUV, SHF-140                     |
| 80-350083 | QS-008              | 35.1"   | S8Q                                                        |

## Quartz Sleeves UVMAX®

| Item #    | UVMAX® Model # | ≈Length | Fits                           |
|-----------|----------------|---------|--------------------------------|
| 80-350071 | 602730         | 9.1"    | Model A                        |
| 80-350072 | 602731         | 11.5"   | (Model B, B4)                  |
| 80-350044 | 602372         | 15.4"   | Model C, C4, D/Plus, D4/Plus   |
| 80-350045 | 602733         | 24.9"   | Model E/Plus, E4/Plus, Pro7    |
| 80-350046 | 602734         | 39.1"   | Model F/Plus, F4/Plus, Pro 15  |
| 80-350057 | 602974         | 17.5"   | Pro 10, G/Plus                 |
| 80-350058 | 602975         | 27"     | Pro 20, H/Plus                 |
| 80-350059 | 602976         | 36.6"   | Pro 30, Pro 50, J/Plus, K/Plus |

## UV Lamps UVMAX®

| Item #    | UVMAX® Model #                         | ≈Length | Lamp Life Hrs. |
|-----------|----------------------------------------|---------|----------------|
| 80-140159 | 602803 (Model A)                       | 11"     | 9000           |
| 80-140160 | 602804 (Model B, B4)                   | 8.9"    | 10,000         |
| 80-140111 | 602805 (Model C, C4, D/Plus, D4/Plus)  | 15.3"   | 10,000         |
| 80-140112 | 602806 (Model E/Plus, E4/Plus, Pro7)   | 24.8"   | 10,000         |
| 80-140103 | 602807 (Model F/Plus, F4/Plus, Pro 15) | 38.8"   | 10,000         |

## Retrofit UV Kits for Viqua®, Sterilite®, UVMAX®



Have an older UV system in need of an update? IWP offers retrofit kits to upgrade your older UV to the 5.1 controller. Kits include controller, lamp, sleeve, chamber adapter and O-rings. The retrofit usually takes less than ten minutes! Available for Viqua® Sterilite® S1Q-PA, S2Q-PA, S5Q-PA, S8Q-PA, S12Q-PA, UVMAX® A, B4, C, C4, D, D4 Plus, E, E4, E4 Plus, Pro 7, F, F4, and F4 Plus. Call IWP for more details!



With the optional Dealer Module, you can now monitor ALL the UV systems that you service and get real-time reporting on system status. You'll know what systems are in immediate need of service, and what systems are in need of pending service. With the ability to sort this information under a variety of parameters, this Dealer Module is basically a self-contained Business Platform. Fully customizable for your specific business, LUMINOR's **DEALER PORTAL** is a business unto itself. This is a subscription service based on the number of users that are under your "Dealer Umbrella". Each user is classified as an installed unit with an installed IoT module. This service is free for the first ten customers so you can see how it will benefit your business. SMS and email notifications can be automatically sent out once a problem is detected!



## LED, the future of UV!

As the development of UVC LED technology continues its rapid growth, LUMINOR has expanded on the proven efficacy of UV germicidal irradiation, and coupled it with high-tech UVC LED technology, to produce an energy efficient, environmentally friendly technology of the future. These compact UVC LED modules provide 99.99% pathogen reduction and have a global reach with a myriad of applications ranging from residential water treatment, water dispensers, appliances, food service, RV, marine, medical, disaster relief and many, many more! 3/8" John Guest connections for easy installation.

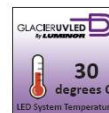
| Item #    | ≈Rated GPM<br>10/16/30/40 ml/cm <sup>2</sup> |
|-----------|----------------------------------------------|
| 80-GUV-2  | 0.7, 0.4, 0.2, 0.1                           |
| 80-GUV-5  | 1.5, 1.3, 0.6, 0.4                           |
| 80-GUV-4S | 1.5, 1.3, 0.6, 0.4                           |
| 80-GUV-5S | 1.5, 1.3, 0.6, 0.4                           |

### Why LED?

- ◆ Compact, high power density UVC LEDs provide a much smaller footprint over traditional UV systems.
- ◆ "Instant-On" requires no warm up time. Less heat build up, less energy, extremely long LED bulb life!
- ◆ Mercury free, no risk due to lamp breakage
- ◆ Not impacted by On-Off cycling, can easily be controlled by a flow switch or other input device.
- ◆ Less heat equals less UV chamber fouling.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>This most compact unit allows OEM's to utilize the LED disinfection module in their unique application</b></p> <ul style="list-style-type: none"> <li>• Compact footprint, high power density</li> <li>• Integral solid state control architecture</li> <li>• Eco friendly, mercury free</li> <li>• 5,000 hrs LED life</li> <li>• Easy to use, install, maintenance free</li> <li>• Temperature independent ensuring constant UV output, regardless of water temp.</li> </ul> |  <p><b>This higher flow unit allows OEM's to utilize the LED disinfection module in their unique application</b></p> <ul style="list-style-type: none"> <li>• Compact footprint, high power density</li> <li>• Integral solid state control architecture</li> <li>• Eco friendly, mercury free</li> <li>• 5,000 hrs LED life</li> <li>• Easy to use, install, maintenance free</li> <li>• Temperature independent ensuring constant UV output, regardless of water temp.</li> </ul> |  <p><b>Everything is included in this compact, all-in-one module</b></p> <ul style="list-style-type: none"> <li>• Multi-State Status LED indicating power, flow, LED life and overtemp./fail alarms</li> <li>• Automatic detection of water flow provides on-demand disinfection, low energy use &amp; prevents heat build-up</li> </ul> |  <p><b>Everything is included in this compact, all-in-one module</b></p> <ul style="list-style-type: none"> <li>• Proven colour screen interface as found on other LUMINOR systems</li> <li>• Automatic detection of water flow provides on-demand disinfection, low energy use &amp; prevents heat build-up</li> <li>• Includes IEP port for expansion modules</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Sample Screens Available on GUV-5S Controller ONLY







### 80-MOD-APP

Reporting live, dynamic feedback on all features and functions of your UV system. Monitor just one system, or ALL the systems that you may service. Professional packages available!



### 80-MOD-SHERPA

Monitor your 5.1 and NSF UV systems remotely from anywhere in your home! Simple plug and play technology provides real-time status of your UV system!

### Flow Meter



| Part #      | Size |
|-------------|------|
| 80-LFM-0.5  | 1/2" |
| 80-LFM-0.75 | 3/4" |
| 80-LFM-1.0  | 1"   |
| 80-LFM-1.5  | 1.5" |

When the system senses "no-flow" or "low-flow" conditions, a signal is sent to the main controller and automatically reduces the power output to the UV lamp, thereby reducing the overall power consumption resulting in energy savings, reduced quartz sleeve fouling and cooler operating temperatures! Available on 5.1 and NSF systems.



| Part #       | Fits                   |
|--------------|------------------------|
| 80-RS-B2.5   | 5.1 with 2.5" Chamber  |
| 80-RS-B3.5   | 5.1 with 3.5 Chamber   |
| 80-RSHO-B3.5 | 5.1HO and Class B UV's |
| 80-RS-B2.5V  | Class A UV             |
| 80 RS-B3.5V  | HO Class A UV          |

UV sensor allows real time monitoring of the UV intensity. Works on all 5.1 and NSF UV systems.



### 80-MOD-SOL1

Solenoid control module connects to a Normally Closed (NC) solenoid valve and will shut off the water when the UV intensity drops below 50% or when a lamp failure occurs. The module can be placed into a manual override in case of an emergency.



### 80-MOD-420

Add 4-20mA output for the UV intensity of any 5.1 or NSF system. Use 16-22 AWG wire to connect to a data logger, computer or other receiving device.



### 80-MOD-EMU

Emulator, ideal for trades shows and sales call. Emulate the UV output, lamp counter, alarm status, solenoid, 4-20 and remote alarm module.



### 80-MOD-130114

Simple cooling fan is designed to run continuously and runs independent from the UV system, Fits any 3.5" UV system. Simple clamp on installation. 110 V.



### 80-MOD-RAM

Remote Alarm Module for 5.1 and NSF UV systems. Dry contacts NO, NC and Common. Ideal for remote monitoring of alarm condition.

### IWP-TRV

A simple way to keep the water inside the chamber from getting dangerously hot. Add a thermal relief kit to any UV system. If the temperature rises dangerously high, the valve will open allowing cool water to take its place!



| Part #    | Size |
|-----------|------|
| IWP-TRV08 | 1/2" |
| IWP-TRV12 | 3/4" |
| IWP-TRV16 | 1"   |
| IWP-TRV24 | 1.5" |



# Common Water Contaminants

| Contaminant               | MCL/Action Level | Common Sources/Notes                                                               | Conventional Treatment Method(s)                                                                                                        |
|---------------------------|------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Alkalinity                | 400 mg/L         | Naturally occurring / subsequent to treatment                                      | Reverse Osmosis, Anion Exchange                                                                                                         |
| Aluminum                  | 0.05 to 0.2 mg/L | Natural deposits                                                                   | Distillation, Reverse Osmosis, PE Cation                                                                                                |
| Ammonia                   | Highly variable  | Natural/industrial waste; disinfection with chloramines                            | Distillation, Ion Exchange with Clinoptilolite, specifically designed redundant series softening                                        |
| Antimony                  | 6 ug/L           | Natural/industrial waste                                                           | Coagulation, Reverse Osmosis                                                                                                            |
| Arsenic                   | 10 ug/L          | Natural deposits, smelters, glass, electronics wastes, orchards                    | Reverse Osmosis, NTO, Anion Exchange, Activated Alumina, Manganese Greensand                                                            |
| Asbestos                  | 7 MFL            | Failure of asbestos cement water mains, erosion of natural deposits                | 1 micron physical filtration, RO, UF, NF                                                                                                |
| Barium                    | 2 mg/L           | Natural deposits, pigments, epoxy sealants, spent coal; circulatory system effects | Reverse Osmosis, Distillation, Cation Exchange Softening                                                                                |
| Boron                     | 1 mg/L           | Natural / boiler blowdown pollutant                                                | Reverse Osmosis, Distillation, Selective Anion Exchange, Deionization                                                                   |
| Cadmium                   | 0.005 mg/L       | Natural deposits, galvanized pipe corrosion, batteries, paints                     | Reverse Osmosis, Distillation, Submicron Filtration                                                                                     |
| Calcium                   | N/A              | Natural deposits                                                                   | See Hardness                                                                                                                            |
| Chloramines (as Cl2)      | 1-4 mg/L         | Municipal disinfection (Total-Free)                                                | Catalytic GAC, Fine Mesh GAC, KDF-85, Clinoptilolite for residual ammonia adsorption                                                    |
| Chloride                  | 250 mg/L         | Naturally occurring                                                                | Reverse Osmosis                                                                                                                         |
| Chlorine                  | 1-4 mg/L         | Water disinfection (test as free chlorine)                                         | Activated Carbon, KDF                                                                                                                   |
| Chromium-6                | 0.1 mg/L         | Natural deposits, mining, electroplating, pigments                                 | Reverse Osmosis, Anion Exchange                                                                                                         |
| Coliform                  | Zero             | Indicated contamination by animal wastes and possible pathogens                    | Redundant monitored disinfection; chlorination, contact time, absolute filtration, UV                                                   |
| CO2                       | N/A              | Naturally occurring; levels above 50 ppm may need treatment                        | Aeration, soda ash or caustic soda injection, calcium carbonate and/or magnesium oxide filtration                                       |
| Color                     | 15 Color Units   | Multiple                                                                           | Reverse Osmosis, pilot testing, Bone Char, Coagulation, Anion Exchange, Ultrafiltration                                                 |
| Copper                    | 1.3 mg/L         | Natural/industrial deposits, wood preservatives, plumbing corrosion                | Reverse Osmosis, Polyphosphates, Ion Exchange Softening                                                                                 |
| Cryptosporidium           | Zero             | Animal or human waste, contaminated food products                                  | Reverse Osmosis, UV, 1 Micron Absolute Filtration                                                                                       |
| E.coli (Escherichia coli) | Zero             | Naturally occurring, human or animal wastes                                        | Ultraviolet, redundant monitored disinfection; chlorination, contact time, filtration, UV                                               |
| Fluoride                  | 2 mg/L           | Natural deposits, fertilizer, aluminum industries, water additive                  | Reverse Osmosis, Bone Char, Activated Alumina                                                                                           |
| Giardia                   | Zero             | Naturally occurring, human or animal wastes                                        | Reverse Osmosis, Carbon Block (0.5 micron), UV, 1 Micron Absolute Filtration                                                            |
| Glyphosate                | 700 ug/L         | Agricultural runoff                                                                | Activated Carbon                                                                                                                        |
| Gross Alpha (pCi/L)       | 15               | Erosion of natural deposits                                                        |                                                                                                                                         |
| Gross Beta (pCi/L)        |                  | Decay of natural and man-made deposits                                             |                                                                                                                                         |
| Hardness                  | ≈3 GPG           | Natural deposits                                                                   | Ion Exchange Softening and various alternates                                                                                           |
| Heavy Metals              | Varies           | Naturally occurring, manufacturing by-product                                      | KDF, Titanium Oxide, RO, Distillation                                                                                                   |
| Hydrogen Sulfide          | N/A / 0.05 mg/L  | Natural; rotten egg taste and odor                                                 | Iron reduction filter, KDF 85, Catalytic GAC, oxidation or aeration followed by filtration; replace Mg water heater anode with Al or Zn |
| Iron                      | 0.3 mg/L         | Natural deposits                                                                   | Iron reduction filter; oxidation or aeration followed by physical filtration; ion exchange; special media (e.g. FerriLite)              |
| 18 Langelier Index        | >0.0             | Natural and human impact                                                           | Predicts corrosivity: -2 to 0.0 moderately aggressive; <-2.0 highly aggressive                                                          |

# Common Water Contaminants (continued)

| Contaminant                                  | MCL/Action Level             | Common Sources/Notes                                                   | Conventional Treatment Method(s)                                                                                           |
|----------------------------------------------|------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Lead                                         | 0-15 ug/L                    | Pollution, corrosion                                                   | Micro-D, Reverse Osmosis, DI, special design ion exchange softener, special design GAC cartridge, KDF                      |
| Magnesium                                    | N/A                          | Natural deposits                                                       | See Hardness                                                                                                               |
| Manganese                                    | 0.05 mg/L                    | Natural deposits                                                       | Iron reduction filter; oxidation or aeration followed by physical filtration; ion exchange; special media (e.g. FerriLite) |
| Mercury                                      | 0.002 mg/L                   | Crop runoff, natural deposits, batteries, electrical switches          | Reverse Osmosis, Activated Carbon                                                                                          |
| MTBE (Methyl Tertiary-Butyl Ether)           | 20-40 ug/L                   | Leaking underground gasoline storage tanks                             | High capacity GAC; air stripping above ≈100 ug/L                                                                           |
| Nitrate                                      | 10 mg/L                      | Animal waste, fertilizer, natural deposits, septic tanks, sewage       | Reverse Osmosis, Ion Exchange                                                                                              |
| Nitrite                                      | 1 mg/L                       | Animal waste, fertilizer, natural deposits, septic tanks, sewage       | Reverse Osmosis, Ion Exchange                                                                                              |
| PCBs                                         |                              |                                                                        | Clinoptilolite followed by coal-based carbon (GAC) with post 0.5 micron sediment filter                                    |
| PCE (Tetrachloroethylene)                    | 5 ug/L                       | Industrial waste                                                       | GAC; if not effective add air stripping                                                                                    |
| Perchlorate                                  | ≈4 ug/L                      | Industrial waste                                                       | Reverse Osmosis, Anion Exchange                                                                                            |
| pH                                           | ≈ <6.5 or >8.5               | Natural and human causes                                               | Low pH: calcium carbonate, magnesium oxide, soda ash. High pH: acidify e.g. white vinegar                                  |
| PFCs, PFOA, PFOS                             | PFOA 4 PPT, PFAS 10 PPT      | Water near chemical manufacturing or military bases                    | Certified reduction methods recommended: Pioneer, Reverse Osmosis, HomeShield                                              |
| PFOA (Perfluorooctanoic Acid)                | 10 PPT California            | Water near chemical manufacturing or military bases                    | Certified reduction methods recommended: Pioneer, Reverse Osmosis                                                          |
| PFOS (Perfluorooctanesulfonic acid)          | 40 PPT California            | Water near chemical manufacturing or military bases                    | Certified reduction methods recommended: Pioneer, Reverse Osmosis                                                          |
| Radium                                       | 5 pCi/L                      | Natural deposits                                                       | Reverse Osmosis, special designed ion exchange softening                                                                   |
| Radon                                        | 3000 pCi/L                   | Natural deposits                                                       | Aeration/venting, Activated Carbon                                                                                         |
| Ryznar Index                                 | >7 or <5                     |                                                                        |                                                                                                                            |
| Selenium                                     | 0.05 mg/L                    | Natural deposits, mining, smelting, coal/oil combustion                | Reverse Osmosis, NTO                                                                                                       |
| Silica (Unreactive Polymerized or colloidal) | N/A                          | Natural deposits                                                       | Ultrafiltration (UF), Reverse Osmosis                                                                                      |
| Silica (Reactive SiO <sub>4</sub> )          | N/A                          | Natural deposits                                                       | RO in conjunction with deionization (up to ~90%); low levels can mimic hardness and etch glass                             |
| Silt Density Index (SDI)                     | ≈4 at 15 minutes             | Suspended matter; used primarily to predict membrane fouling potential | Physical filtration, coagulant, settling tank. No correlation to NTU                                                       |
| Sodium                                       | N/A                          | Natural and human causes                                               | Reverse Osmosis                                                                                                            |
| Sulfate                                      | 250 mg/L                     | Naturally occurring                                                    | Reverse Osmosis, ion exchange                                                                                              |
| Tannin                                       | ≈50 APHA Units               | Naturally occurring                                                    | Anion Exchange, Bone Char, Chlorination, Reverse Osmosis                                                                   |
| Total Dissolved Solids                       | 500 mg/L                     | Erosion of naturally occurring mineral deposits                        | Reverse Osmosis                                                                                                            |
| Trihalomethanes (THMs)                       | 0.08 mg/L                    | By-product of chlorination in drinking water                           | Activated Carbon, KDF                                                                                                      |
| 123 TCP                                      | N/A                          | Man-made industrial solvent                                            | Activated Carbon                                                                                                           |
| Turbidity                                    | N/A (1 NTU max. recommended) | Soil runoff, natural                                                   | Whole-house sediment filter, Reverse Osmosis, coagulant                                                                    |
| Uranium                                      | 0.03 mg/L                    | Naturally occurring                                                    | Reverse Osmosis, Anion Exchange                                                                                            |
| Volatile Organic Compounds                   | Varies                       | Industrial wastes                                                      | Activated Carbon, Aeration                                                                                                 |
| Vanadium                                     |                              |                                                                        | NTO                                                                                                                        |

# Glossary

| Term                                 | Definition / Catalog pages                                                                                                                                                           |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AIO / AIO3</b>                    | Air Injection Oxidizing filter systems that oxidize iron, manganese, and hydrogen sulfide (H <sub>2</sub> S) for removal. (See p. 9, 24, 66)                                         |
| <b>Anion resin</b>                   | Ion-exchange resin that exchanges negative ions; used for nitrate, sulfate, arsenic, and other anion contaminants. (See p. 11, 90, 110)                                              |
| <b>Backwash</b>                      | Reversal of flow through a filter or softener bed to lift, clean, and reclassify media and flush trapped solids to drain. (See p. 7, 9, 10, 12, 16, 18, 20, 22...)                   |
| <b>Ban-T</b>                         | Impact Water Products brine/air/nitrogen related product naming used in catalog accessory and chemical sections. (See p. 16, 17, 19, 20, 21, 108)                                    |
| <b>Brine</b>                         | Concentrated salt (NaCl) or potassium chloride (KCl) solution used to regenerate cation softener resin. (See p. 7, 8, 10, 11, 12, 26, 32, 38...)                                     |
| <b>Brine tank</b>                    | Vessel holding salt/KCl and brine solution for softener regeneration; sized by capacity and refill rate. (See p. 8, 10, 11, 12, 43, 55, 98, 99...)                                   |
| <b>Capacity</b>                      | How much hardness or contaminant a system can remove between regenerations or media exhaustion, often in grains or gallons. (See p. 9, 13, 20, 24, 30, 36, 37, 42...)                |
| <b>Catalytic carbon</b>              | Activated carbon treated to catalyze reactions that reduce chloramine, H <sub>2</sub> S, and some VOCs more effectively than standard GAC. (See p. 9, 10, 21, 30, 36, 42, 48, 49...) |
| <b>Cation resin</b>                  | Ion-exchange resin that exchanges positive ions; softener resin exchanges Ca <sup>2+</sup> /Mg <sup>2+</sup> for Na <sup>+</sup> or K <sup>+</sup> . (See p. 11, 90)                 |
| <b>Chloramine</b>                    | Disinfectant formed from chlorine and ammonia; harder to remove than free chlorine; often requires catalytic carbon. (See p. 7, 9, 10, 21, 26, 30, 36, 42...)                        |
| <b>Chlorine</b>                      | Common municipal disinfectant; typically reduced with activated carbon filtration. (See p. 7, 9, 10, 15, 21, 22, 23, 26...)                                                          |
| <b>Clinoptilolite</b>                | Natural zeolite media used for ammonium and some metal reduction in backwashing filters. (See p. 9, 14, 30, 36, 42, 48, 54, 59...)                                                   |
| <b>DI</b>                            | Deionization — removal of dissolved ions using cation and anion resins, often for high-purity rinse water. (See p. 65, 84, 94, 95)                                                   |
| <b>DLFC</b>                          | Drain Line Flow Control — orifice that limits backwash/drain flow rate to protect media and meet plumbing codes. (See p. 43)                                                         |
| <b>Empty bed contact time (EBCT)</b> | Minutes water spends in contact with media; longer EBCT generally improves contaminant reduction.                                                                                    |
| <b>GAC</b>                           | Granular Activated Carbon — media for taste/odor, chlorine, and many organic contaminant reductions. (See p. 10, 18, 20, 21, 88, 108)                                                |
| <b>GPD</b>                           | Gallons per day — daily production rating, commonly used for RO systems. (See p. 71, 104, 108, 113, 116, 117, 118, 120...)                                                           |
| <b>gpg</b>                           | Grains per gallon — hardness unit. 1 gpg = 17.1 mg/L (ppm) as CaCO <sub>3</sub> . (See p. 23, 37, 128, 130)                                                                          |
| <b>GPM</b>                           | Gallons per minute — instantaneous flow rate through a valve, softener, or filter. (See p. 7, 12, 23, 26, 32, 38, 43, 44...)                                                         |
| <b>Grain</b>                         | Unit of hardness mass; softener capacity is often stated in kilograins (1 kilograin = 1,000 grains). (See p. 13, 37, 167)                                                            |
| <b>H<sub>2</sub>S</b>                | Hydrogen sulfide — gas that causes rotten-egg odor; treated by oxidation, catalytic carbon, or AIO-style systems. (See p. 49, 88, 89)                                                |
| <b>Hardness</b>                      | Dissolved calcium and magnesium that cause scale and soap interference; removed by cation softening. (See p. 8, 13, 22, 23, 25, 26, 37, 43...)                                       |
| <b>i5 / i15 / i20</b>                | Impact/Clack residential and light-commercial control valve families used across softener and backwashing lines. (See p. 6, 8, 9, 10, 12, 21, 23, 24...)                             |



# Glossary (continued)

| Term                        | Definition / Catalog pages                                                                                                                               |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Injector</b>             | Venturi device that draws brine or chemical into the valve during regeneration or feed cycles. (See p. 74, 138)                                          |
| <b>Iron</b>                 | Common well-water metal causing staining; forms include clear-water (ferrous) and red-water (ferric). (See p. 9, 19, 22, 23, 24, 30, 36, 37...)          |
| <b>Katalox Light</b>        | Catalytic media used for iron, manganese, and H <sub>2</sub> S reduction in backwashing filters. (See p. 9, 24, 30, 36, 42, 48, 54, 59...)               |
| <b>KCl</b>                  | Potassium chloride — alternative regenerant to NaCl for softeners when lower sodium discharge is desired. (See p. 55)                                    |
| <b>Manganese</b>            | Metal often found with iron; causes black staining; removed by oxidation and catalytic/filter media. (See p. 9, 22, 23, 24, 30, 36, 37, 42...)           |
| <b>MAV</b>                  | Motorized Alternating Valve — Clack valve used to alternate twin tanks or related service/regeneration switching. (See p. 6, 33, 39, 45, 51, 62, 67, 70) |
| <b>Metered regeneration</b> | Softener regeneration triggered by water volume (meter) rather than by time clock alone.                                                                 |
| <b>NaCl</b>                 | Sodium chloride (salt) — standard softener regenerant. (See p. 55)                                                                                       |
| <b>NHWBP</b>                | No Hard Water Bypass — valve feature that prevents hard water from entering service during regeneration. (See p. 28, 33, 34, 38, 39, 40, 45, 46...)      |
| <b>OxyMag / Ox Mag</b>      | Impact conditioner product line referenced in the catalog for scale/conditioning applications.                                                           |
| <b>PFAS</b>                 | Per- and polyfluoroalkyl substances (including PFOA/PFOS); addressed by specialty carbon/certified systems such as HomeShield. (See p. 10, 15, 21)       |
| <b>PFOA / PFOS</b>          | Specific PFAS compounds; HomeShield pages cover certified reduction claims. (See p. 10, 15, 21, 80)                                                      |
| <b>ppm / mg/L</b>           | Parts per million / milligrams per liter — concentration units for dissolved contaminants. (See p. 22, 23, 37, 49, 65, 68, 71, 78...)                    |
| <b>Progressive flow</b>     | Multi-tank softener arrangement that brings additional tanks online as flow demand increases. (See p. 6, 28, 29, 33, 34, 35, 39, 40...)                  |
| <b>Resin</b>                | Bead media used in ion exchange (softening, DI) or related process beds. (See p. 8, 10, 11, 13, 22, 27, 37, 43...)                                       |
| <b>RO</b>                   | Reverse Osmosis — membrane process that reduces dissolved solids (TDS) and many contaminants. (See p. 5, 19, 65, 112, 113, 114, 115, 117...)             |
| <b>Service flow rate</b>    | Recommended continuous GPM through a system while meeting treatment goals. (See p. 7, 26, 32, 38, 44, 50, 56, 60...)                                     |
| <b>TDS</b>                  | Total Dissolved Solids — measure of dissolved minerals; RO is commonly sized around TDS and recovery. (See p. 23, 37, 64, 71, 91, 113, 118, 120...)      |
| <b>TFC</b>                  | Thin-Film Composite — common RO membrane construction. (See p. 115)                                                                                      |
| <b>Twin alternating</b>     | Two-tank softener setup where one tank is in service while the other regenerates, providing continuous soft water. (See p. 10, 12, 37, 70, 74)           |
| <b>UF</b>                   | Ultrafiltration — membrane filtration for particulate/pathogen reduction at higher flux than RO. (See p. 78, 79)                                         |
| <b>UV</b>                   | Ultraviolet disinfection — inactivates microorganisms; does not remove dissolved hardness or metals. (See p. 43, 97, 122, 123, 168, 169, 170, 171...)    |
| <b>WS2HF / WS3</b>          | Clack commercial valve families used on larger Impact softener and filter systems (2" high-flow and 3"). (See p. 56, 57, 58, 59, 60, 61, 62, 63...)      |



# !mpACT

WATER PRODUCTS

We will not compete in the race to the bottom!