



WATER QUALITY PRODUCTS

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Section 1

Whole House Filtration Equipment & UV Systems

Hydrosafe®

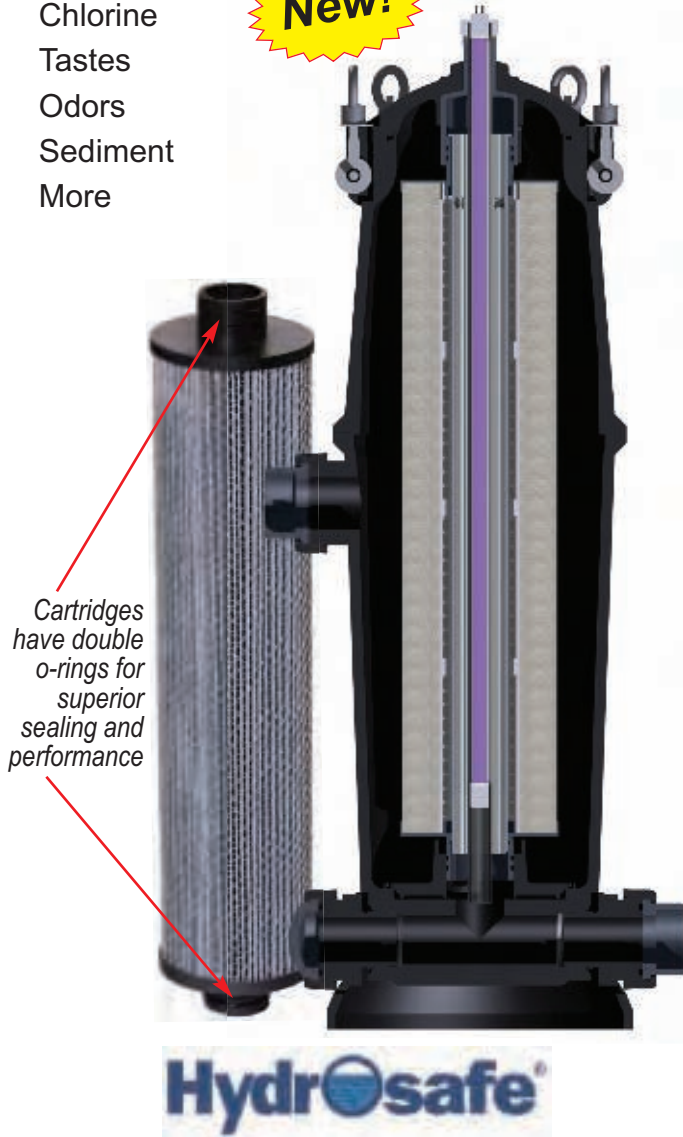
Whole House Filtration and Water Treatment

Triple-Treat™ Protection

The innovative HydroSafe® filtration system incorporates three technologies in one unit to provide three-step treatment to remove:

- Bacteria
- Cysts
- Chlorine
- Tastes
- Odors
- Sediment
- More

New!



Three-in-one technology

Provides peace of mind and safe, great tasting water, supplied to every tap in the house. Here's how it works:

Step #1

0.2 Micro-filtration

Hydro-Safe filter cartridge is pleated for greater surface area using a micro-fiber, rated at 0.2 micron. This unique filter media is certified under NSF / ANSI Standard 53 for cysts reduction with the capacity to remove sub-micron particles and harmful microorganisms with very little pressure drop or flow restriction.

Step #2

Carbon Treatment

An exceptionally fine activated carbon powder is added to the sub micron filter fiber using an electrostatic bonding process. Activated carbon provides a secondary treatment process to remove chlorine, taste and odors.

UV Light disinfection

During the final process, water flows into a stainless steel reaction chamber where it is exposed to a 254 nanometer UV lamp. Inside this chamber bacteria, viruses and other harmful microorganisms are destroyed to provide disinfection without the use of chemicals.

Specifications (Model HSFS)

Flow rate (max.)	14 GPM
Voltage (lamp)	110 Volts
Cartridge capacity (Gals./ average use)	200,000 Gallons
UV dose rate (mJ/cm2)	40,000 +
Bacteria reduction*	99.9%

*E Coli used for tests with cartridge in place.

IMPORTANT: It is essential to install a one micron pre filter prior to the unit to extend the life of the 0.2 micron cartridge.

Part Numbers

Part	Part Number
System	HSFS
Cartridge	HSFSCART-PAC
Lamp	HSFSLAMP
Sleeve	HSFSQUARTS
Ballast	WUVBALLAST6-12
Coupler, 1"	HSFSCOUPLING-T

Independent lab validated

Hydro-Safe systems have been tested by Bio-Vir labs to validate performance.

Test results confirm bacteria is reduced by 99.9%.

E coli bacteria used for tests.



BIG-BUBBA[®]

FILTERS

Non-Metallic Filter Housings for High Flow Rates & Low Cost

Rugged construction

Big-Bubba filter housings are made of rugged, glass-reinforced polypropylene so they will not chip, rust or dent. And because all wetted surfaces are non-metallic, they are ideal when chemical compatibility is an issue and for sea water applications.

Low cost

Big-Bubba filters are an economical replacement for stainless steel filtration equipment because of their non-metallic construction and today's high cost of stainless steel!



Applications

Big-Bubba filters are ideal for a wide range of applications, including:

- Commercial filtration
- Industrial filtration
- Pre-filtration for reverse osmosis equipment
- Community water systems
- Sea water applications due to their non-corrosive construction
- Replacement for bag filters for more filter area
- Replacement for multiple cartridge filters for greater convenience
- Water for livestock & poultry
- Whole house filtration



P/N: BBH-150

Proprietary cartridges

We offer a full line of replacement cartridges for Big-Bubba filters, all with double o-ring seals for superior performance. Cartridges are easy to install, easy to service and easy to replace. Some of the filter media we use in select micron ratings are cleanable and reusable to reduce filtration costs.

Three cartridge options, including activated carbon for whole house filtration!

Double o-rings for superior sealing.

E-Z change-out

Cartridge replacement is easy as 1-2-3:

1. Remove swing bolts.
2. Remove lid.
3. Rotate cartridge 1/4 turn and pull-up.

Filter inlet.

Two outlets

Big-Bubba filters have two outlets on opposite sides to allow more flexibility with piping configurations. Filter may be installed in-line or piping may come from the same direction. A plug is provided for the outlet, not used.

Best Selling Product. Try it today!

Filter outlet.

Big-Bubba filters offer a wide range of replacement cartridges for every application!

Big-Bubba® Filters Are Ideal As Stand Alone Filters Or Used For Filtration Systems



Parallel installation

Parallel installations are recommended to achieve high flow rates, by installing filters on a common manifold, feeding all filters installed in a row.



Series installation

Series installations are recommended for applications such as surface water filtration, where cartridges having different micron ratings are used.

THREE CARTRIDGE TYPES:



Pleated cartridge

Pleated cartridges

Ideal for more critical applications, offering greater efficiency, more surface area for greater throughput and reduced cost.

Product code	Media Type	Micron Rating	Per case
BBC-150-P1A	PP	1 Absolute	1
BBC-150-P1	PP	1	1
BBC-150-P5	PP	5	1
BBC-150-P20	PE	20	1
BBC-150-P50	PE	50	1
BBC-150-PM150	Mesh	150	1

Note: 5, 20, 50 and 150 micron cartridges are cleanable and reusable to reduce costs.

Depth cartridges

Melt blown Polypropylene cartridges are recommended when depth filtration is necessary for gelatinous substances and when chemical resistance may be a requirement.

Product code	Media Type	Micron Rating	Per case
BBC-150-D1	PP	1	1
BBC-150-D5	PP	5	1
BBC-150-D20	PP	20	1
BBC-150-D50	PP	50	1



Depth cartridge



Activated carbon cartridge

Activated carbon

Ideal for whole house filtration to reduce chlorine, taste, odors and sediment.

Product Code	Max. Flow	Capacity	Chlorine Reduction
BBC-150-AC	20 GPM	150,000 Gals.	90%

Note: We build filtration systems, or they may be installed on site. For more information please inquire!

Big-Bubba® Specifications

Big-Bubba housing (P/N: BBH-150)

Specifications	Data
Body (all wetted surfaces)	Glass reinforced PP
Cartridge end caps	Glass reinforced PP
Swing bolts	304 stainless steel
O rings (cartridges)	EPDM (Viton optional)
O ring (lid)	EPDM (Viton optional)
Pipe fittings	2" slip
Overall height	40"
Width (vessel OD)	12"

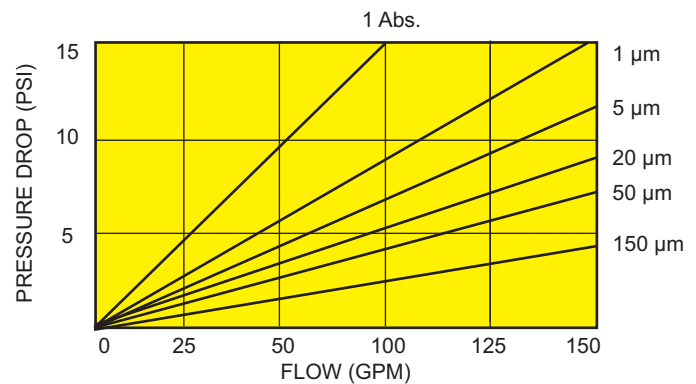
Big-Bubba cartridges

Specifications	Data
Maximum flow rate	150 GPM* (36 M ³ /hr.)
Maximum flow (carbon)	15 GPM
Maximum flow (1 Absolute)	50 GPM
Maximum temperature	175°F (80°C) @ 80 psi
Maximum working pressure	125 psi (8.75 bar)
Burst test	300 psi
Cycle test	100,000

* Highly dependent on micron rating, solids content and other factors. Please see pressure drop chart below.

Low pressure drop

Big-Bubba filter housings are designed to minimize pressure drop, by using 2" pipe fittings and large diameter center tubes for Big-Bubba filter cartridges. (See chart at right for pressure drop data using pleated cartridges.)



Big-Bubba cartridge specifications

	Pleated	Depth	Activated Carbon
Media	PP	PP	Activated carbon
End caps	PP + FG	PP + FG	PP
Center tubes	PP	PP	PP
Maximum flow rate (GPM)	150	100	15
Maximum temperature	175°F (80°C)	175°F (80°C)	140°F (60°C)
Maximum ΔP (psi)	30	40	30
Chemical resistance	Excellent	Excellent	Not a factor (for water)
Length (media)	26-1/4"	26-1/4"	26-1/4"
O-rings (dual)	EPDM	EPDM	EPDM
Shipping weight (lbs.)	5	5	7
Carton dimensions	7" x 7" x 31"	7" x 7" x 31"	7" x 7" x 31"
Micron ratings	1A, 1, 5, 20, 50, 150	1, 5, 20, 50	10

Note: Flow rates are based on each specific application, micron rating, solids content and a number of other factors. End user should consider these factors when selecting the filter housing (or number of filter housings) needed for their particular requirement.

Spare parts

Part Numbers	Description
BB LID	Lid
BB PR	Pressure release button
PG15L25	Pressure gauge
BB EYEBOLT	Eye bolt
BB POST	Post for eye bolt
BB WASHER	Washer for eye bolt
DRAINPLUGOR	Drain plug with o ring

Part Numbers	Description
BB ORING E	O ring for lid (EPDM)
BB ORING V	O ring for lid (Viton)
BC ORING E	O ring for cartridge (EPDM)
BC ORING V	O ring for cartridge (Viton)
BB COUPLER	Pipe fitting coupler (two pieces)
BB COUPLER OR	O ring for coupler
BB PLUG	Plug for second outlet

Watts UV Disinfection Systems



Applications

- Well water
- Homes
- Water systems
- Aquaculture
- Food service
- Water coolers
- RO systems



Features & Benefits

- Disinfection without chemicals.
- Effective disinfection for chlorine resistant bacteria, virus cysts.
- Lamps rated for 12 month continuous service life.
- Highly polished 304 stainless steel reactor chamber.
- Audible and visual alarm indicating lamp failure.
- Easy lamp replacement service.
- Available in 110 v and 230v.
- 30mj/cm² dose at specified flow rate at the end of lamp life.
- Quartz sleeve and lamps.

Independent lab validated

Watts UV systems have been tested by BioVir Laboratories, using *E.coli* bacteria. Test results indicate Watts UV systems are capable of providing the 40 mJ/cm² dose requirement for *E.coli* bacteria disinfection at maximum flow rates for all four models. Based on these tests, the log reduction of *E.coli* bacteria was between 2.07 to 3.03, which is 99.1 to 99.9 percent reduction of *E.coli* bacteria.

Specifications

Chamber materials	304SS
Max. water temperature	104°F (40°C)
Min. water temperature	36°F (2°C)
Max pressure	125 psi
UV dose (end of life)	30 mj/cm ²
Lamp life	9,000 hrs
Lamps per chamber	Single

Water quality guidelines

Total Iron	less than 0.3 mg/l
Hydrogen sulfide	less than 0.05 mg/l
Turbidity	less than 10 mg/l
Manganese	less than 0.05 mg/l
Hardness	less than 7 grains
UV transmittance	greater than 90%

Note: Minimum water quality guidelines are recommended to ensure proper operation and continuous disinfection.

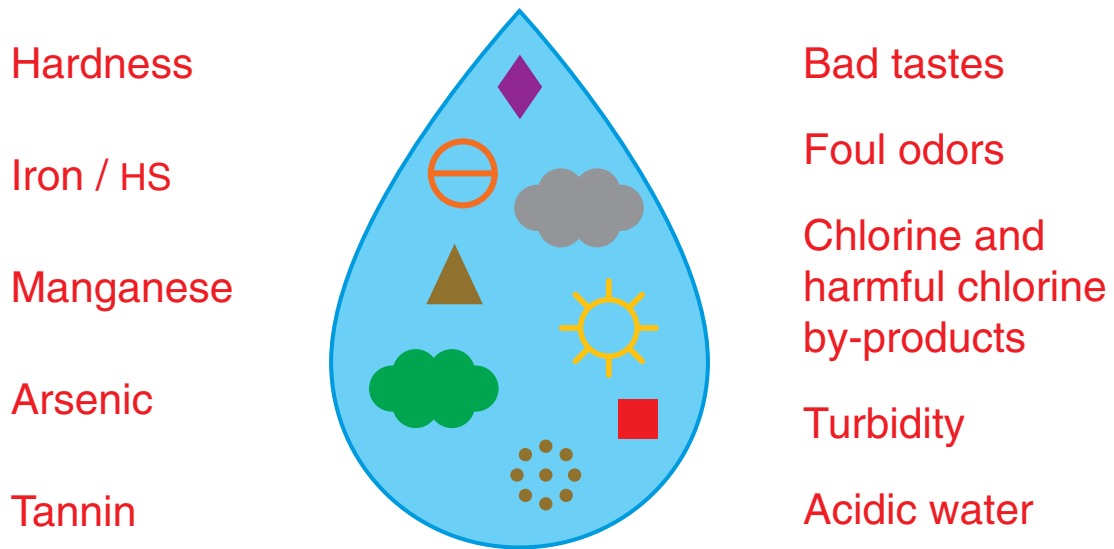
Models

Product code	Flow Rate (gpm)	Pipe Size	Dimensions (L x W x H)	Electrical	Shipping (Lbs.)
WUV2-110	2	1/2" MNPT	18" x 6" x 5-3/8"	110-130 v / 50-60 Hz	6
WUV2-230	2	1/2" MNPT	18" x 6" x 5-3/8"	200-250 v / 50-60 Hz	6
WUV6-110	6	3/4" MNPT	25-1/2" x 6" x 5-3/8"	110-130 v / 50-60 Hz	7
WUV6-230	6	3/4" MNPT	25-1/2" x 6" x 5-3/8"	200-250 v / 50-60 Hz	7
WUV8-110	8	3/4" MNPT	32" x 8-1/4" x 3-3/4"	110-130 v / 50-60 Hz	9
WUV8-230	8	3/4" MNPT	32" x 8-1/4" x 3-3/4"	200-250 v / 50-60 Hz	9
WUV12-110	12	1" MNPT	41-1/2" x 8-1/4" x 3-3/4"	110-130 v / 50-60 Hz	17
WUV12-230	12	1" MNPT	41-1/2" x 8-1/4" x 3-3/4"	200-250 v / 50-60 Hz	17

Section 2

Residential Water Softeners

Whole house water quality problems.



The continuous water cycle . . .

Nature intended us to have high quality water. This is why we have the *continuous water cycle*, whereby water from our oceans, rivers, lakes and streams falls to the ground as rain or snow and becomes filtered as it seeps through the earth's surface. As the water works its way through the ground, however, it picks up minerals by dissolving limestone, causing water hardness. Water may also come into contact with Iron, Manganese, Arsenic and other contaminants, which cause additional water treatment problems.

The chart below lists typical whole house water quality problems and indicates which equipment effectively corrects any problems you may have in your home.

Water Quality Problems	Symptoms	Recommended Equipment
Hardness	Mineral deposits on dishes & glassware; stiff, dingy laundry; high soap usage and need for fabric softeners; dry, itchy skin and scalp; unmanageable hair; extra work removing soap curd on tubs and showers; high energy costs due to scale build-up in pipes and on appliances.	Water softener.
Chlorine, foul odors & tastes	Chlorine taste foul odors damage to hair itchy skin.	Activated carbon.
Hydrogen Sulfide	Rotten egg odors.	Filox filter.
Iron & Manganese	Unpleasant metallic tastes; rust particles; staining on plumbing fixtures; red water; odors.	Iron filter.
Turbidity	Cloudy water sediment, sand, silt & rust particles.	Media filter.
Acidic water (low pH)	Green stains on bathroom sinks and other porcelain surfaces blue green water. (Acidic water may cause corrosion of pipes & plumbing fixtures.)	Acid neutralizer using Calcite.
Tannin	Brownish, tea colored water musty odors.	Tannin filter.
Arsenic	A naturally occurring element found in ground water, Arsenic is a carcinogen at high concentrations, and the EPA reports Arsenic may cause adverse health effects in low concentrations. Testing for Arsenic is highly recommended.	Arsenic Reduction System.

Watts® Water Softeners with Vortech® Tanks

"Hard" water is not considered unhealthy; however, hard water problems end up costing you money through increased soap usage, reliance on water softening products and shorter life for appliances due to scale build-up in pipes and other factors.

To correct water hardness, We offer a wide range of water conditioning systems, designed to improve water quality throughout your entire household.

Features and benefits

- Spot-free glassware and dishes.
- No mineral deposits on bathtubs and shower stalls.
- Brighter, softer laundry.
- Less reliance on water softening products.
- Dramatic reduction in soap usage.
- Manageable hair because shampoo works better.
- Pipes remain free of calcium scale build-up.
- Extended life of appliances and reduced energy costs because scale is virtually eliminated.
- Spot-free car wash (if softened water is used).



Metered valve for greater efficiency

Clack® valves are metered for greater efficiency and reduced salt usage, because regeneration of the softener resin is based on water consumption. Push button settings provide ease-of-use.

Complete system

The models listed below are complete systems including Vortech mineral tank, resin, metered control valve, by-pass valve and fully assembled brine tank, with safety float valve to prevent brine water overflow.

Model selection is typically based on water hardness, water usage, water source and other factors.

Models (with Clack metered valves, by-pass and safety float valves)

Model Number	Capacity (Grains)	Media Cu.Ft.	Valve Type	Connection	Mineral Tank Size	Brine Tank Size	Safety Float Valve
M3011-W100SM	30,000	1.0	Metered	1"	9"x48"	18"x36"	Yes
M3013-W100SM	45,000	1.5	Metered	1"	10"x54"	18"x36"	Yes
M3015-W100SM	60,000	2.0	Metered	1"	12"x52"	18"x36"	Yes

NOTE: Brine tanks come with safety float valve.

CK10 Water Softeners with Standard Tanks

"Hard" water is not considered unhealthy; however, hard water problems end up costing you money through increased soap usage, reliance on water softening products and shorter life for appliances due to scale build-up in pipes and other factors.

To correct water hardness, We offer a wide range of water conditioning systems, designed to improve water quality throughout your entire household.

Features and benefits

- Spot-free glassware and dishes.
- No mineral deposits on bathtubs and shower stalls.
- Brighter, softer laundry.
- Less reliance on water softening products.
- Dramatic reduction in soap usage.
- Manageable hair because shampoo works better.
- Pipes remain free of calcium scale build-up.
- Extended life of appliances and reduced energy costs because scale is virtually eliminated.
- Spot-free car wash (if softened water is used).



Metered valve for greater efficiency

Clack® valves are metered for greater efficiency and reduced salt usage, because regeneration of the softener resin is based on water consumption. Push button settings provide ease-of-use.

Model selection is typically based on water hardness, water usage, water source and other factors.



Complete system

The models listed below are complete systems including mineral tank, resin, metered control valve, by-pass valve and fully assembled brine tank, with safety float valve to prevent brine water overflow.

Models (with Clack metered valves, by-pass and safety float valves)

Model Number	Capacity (Grains)	Media Cu.Ft.	Valve Type	Connection	Mineral Tank Size	Brine Tank Size	Safety Float Valve
M3011-CK10SM	30,000	1.0	Metered	1"	9"x48"	18"x36"	Yes
M3013-CK10SM	45,000	1.5	Metered	1"	10"x54"	18"x36"	Yes
M3015-CK10SM	60,000	2.0	Metered	1"	12"x52"	18"x36"	Yes

NOTE: Brine tanks come with safety float valve.

7000 Series Softeners With 1" - 1-1/2" Control Valves

Your best option for large homes

7000 series softeners are our fastest growing line of residential softeners because they appeal to consumers who own and builders who build larger homes, requiring 1"-1-1/2" pipe size.

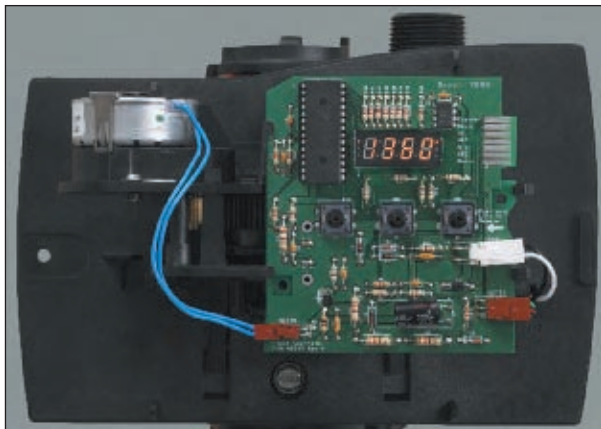


Specifications

Valve	Fleck 7000 with SE electronics
Valve body	Glass reinforced Noryl® (1-1/4")
Valve type	Electronic - metered
Pipe size	1" - 1-1/2"
Bypass	Bypass included (MNP)
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- 1-1/4" valve for high flow / backwash rates.
- Easy to program Fleck 7000 valves.
- Variable brining is standard.
- Variable reserve is standard.
- Quick connect fittings (some connections).
- Models for capacities to 210,000 grains.
- Top quality components are used.
- Brine tanks with grid plate for maximum saturation of brine.
- 1-1/4" distribution system (standard).
- Safety brine valve with air check.
- Reliable optical electronics eliminates micro switch positioning.



Easy to program!

7000 Series electronic softeners are easy to program and are highly reliable, plus manual operation is possible should power be disrupted!



7000 Series Models

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M3011-70	30,000	1"-1-1/2"	9x48	1	10	18x40	400	15.2	15	2	110
M3013-70	45,000	1"-1-1/2"	10x54	1.5	15	18x40	400	16.4	15	2.4	130
M3015-70	60,000	1"-1-1/2"	12x52	2	30	18x40	400	20.5	15	3.5	190
M3017-70	90,000	1"-1-1/2"	14x65	3	60	18x40	400	21.9	15	5	240
M3019-70	120,000	1"-1-1/2"	16x65	4	80	18x40	400	23.4	15	7	320
M3021-70	210,000	1"-1-1/2"	21x62	7	100	24x41	700	25.0	15	11	585

Note: Brine tanks and mineral tanks are almond as standard. Other options are available. Please specify when ordering. Connectors available: 1", 1 1/4", 1 1/2", NPT.

Water Softeners with Fleck 5600 Valves



Our most economical models!

Water softeners with Fleck 5600 control valves are our best selling softeners because they are built right and priced right. Check out the specifications, Features & benefits described below.

Specifications

Valve	Fleck 5600 top mount valve
Valve body	Glass reinforced Noryl®
Pipe size	3/4"
Types	Time clock and metered
By-pass	Included (stainless steel)
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- Economical pricing!
- Top quality components.
- Fully assembled, ready for installation.
- Models for capacities to 60,000 grains.
- User friendly Fleck 5600 control valves.
- Brine tanks with grid plate for maximum saturation of brine.
- Stainless steel by-pass valve is included.
- Safety brine valve with air check.

Time clock models (FT5600 valve)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M2010	30,000	3/4"	9x48	1	10	18x40	400	15-20	9-11	2.2	110
M2012	45,000	3/4"	10x54	1.5	15	18x40	400	18-23	10-13	2.7	130
M2014	60,000	3/4"	12x52	2	30	18x40	400	19-25	10-13	4.0	190

Metered models (FM5600 valve)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M3011	30,000	3/4"	9x48	1	10	18x40	400	15-20	9-11	2.2	110
M1286	30,000	3/4"	10x35	1	10	Cabinet	225	15-20	10-13	2.7	110
M3013	45,000	3/4"	10x54	1.5	15	18x40	400	18-23	10-13	2.7	130
M3015	60,000	3/4"	12x52	2	30	18x40	400	19-25	10-13	4.0	190

Stocked Softeners for Same Day Shipment



Our most popular models, stocked for immediate shipment

Part Number	Type	Capacity	Valve	Mineral Tank		Brine Tank	
				Color	Size	Color	Size
M2010-SD	Time clock	30,000	5600	Blue	9x48	Blue	18x40
M3011-SD	Metered	30,000	5600	Blue	9x48	Blue	18x40
M1286	Cabinet (M)	30,000	5600	Brown, tan	Cabinet	Brown, tan	Cabinet

Note: Softeners listed above are assembled and include by pass valve and safety float valve to prevent brine overflow.

Ready to ship softeners

Part Number	Type	Capacity	Valve	Mineral Tank		Brine Tank	
				Color	Size	Color	Size
WSFMT100-4	Metered	30,000	5600	Black	9x48	Black	14x14x34
WSFMT100-8	Metered	30,000	5600	Almond	9x48	Almond	14x14x34
WSFMT150-12	Metered	45,000	5600	Black	10x54	Black	14x14x34
WSCMT100-12	Metered	30,000	Clack	Black	9x48	Black	18x36
WSCMT100-13	Metered	30,000	Clack	Almond	9x48	Black	18x36
WSCMT150-12	Metered	45,000	Clack	Black	10x54	Black	18x36

Note: Softeners listed above are assembled and include by pass valve and safety float valve to prevent brine overflow.

LCTA-75 & LCTA-100 Twin Alternating Tank Softeners



Ideal softeners when soft water is required 24 / 7, without interruption.

Suitable for light commercial applications ranging from 20,000 to 120,000 grains of hardness removal capacity, at flow rates to 24 GPM.

Specifications

Valve	Fleck 9000 SE
Valve body	Brass
Pipe sizes	3/4" and 1"
Types	Metered
By-pass	Additional (LCTA-75 included)
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- Economical pricing!
- Top quality components
- Models for capacities to 120,000 grains
- Fleck 9000 SE control valves with "SE" electronics
- Brine tanks with grid plate for maximum saturation of brine
- Stainless steel by-pass valve is for LCTA-75 only
- Safety brine valve with air check.

LCTA-75 twin tank softeners with FM9000SE metered control valves

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M2058-SE	30,000	3/4"	9x48	1	15	18x40	400	13-19	15-25	2	230
M2059-SE	45,000	3/4"	10x54	1.5	20	18x40	400	14-21	15-25	2.4	290
M2060-SE	60,000	3/4"	12x52	2	30	18x40	400	15-21	15-25	3.5	420
M2063-SE	75,000	3/4"	13x54	2.5	45	18x40	400	15-21	15-25	4	460
M2066-SE	90,000	3/4"	14x65	3	60	18x40	400	17-22	15-25	5	500
M2069-SE	120,000	3/4"	16x65	4	80	18x40	400	17-24	15-25	7	650

LCTA-100 twin tank softeners with metered FM9000SE control valves

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M2058B-SE	30,000	1"	9x48	1	15	18x40	400	13-19	15-25	2	230
M2059B-SE	45,000	1"	10x54	1.5	20	18x40	400	14-21	15-25	2.4	290
M2060B-SE	60,000	1"	12x52	2	30	18x40	400	15-21	15-25	3.5	420
M2063B-SE	75,000	1"	13x54	2.5	45	18x40	400	15-21	15-25	4	460
M2066B-SE	90,000	1"	14x65	3	60	18x40	400	17-22	15-25	5	500
M2069B-SE	120,000	1"	16x65	4	80	18x40	400	17-24	15-25	7	650

Twin Water Softeners with Fleck 9100 Valves

Our most efficient models

Water softeners with Fleck 9100 control valves offer twin-alternating meter initiated operation, resulting in 24/7 soft water capability. Check out the features, specifications, benefits and options described below.



Specifications

Valve	Fleck 9100 mechanical or digital valve
Electrical	120 Volt 60 Hz standard
Valve body	Xyron
Distributor	1.05" O.D.
Types	¾" meter immediate initiated
Connection	¾" MNPT Noryl® Standard
Mineral Tank	Corrosion resistant FRP
Brine Tank	Fully assembled polyethylene
Media	High capacity cation resin

Features & benefits

- High efficiency, no reserve capacity required.
- Top quality components.
- Up to 5 CF fully assembled, ready for installation.
- Capacities up to 120,000 grains per regeneration.
- Digital SE version includes attached 24V transformer.
- Decorative mineral tank jacket options available.
- Multiple brine tank options available.
- Multiple ¾" to 1¼" bypass and connection options.
- Safety brine valve with air check included.

Meter initiated models

Part Number	Resin Cu. Ft.	App. GPG Capacity @ 4 lb CF	App. GPG Capacity @ 15 lb CF	Mineral Tank Size	Brine Tank Size	Dry Salt Lbs.	Estimated Peak GPM	Rec. GPM Range	App. Height Inch	Ship Wt. (lbs)
M2058-91	2	16,000	30,000	(2)9x48	14x14	200	13	1.3-8	60	180
M2059-91	3	24,000	45,000	(2)10x54	14x14	200	14	1.6-10	66	250
M2060-91	4	32,000	60,000	(2)12x52	15x17	250	15	2.3-15	64	330
M2066-91	6	48,000	90,000	(2)14x65	18x40	350	15	3.2-15	76	470
M2069-91	8	64,000	120,000	(2)16x65	24x40	600	15	4.2-15	76	625

Section 3

Residential Backwashing Filters

Trio-Treat Systems from Watts®

Iron, Hydrogen Sulfide & Manganese – The "Troublesome Trio"

If you're a water treatment professional, you're well aware Iron, Hydrogen Sulfide and Manganese are difficult to remove. This is why many in our industry consider them the "Troublesome Trio".

Watts Trio-Treat Systems are the solution to combat the "troublesome Trio"!

**New Product.
Try It Today!**



AIR



7000 AIR INDUCTION VALVE



FILOX®

= Satisfied Customers

Trio-Treat filters with Filox® media for superior performance

Part Number	Valve	Tank	Tank Size	Tank Color	Media (Cu. Ft.)	Media Installed	Drop (PSI)	BW Flow Rate	Service Flow Rate
N2349-FAIO	7000AIO	Vortech	9" x 48"	Black	1	Yes	<15	5.3	6
N2350-FAIO	7000AIO	Vortech	10" x 54"	Black	1.5	Yes	<15	7.5	9
N2351-FAIO	7000AIO	Vortech	12" x 52"	Black	2	Yes	<15	10	12
N2352-FAIO	7000AIO	Vortech	13" x 54"	Black	2.5	No	<15	12	15
N2353-FAIO	7000AIO	Vortech	14" x 65"	Black	3	No	<15	15	18
N2354-FAIO	7000AIO	Vortech	16" x 65"	Black	4	No	<15	20	24

Note: Valves come with 1" brass check valve; shipped loose with unit.

Models without media

Part Number	Valve	Tank	Tank Size	Tank Color	Media CAPACITY	Media Installed	Flow With MICRO-Z (GPM)	Flow With Birm (GPM)	Flow With GS Plus (GPM)
NX09T-AIO32VT	7000AIO	Vortech	9" x 48"	Black	1	No*	9	2.2	2.2
NX10T-AIO32VT	7000AIO	Vortech	10" x 54"	Black	1.5	No*	11	2.8	2.8
NX12T-AIO32VT	7000AIO	Vortech	12" x 52"	Black	2	No*	16	4	4
NX13T-AIO32VT	7000AIO	Vortech	13" x 54"	Black	2.5	No*	18	4.6	4.6
NX14T-AIO32VT	7000AIO	Vortech	14" x 65"	Black	3	No*	21	5.3	5.3
NX16T-AIO32VT	7000AIO	Vortech	16" x 65"	Black	4	No*	28	7	7

Note: Valves come with 1" brass check valve; shipped loose with unit.

Trio-Treat Air Induction Valve

Eliminates the need for oxidizing agents in many applications!

The 7000AIO valve

The 7000AIO valve is the most effective way to introduce air into a water filtration system for iron reduction, eliminating the need for oxidizing agents (such as chlorine) and hazardous chemicals (such as potassium permanganate) in many applications. The filter must be fitted with an inlet check valve to prevent any air from flowing backwards out of the filter tank. As oxidation of the iron occurs, the iron drops out of solution so it may be removed during the backwash cycle. Important factors will determine performance of a system using the 7000AIO valve, including water pressure, iron levels, pH levels, presence of iron bacteria, alkalinity and water hardness. Water professionals, who are knowledgeable in iron removal techniques, should only install this system. For more information, see technical data related to Filox® iron reduction media.

Installation requirements

Water pressure	20 psi (1.4 bar) minimum; 125 psi (8.6 bar) maximum.
Water temperature	110°F (43°C) maximum; do not expose unit to freezing conditions.
By-pass valve	A by-pass valve is recommended.

Installation instructions

1. All plumbing should comply with local plumbing codes.
2. A properly sized check valve must be installed at the valve inlet to prevent the pressurized air in the mineral tank from venting backward up to the feed water plumbing.
3. Assemble the deflector to the distribution tube.
4. Lubricate the distributor o-ring seal and tank o-ring seal.
5. Install the valve on the mineral tank.
6. Note: Teflon tape is the only sealant to be used on the drain fitting.
7. Place the by-pass in by-pass position.
8. Turn on main water supply on.
9. Open a cold filtered water tap nearby and let water run a few minutes or until the system is free from foreign materials.
10. Close cold water line.
11. Place unit in cycle 4 rapid rinse and slowly open the by-pass. Let run to drain until all air is purged.
12. Plug unit into an electrical outlet.

Note: All electrical connections must be connected according to local codes. Be sure the outlet is uninterrupted.

Start up

The system should be installed with the inlet, outlet and drain connections made in accordance with the manufacturer's recommendations and meet plumbing codes. For more information see manufacturer's complete installation and start-up procedures.

Note: The valve control may need to be set to the "home" position when it is powered up.

1. Press the "extra cycle" button and hold it for five seconds to trigger a manual regeneration and advance the valve to the first regeneration position. Pressing the "extra cycle" button while the unit is in a regeneration cycle will cause the valve to advance to the next position.
2. Position the valve to "backwash". Ensure the drain line flow remains steady for ten minutes, or until the water runs clear.
3. Position the valve to the "draw" position. Ensure the unit is drawing air through the air inlet check valve. Allow the unit to run until the system has been fully flushed with fresh air, as indicated by the presence of large air bubbles in the drain discharge.
4. Position the valve to the "rapid rinse" position. Check the drain line flow, and run for five minutes or until the water runs clear.
5. Replace control box cover.

For more information see manufacturer's installation and start-up manual.

Filox™ Backwashing Filters with CK10 Valves and Vortech Tanks

Whole house filters for Iron, Hydrogen Sulfide and Manganese.

Iron, Manganese and Hydrogen Sulfide are common elements found in your water and can be a nuisance causing stains in sinks, bathtubs, toilets, driveways and even the side of your house. In addition Iron, Manganese and Hydrogen Sulfide release unpleasant odors and tastes to your water supply. FILOX™, a non-chemical oxidizing media is the answer to these water problems.

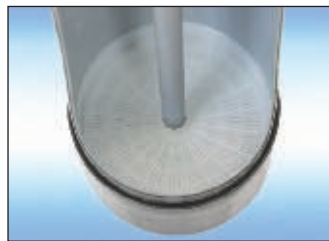
System advantages

- Highest flow rate of any Iron removal media.
- No oxidizing chemicals needed for regeneration.
- High efficiency with minimum of 80% Manganese dioxide for enhanced performance and capacity.
- Effective, from 5.0 to 9.0 pH.
- System is easy to program, with 10 pre-programmed regeneration cycles to optimize water treatment.
- May require additional oxidizing agents depending on water conditions.
- 10 year warranty on tank.
- 5 year warranty on valve.
- Made in USA.



Standard Mineral Tank

Standard tanks use gravel under bedding, which adds weight and cost. Also, re bedding is more difficult, should riser tubes pull out of the gravel bed.



Vortech™ Mineral Tank

No gravel under bedding is required, reducing weight and cost. Also, riser tubes are permanently attached, so they cannot pull out during re bedding.



NOTE: The use of chemicals and oxidizers, such as chlorine potassium permanganate and oxygen may be required to provide the optimal treatment for Iron, Hydrogen Sulfide and Manganese.

Models

PART NO.	VALVE	MINERAL TANK SIZE	MEDIA CUBIC FT.	GRAVEL (LBS)	SERVICE FLOW (GPM)	DROP (PSI)	BACK WASH (GPM)	FLOOR SPACE LXWXH
NF09-W100F	Time clock	9X48	1	10	6	< 15	5.3	16X10X55
NF10-W100F	Time clock	10X54	1.5	10	9	< 15	7.5	16X11X62
NF12-W100F	Time clock	12X52	2	20	12	< 15	10	17X13X60
NF14-W100F	Time clock	14X65	3	40	18	< 15	15	18X15X74
NF16-W100F	Time clock	16X65	4	50	24	< 15	20	20X17X74
NF21-W100F	Time clock	21X62	5	100	27	< 15	25	22X23X70

Iron Filters with CK10 Valves & Standard Tanks

Whole house filters for Iron and Manganese reduction.

Iron is one of the most common elements found in nature, and most ground waters contain a measurable amount of iron. Iron stains bathtubs, toilets, sinks, driveways and it will even stain the side of your house in sufficient concentrations. We offer two media types to remove iron in point-of-entry applications.

Two media types

FILOX™

A non-chemical oxidizing media to reduce Iron.

Greensand-Plus™

An enhanced version of the traditional medium to remove Iron from water.

Filox™ system advantages

- Highest flow rate of any Iron removal media.
- No oxidizing chemicals needed for regeneration.
- High efficiency with 80% Manganese dioxide for enhanced performance and capacity.
- Effective, from 5.0 to 9.0 pH.
- System is easy to program, with 10 pre-programmed regeneration cycles to optimize water treatment.

Greensand-Plus™ system advantage

- Lower backwash requirements.
- Known saturation capacity.
- Higher temperatures and differential pressures than traditional Manganese Greensand.
- Greensand-Plus is also used for radium reduction.
- User friendly, low maintenance electronic time clock valve.



Note:

The use of chemicals and oxidizers, such as chlorine, potassium permanganate and oxygen may be required for both systems to provide the optimal treatment for Iron, Hydrogen Sulfide and Manganese.

Filox™ models

Part No.	Valve	Mineral Tank Size	Media Cubic Ft.	Gravel (Lbs)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	Floor Space LxWxH
NF09-CK10F	Timeclock	9X48	1	10	6	< 15	5.3	16X10X55
NF10-CK10F	Timeclock	10X54	1.5	10	9	< 15	7.5	16X11X62
NF12-CK10F	Timeclock	12X52	2	20	12	< 15	10	17X13X60
NF14-CK10F	Timeclock	14X65	3	40	18	< 15	15	18X15X74
NF16-CK10F	Timeclock	16X65	4	50	24	< 15	20	20X17X74
NF21-CK10F	Timeclock	21X62	5	100	27	< 15	25	22X23X70

Greensand Plus™ models

Part No.	Valve	Mineral Tank Size	Media Cubic Ft.	Gravel (Lbs)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	Floor Space LxWxH
NGP09-CK10F	Timeclock	9X48	1	10	3	< 15	5.3	16X21X55
NGP10-CK10F	Timeclock	10X54	1.5	10	4	< 15	7.5	16X22X62
NGP12-CK10F	Timeclock	12X52	2	20	5	< 15	10	17X24X60
NGP14-CK10F	Timeclock	14X65	3	40	6	< 15	12	18X33X74
NGP16-CK10F	Timeclock	16X65	4	50	7	< 15	20	20X35X74

Backwash Filters with CK10 Valves



Whole house filters for chlorine, taste, odor and sediment reduction.

Our activated carbon filters are highly popular because they correct a wide range of water quality problems, by removing chlorine, tastes, odors and sediment.

Benefits

- Great tasting water from every tap in your house!
- No bad tastes!
- No foul odors!
- Crystal clear water for drinking, bathing and cooking!
- User-friendly equipment.
- Low maintenance due to automatic operation.

Models

Part Number	Valve	Mineral Tank Size	Media Cubic Ft.	Gravel (Lbs)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	Floor Space LxWxH
NC09-CK10F	Timeclock	9X48	1	10	4	< 15	4.2	16X10X55
NC10-CK10F	Timeclock	10X54	1.5	10	6	< 15	5.3	16X11X62
NC12-CK10F	Timeclock	12X52	2	20	8	< 15	7.5	17X13X60
NC14-CK10F	Timeclock	14X65	3	40	11	< 15	10	18X15X74
NC16-CK10F	Timeclock	16X65	4	50	14	< 15	11	20X17X74
NC21-CK10F	Timeclock	21X62	5	100	20	< 15	25	22X23X70

Whole house filters for sediment reduction with high efficiency Micro-Z™ filter media.

Our filtration systems for sediment use our high performance Micro-Z filter media to provide increased loading capability and higher service flow rates. Micro-Z's unique Zeolite structure offers increased porosity to outperform conventional sand filters by reducing water consumption. The need to backwash is dramatically reduced!

Features & benefits

- Uses Micro-Z™ for increased solids loading.
- Unique structure allows for higher flow rates.
- Reduces water consumption because the need to backwash is dramatically reduced.
- Reliable equipment, designed for long-term service.



Models

Part Number	Valve	Mineral Tank Size	Media Cubic Ft.	Gravel (Lbs)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	Floor Space LxWxH
NM09-CK10F	Timeclock	9X48	1	10	5/9	< 15/25	5.3	16X10X55
NM10-CK10F	Timeclock	10X54	1.5	10	7/10	< 15/25	7.5	16X11X62
NM12-CK10F	Timeclock	12X52	2	20	9/15	< 15/25	11	17X13X60
NM14-CK10F	Timeclock	14X65	3	40	13/21	< 15/25	15	18X15X74
NM16-CK10F	Timeclock	16X65	4	50	17/28	< 15/25	25	20X17X74
NC21-CK10F	Timeclock	21X62	5	100	20	< 15	25	22X23X70

Backwashing Filters With Fleck Valves



Fully assembled backwashing filters with activated carbon and MicroZ™

Backwashing filters come with Fleck valves and various options, so you can select the filter best suited for your application!

Specifications

Valves	Fleck
Valve type	Time clock
Pipe size	3/4" and 1"(see below).
By-pass	(See below).
Mineral tanks	Corrosion resistant FRP. NSF.
Media	Various (see below)

Backwashing filters with activated carbon for taste, odor and chlorine reduction

Part Number	Valve	Valve Number	Pipe Size	Tank	Carbon (Cu. Ft.)	Size By-Pass	Service Flow (GPM)	Ship Wt. (lbs)
N2050D	Fleck	F5600	3/4"	9X48	1	3/4" SS	4.5	90
N2050	Fleck	F2510	3/4"	9X48	1	3/4"	4.5	90
N2051	Fleck	F2510	3/4"	10X54	1.5	3/4"	5.4	105
N2052	Fleck	F2510	3/4"	12X52	2	3/4"	7.8	117
N2051-1	Fleck	F2750	1"	10X54	1.5	None	5.4	90
N2052-1	Fleck	F2750	1"	12X52	2	None	7.8	105

Backwashing filters with MicroZ™ media for sediment reduction

Part Number	Valve	Valve Number	Pipe Size	Tank	Carbon (Cu. Ft.)	Size By-Pass	Service Flow (GPM)	Ship Wt. (lbs)
N5245-09	Fleck	F2750	1"	9x48	1	None	5	110
N5245-10	Fleck	F2750	1"	10x54	1.5	None	7	140
N5245-12	Fleck	F2750	1"	12x52	2	None	9	167

Neutralizers

Part Number	Valve	Valve Number	Pipe Size	Tank	Media (Cu. Ft.)	Backwash (GPM)	Service Flow (GPM)	Ship Wt. (lbs)
N2070	Neutralizer	F2510	3/4"	9x48	1	3	4	165
N2070-56	Neutralizer	F5600	3/4"	9X48	1	4	4	130

Ready-To-Ship Filters

Activated carbon & Iron Reduction Filters

Just landed an order and need shipment immediately?

These models are in stock, ready to roll!

Specifications

Valve: CK-10
Type: Time clock
Pipe size: 3/4" to 1" tail pieces
Mineral tanks: Black tanks are standard



Filox® Iron reduction systems with three button CK10 valves

MODEL NUMBER	SERVICE FLOW RATE	FILOX CU. FT.	MINERAL TANK SIZE	MINERAL TANK COLOR	FLOOR SPACE REQUIREMENT	DROP PSI	BACK WASH (GPM)	GRAVEL (LBS.)	MAX. PER PALLET
FILOX100	6 GPM	1.0	9X48	Black	16x10x55	<15	5.3	10	6
FILOX150	9 GPM	1.5	10x54	Black	16x11x62	<15	7.5	10	6

Note: All valves come with 3/4" / 1" tail pieces; mineral tanks are standard with gravel underbedding.

Carbon systems for chlorine, taste & odor reduction with three button CK10

MODEL NUMBER	SERVICE FLOW RATE	CARBON CU. FT.	MINERAL TANK SIZE	MINERAL TANK COLOR	FLOOR SPACE REQUIREMENT	DROP PSI	BACK WASH (GPM)	GRAVEL (LBS.)	MAX. PER PALLET
CARBON100	4 GPM	1.0	9X48	Black	16x10x55	<15	4.2	10	6
CARBON150	6 GPM	1.5	10x54	Black	16x11x62	<15	5.3	10	6

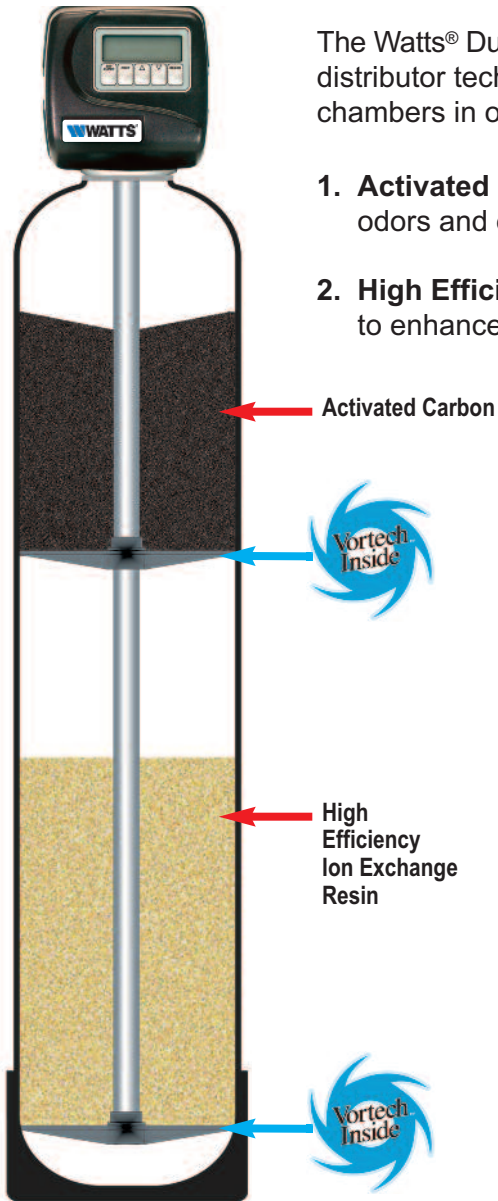
Note: All valves come with 3/4" / 1" tail pieces; mineral tanks are standard with gravel underbedding.

Section 4

Multi-Chamber Softeners and Filters

Watts® Dual-Media Water Softener & Filter

Water softener and carbon filter in one compact design for whole house water treatment!



The Watts® Dual Media Water Softener and Filter utilizes Vortech™ patented distributor technology to maximize media efficiency with two separate media chambers in one tank.

- 1. Activated Carbon** for pre-treatment removes chloramines*, chlorine, taste, odors and extends ion exchange resin life.
- 2. High Efficiency Ion Exchange Resin** for increased efficiency and to enhance performance with high iron content water.

Features & Benefits

- Combines two technologies in one single tank.
- One control valve and mineral tank to reduce costs.
- Carbon and resin are in separate chambers.
- Proper contact time is provided by using two chambers.
- No media migration with carbon and resin separated.
- Carbon can be replaced without replacing the resin.
- Lower pressure drop, compared to twin tank systems.
- Vortech™ tank technology for higher backwash rates.
- No gravel under bedding to reduce costs and weight.
- Space saving, single tank design.
- Vortech™ tanks are NSF standard certified.
- Made in U.S.A.

Reduces

- ✓ Hardness
- ✓ Chloramines*
- ✓ Chlorine
- ✓ Taste
- ✓ Odors
- ✓ Iron**



Dual water softener and filter

Part Number	Softening Capacity (Grains)	Tank Size	Tank Color	Dome Hole	Resin (cu.ft.)	Carbon (cu. Ft.)
M3011-W100SM-CR	30,000	10x54	Black	NO	1	0.5
M3011GW100SM-CR	30,000	10x54	Gray	NO	1	0.5
M3013CK10SMCR10	45,000	13x54	Black	NO	1.5	1
M3013CKDHSMCR10	45,000	13x54	Black	YES	1.5	1
M3013CK10SMCR15	45,000	13x65	Black	NO	1.5	1.5
M3013CKDHSMCR15	45,000	13x65	Black	YES	1.5	1.5
M3015CK10SMCR10	60,000	13x65	Black	NO	2	1
M3015CKDHSMCR10	60,000	13x65	Black	YES	2	1

Note: All units come with CK10 valve, by-pass, 1" PVC elbow tails & coconut shell carbon. Brine tanks come with safety float valve.

*When catalytic carbon is used.
**Pre-treatment may be required.

Watts® Dual-Media Water Softener & Filter

Water softener and carbon filter in one compact design for whole house water treatment!

Get two water treatment methods in one compact design

The Watts® Dual Media Water Softener and Filter comes with metered control valves, which regenerate based on water usage for greater efficiency.

Specifications

Valve	CK-10 metered valve
Pipe fittings	3/4" / 1" sockets and 1" MNPT elbows provided
Resin	1, 1.5 or 2 cu. ft. ion exchange resin
Media	0.5, 1.0 or 1.5 cu. ft. granular activated carbon
Mineral tank	Vortech, corrosion resistant FRP
Distributor	1.05" O.D.
Electrical	120 volt, 60 Hz, standard

These models come with Vortech™ tanks, designed to improve backwash rates and conserve water.

Vortech™ dual-tank features and benefits

- Separate chambers in a single tank.
- Mid-plate eliminates media migration.
- No gravel under bedding to reduce costs and weight.
- Higher backwash rate.
- Reduced backwash duration to conserve water.
- Riser tubes are permanently attached.
- NSF certified and made in U.S.A.



Standard Mineral Tank

Standard tanks use gravel under bedding, which adds weight and cost. Also, re bedding is more difficult, should riser tubes pull out of the gravel bed.



Vortech™ Mineral Tank

No gravel under bedding is required, reducing weight and cost. Also, riser tubes are permanently attached, so they cannot pull out during re bedding.

Watts® Tri-Plex Water Softeners

Multi-Stage water treatment systems for consumers who demand the “best”.

Multi-stage water treatment system in a single tank to save space and money!

Our metered control valve regenerates in an *up-flow* pattern based on water usage to conserve water and reduce salt requirements.

Pre-filter

Our Micro-Z® filter media is used for pre-filtration to remove particles, five micron and up. Micro-Z outperforms sand and multimedia to increased particulate removal.

KDF®

This important step enhances the performance of activated carbon (below) and aids in the removal of iron and hydrogen sulfide.

Activated carbon

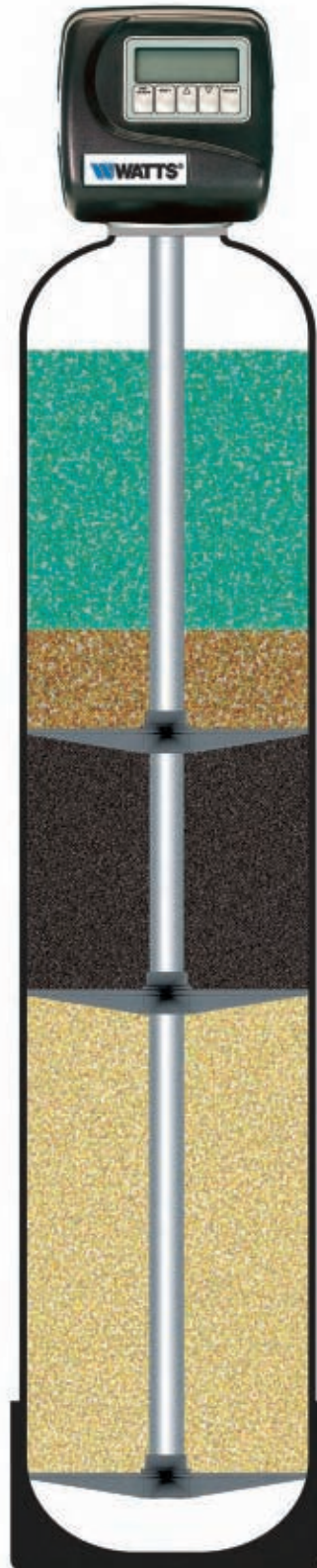
Activated carbon is used for pre-treatment to improve water quality by reducing bad tastes, foul odors, chlorine and organic substances through adsorption.

High efficiency ion exchange resin

Fine mesh resin is used for increased efficiency to remove water hardness, Calcium, Magnesium and improve performance in high Iron content water.

Two models

We offer two models based on water type, including models for municipal water and well water.



Innovative design

If you want the most from your investment, Tri-Plex water conditioners are for you! There's nothing else like them anywhere!

Multi-stage water treatment process

With Tri-Plex water softeners you get several water treatment media in a single tank, using a single control valve, to reduce space and save money!

Reduces:

- Water hardness
- Calcium
- Magnesium
- Sediment
- Chlorine
- Bad tastes
- Foul odors
- Heavy metals (KDF)
- Scale
- Damage to appliances due to scale build-up.
- Spots on dishes & glassware.
- Soap build-up on shower walls and bath tubs.

Other benefits:

- Soap savings 50% or more because soap and detergents work better in soft water.
- Softer, brighter laundry.
- Refreshing shower water and no chlorine damage to hair.
- Smoother shave with softened water.
- Reduced energy costs by scale elimination.

Tri-Plex Water Conditioning Systems by Watts®

Components

Tri-Plex water conditioning systems come with the W100SM metered valve, which features up-flow regeneration to conserve water and increase salt efficiency. Tri-Plex conditioners also use three chamber 10" x 60" Vortech® mineral tanks, (with safety float valves) and come with a 1" by-pass valve.

Media replacement

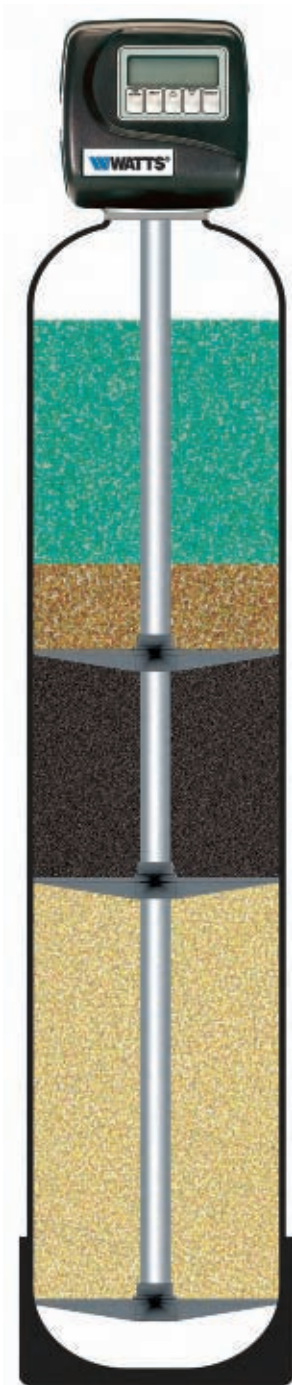
Media replacement may be completed using the extraction tool, designed for Tri-Plex water conditioning systems (see bottom photo). Micro-Z® is typically not replaced because the media is refreshed during backwash. We recommend replacement of the activated carbon and KDF every 1-2 years, depending on chlorine levels. For more information please see our owners manual.

Resin replacement

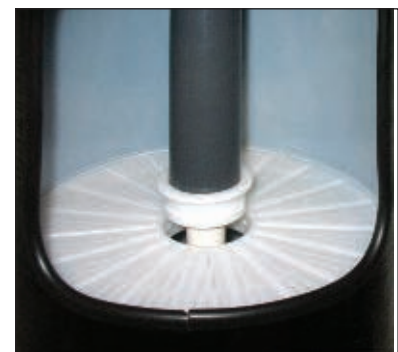
Resin life is dramatically extended due to pre-treatment by activated carbon and KDF. With Tri-Plex conditioners, resin life may be extended indefinitely with adequate carbon pre-treatment.

Warranty

Tri-Plex conditioners come with a five year limited warranty on control valves, mineral tanks and brine tanks. For more details please refer to our owners manual.



Extraction Tool
(P/N: D91EXT)



Adapter Removal Tool
(P/N: D91INS)

Models

MODEL NUMBER	VALVE	WATER	RESIN CU. FT.	CARBON CU. FT.	SERVICE FLOW (GPM)	BACKWASH (GPM)	BRINE TANK	SHIP WT. (LBS.)
M3011-W100SM5CZ	W100SM	City	1.0	0.5	8 to 11	7.5	18x36	150
M3011-W100SM8CZ	W100SM	Well	1.0	0.5	8 to 11	7.5	18x36	150

Note: Pipe connections are 1".

Watts® Twin Tank-Dual Chamber Alternating Water Softener and Conditioner

Reduces water hardness, chlorine, tastes and odors 24/7!



Nothing like it anywhere!

Unlike conventional water softeners, Watts® Twin Tank, Dual Chamber systems provide soft, conditioned water continuously. And because each tank has two chambers for two different treatment methods, water hardness, chlorine, tastes and odors are removed, 24/7

Features and benefits

- Designed for applications when continuous water conditioning is required or desired.
- Innovative twin alternating dual chamber system works continuously, 24/7!
- Systems regenerate immediately, so soft water is available upon demand!
- Soft water is provided when the second tank is being regenerated.
- Carbon pre-treatment dramatically extends resin life to reduce costs.
- Vortech® tanks, used for superior performance.
- Metered valve for greater efficiency and reduced water consumption.

Removes

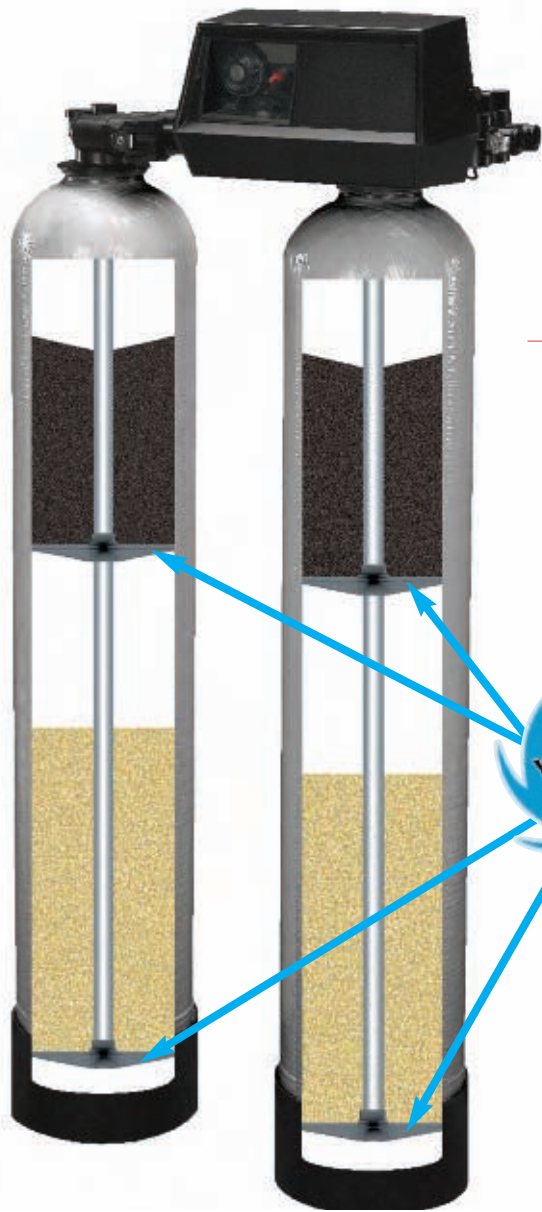
Calcium
Magnesium
Iron*
Water hardness
Chlorine
Chloramines
Organic matter

*Additional treatment may be required.

Specifications

MODEL NUMBER	CAPACITY (GRAINS)	VALVE TYPE	CONNECTION	MINERAL TANK		BRINE TANK		SAFETY
				COLOR	SIZE	COLOR	SIZE	FLOAT VALVE
M3011-9100SM-CR	30,000 Per Tank	Metered	1"	Gray	10" x 54"	Black	18" x 40"	Yes

Watts® Twin Tank-Dual Chamber Water Conditioners With "9100" Metered Valve For Greater Efficiency!



Metered valve for greater efficiency

Our "9100" control valve is metered for greater efficiency and reduced salt usage, because regeneration of the softener resin is based on 100% water consumption before switching to your second tank!

- Corrosion-free fiber-reinforced polymer valve body.
- Innovative second tank quick connection.



Benefits

- Provides continuous, soft water, 24/7.
- Chlorine, taste & odors are reduced!
- Refreshing shower water without hardness.
- Softer, brighter laundry.
- Reduced soap usage and costs.
- No mineral deposits on dishes and glassware.
- No chemical damage to hair.
- Smoother shave with soft water!

Vortech® tanks

- Large surface area for lower pressure drop.
- Low pressure drop for higher flow.
- Angled slots for greater lift during backwash.
- No gravel under bedding is required.
- Distributor plates are "self cleaning".
- Backwash duration is reduced.
- Less water for backwash is required.
- Riser tubes are permanently attached.
- Made in the U.S.A.
- NSF certified.

Media

CARBON	TYPE	Coconut Shell
	SIZE	12 x 40 Mesh
	CUBIC FEET	0.5
RESIN	TYPE	High Capacity Cation
	SIZE	16 x 40 Mesh
	CUBIC FEET	1.0

Section 5

E-Treat™ Water Conditioning Systems

Watts® E-Treat™ Water Conditioning Systems Using No-Salt Technology

Good for the environment. Good for the planet. Good for you!

Conventional water softeners are generally considered the most effective and practical way to reduce water hardness and prevent scale formation in pipes and plumbing fixtures. Water softeners, however, require salt to regenerate, and

they must be backwashed periodically to rinse and refresh the ion exchange resin. Brine water discharge and the need to conserve water have challenged this conventional technology, and new methods to provide scale-free water are being considered.

New!

**Introducing the environmentally friendly solution
to water quality improvement problems!**



Model # ETREATWCS



**NO
SALT!**



**NO
BACKWASH!**



**NO
SCALE!***



**NO
CHLORINE!**



**NO
ELECTRICITY!**

*With E-Treat™ water conditioning systems, there's no salt,
no backwash, no scale, no chlorine and no electricity!*

Here's how it works:

Step #1 (Main tank)

Water enters the system and flows down through a two cubic foot bed of coconut shell activated carbon. This initial water treatment process improves water quality by reducing bad tastes, foul odors, chlorine and organic substances through adsorption.



Step #2 (Inner tank & contact chamber)

During this process, water flows upward through the rise tube into the inner tank where treatment for scale prevention is provided using our highly effective, ScaleNet™ anti-scale media. This unique material transforms calcium *ions* into Calcium *crystals*, which are stable and cannot attach to pipes, surfaces, hardware or heat exchanger components. The crystals are so small they are easily rinsed away by the water flow!

With ScaleNet™, there is no scale on plumbing fixtures, no costly repairs to hot water heaters due to scale, no salt, no brine tank and no electrical control valve. The installation is easy because only a simple "in and out" valve is required.

* Performance testing proves ScaleNet™ anti-scale media virtually eliminates new scale formation and aids in the removal of existing scale. Results may vary, however, and performance is based on water hardness levels, flow rate and other factors.



Calcium scale in pipes and plumbing equipment results in high energy costs and may lead to expensive repairs to appliances, such as hot water heaters, ice machines, coffee makers and dishwashers. Scale can also be a source for bacteria to grow, which may become a health concern in drinking water applications.

On the other hand, Calcium is important to human health, and supplements are recommended if Calcium is reduced or totally void in one's diet.



ScaleNet™
Anti Scale Media



Installation

E-Treat™ water conditioning systems are typically installed where water enters the house for whole house water treatment. Pipe connections are 1".

ScaleNet™ media and carbon replacement

E-Treat™ water conditioning systems with ScaleNet™ anti-scale media are designed to provide whole house water conditioning for up to five years, based on hardness and chlorine levels before the anti-scale media must be replaced. An extraction tool is available for this operation.

We recommend replacement of the activated carbon every two years, for optimum performance. A dome hole is provided for this extraction.

Our trained water quality improvement dealer in your area can complete the media and carbon replacement procedure.



Extraction Tool For Media
(P/N: D91EXT)

Specifications (Model # ETREATWCS)

Maximum flow rate	12 gallons per minute
Maximum temperature	140°F (60°C)
Minimum temperature	40°F (4°C)
Maximum hardness	Sizing is based on maximum hardness of 25 grains per gallon.
pH range	6 to 9
Pressure	Maximum pressure is 125 psi; 8.75 bar (minimum pressure is 20 psi 1.4 bar).
Tank sizes	Outer tank is 13" x 65". Inner tank is 9" x 30" (outer tank is black).
Flow pattern	In the outer tank the flow is downward. In the inner tank the flow is up-flow.
Certification	ScaleNet™ media is NSF Standard 61 Certified for material safety.
By-Pass Valve	By-pass valve is included.
Capacity	System comes with 2 cu. ft. of coconut shell carbon and 4 liters of ScaleNet™.

Note: Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. System must be maintained according to manufacturer's instructions. Pretreatment is required for Iron, HS, Manganese and hydrocarbons.



INSTALLATION INSTRUCTIONS:

1. Place system on a smooth flat surface.
2. Install the fittings and / or the bypass (see separate instructions).
Slide the nut on first then the split ring and o-ring.
3. Connect incoming cold water to the inlet of the system.
4. Connect system outlet to service water of the house.
5. Open the nearest valve down stream of the system to allow the air to purge from the system, and allow the initial carbon fines to go down the drain.
6. Remove the dome hole plug.
7. Slowly open inlet valve and allow the system to fill with water.
8. Watch the water level through the dome hole opening. Close the inlet valve and reinstall the dome hole plug once the tank is full of water.
9. Fully open the inlet valve and allow water to run to drain until it is clear.
This flushes the carbon fines from the system.
10. Close the down stream valve five minutes after the water runs clear.
11. Check for leaks and repair as required.
12. System is ready for use.

CONDITIONS FOR OPERATION:

- Maximum continuous flow rate 12 gpm
- Minimum pressure 15 PSI
- Maximum pressure 125 PSI
- Minimum operating temperature 34 F
- Maximum operating temperature 120 F
- Water pH range 6.0 to 9.0
- Maximum feed water hardness is 25 grains per gallon.
- Hydrogen sulfide, iron, and manganese pretreatment required
- Maximum chlorine 4 ppm
- Oil and grease should not be present

NOTE: Failure to install the proper pretreatment will cause the scale prevention media to be ineffective.



IMPORTANT

The non-electric, "in / out" valve used with E-TREAT Systems is designed to be used in both up-flow and down-flow installations. E-Treat Systems are down-flow through the bed of carbon and up-flow through the anti-scale media. Labels are provided; however facing the valve, looking directly into the ports of the valve, the inlet is on the LEFT.

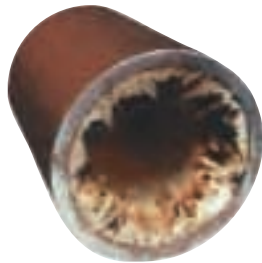
Section 6

ScaleNet[®] Anti-Scale Systems

Watts® Anti-Scale Water Treatment Systems

The problem

Calcium creates scale in pipes, on appliances and other plumbing surfaces. This leads to higher heating and energy costs and expensive repairs to appliances, such as ice machines, coffee makers, dishwashers and cooling towers in commercial buildings.



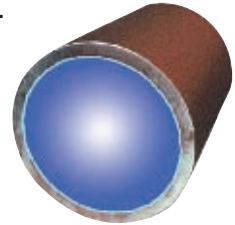
Scale can also be a source for bacteria to grow, which can be a health concern in drinking water applications.

Calcium, on the other hand, is important to human health, and supplements are recommended if Calcium is reduced or totally void in one's diet.



The solution

WATTS® Anti-Scale systems transform Calcium *ions* into Calcium *crystals*, which are stable and cannot attach to pipes, surfaces, hardware or heat exchanger components. The crystals are so small they are easily rinsed away by the water flow.



Benefits

- Scale is virtually eliminated!
- Aids in removing existing scale.
- No costly repairs to appliances due to scale.
- No salt.
- No brine tank.
- No backwash.
- Saves water!
- No electricity.
- Easy installation.

Note: For satisfactory results recommended flow rates and model sizing must be followed.

Residential models

PART NUMBER	TANK SIZE (IN.)	TANK TYPE	PIPE SIZE (IN.)	MEDIA LITERS	GRAVEL LBS.	SERVICE FLOW GPM	FLOOR SPACE L X W X H (IN.)	SHIP WT. (LBS)
M8408-RES	8x35	Vortech	1"	3.5	NA	10	11x11x42	30
M8409-RES	9x35	Vortech	1"	4	NA	12	12x12x42	32
M8410-RES	10x54	Vortech	1"	4.5	NA	15	13x13x61	37
M8412-RES	12x52	Vortech	1"	6.5	NA	20	15x15x59	45
M8413-RES	13x54	Vortech	1"	7.5	NA	25	15x15x61	51

Note: By pass valves are optional. KC11V3006 is optional by pass valve for 1" systems. Maximum hardness is 25 grains per gallon at specified flow rates.

Commercial models

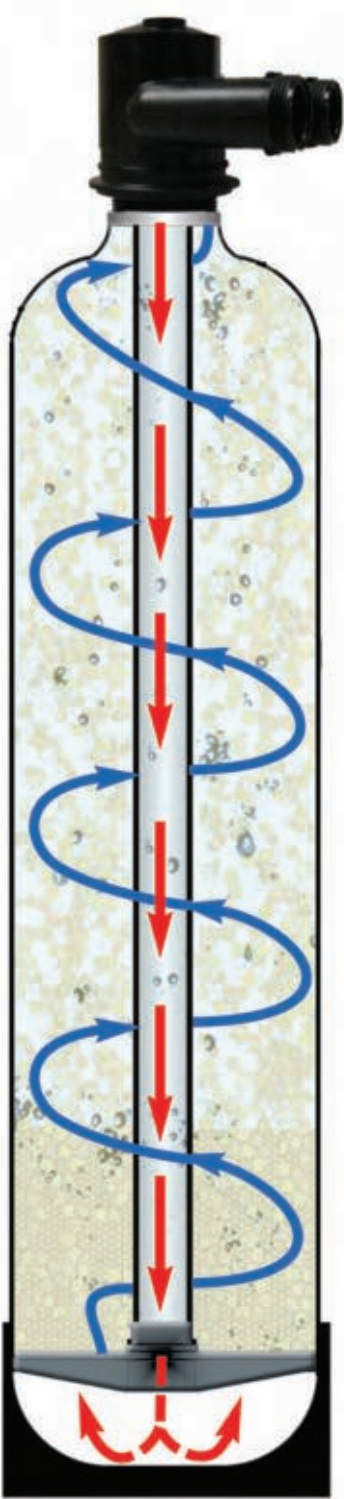
Part Number	Tank Size (In.)	TANK TYPE	Pipe Size (In.)	Media Liters	Gravel Lbs.	Service Flow GPM	Floor Space L x W x H (In.)	Ship Wt. (lbs)
M8409-COM	9x35	Vortech	1"	5.5	NA	12	12x12x42	32
M8410-COM	10x54	Vortech	1"	6.25	NA	15	13x13x61	37
M8412-COM	12x52	Vortech	1"	9.25	NA	20	15x15x59	45
M8413-COM	13x54	Vortech	1"	11	NA	25	15x15x61	51
M8414-COM	14x65	Vortech	1"	12.5	NA	30	15x15x72	77
M8416-COM	16x65	Standard	1.5"	16.5	50	50	17x17x72	138

Note: Commercial systems designed for long runs and high usage. By pass valves are optional. Maximum hardness is 25 grains per gallon at specified flow rates.

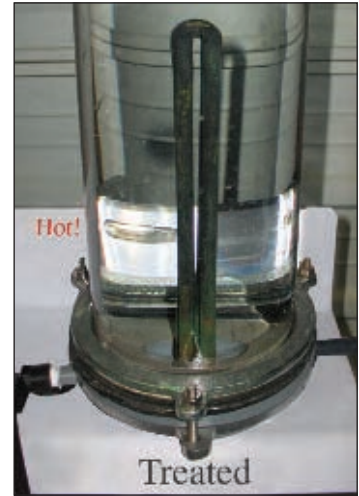
IMPORTANT: Pretreatment is required for Iron, HS, Manganese and hydrocarbons.

Proven results!

Lab tests conducted at the Watts test facility, located in San Antonio, Texas indicate ScaleNet™ anti-scale media virtually eliminates new scale formation and aids in the removal of existing scale. Tests were conducted in water temperatures to 120°F and hardness levels of 17 grains per gallon. Photos (below) show scale formation in untreated water and no scale in the ScaleNet treated water.



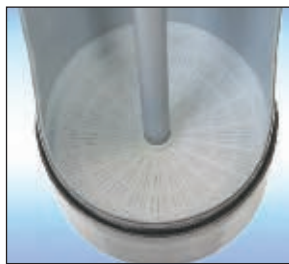
Untreated
Scale Build-Up
(In untreated water).



Treated
No Scale!
(With ScaleNet treatment).

Specifications

Matrix	Ceramic coated polymer.
Density	1.1 to 1.2 lbs. per cubic foot
Weight	650 g/L
Capacity	1 liter per 3.0 gallons of flow (min.)
Lifetime	3-5 years based on hardness and chlorine levels.
Temperature	40°F minimum to 140°F maximum (4°C to 60°C)
pH	6 to 9 (effective range)



Vortech® tanks

Vortech tanks are used to provide increased contact time between the ScaleNet media and water for increased performance.

New!



ScaleNet™ cartridges

We also supply cartridges with ScaleNet anti-scale media for low flow applications.

PART NUMBER	SIZE	FLOW (MAX.)
SNC2510	2.5"x 10"	1 gpm
SNC2520	2.5"x 20"	2 gpm
SNC4520	4.5"x 20"	4 gpm

ScaleNet™ Information

The flow thru the ScaleNet™ system is upward. Therefore, the inlet and outlet connections are opposite of traditional water treatment equipment.

The flow rate must not exceed the maximum specified flow rate of the system. A flow control device will be required for applications where flow rates may exceed the maximum specified flow rate.

Part Number	Tank Size	Pipe Size	Max Service Flow
M8408-RES	8x35	1"	10 gpm
M8409-RES	9x35	1"	12 gpm
M8410-RES	10x54	1"	15 gpm
M8412-RES	12x52	1"	20 gpm
M8413-RES	13x54	1"	25 gpm

Installation Instructions:

1. Place system on a smooth flat surface.
2. Install the fittings and / or the bypass (see separate instructions). Slide the nut on first then the split ring and o-ring.
3. Connect incoming cold water to the inlet of the system.
4. Connect system outlet to service water of the house.
5. Partially open a valve down stream of the system to allow the air to purge from the system.
6. Slowly open inlet valve and allow the system to fill with water.
7. Close the down stream valve five minutes after all the air has been purged from the system and plumbing. This flushes any fines out of the system.
8. Check for leaks and repair as required.
9. System is ready for use.

Conditions for Operation:

- Minimum pressure 15 PSI
- Maximum pressure 125 PSI
- Minimum operating temperature 34 F
- Maximum operating temperature 120 F
- Water pH range 6.0 to 9.0
- Maximum feed water hardness is 25 grains per gallon.
- Maximum chlorine 3 ppm, de-chlorination recommended
- Oil and grease should not be present
- Warning - Do not exceed specified flow rates
- Residential systems are designed for intermittent flow, for continuous flow use commercial systems

IMPORTANT:

Pretreatment for Hydrogen Sulfide, Iron, Manganese
And hydrocarbons is required.

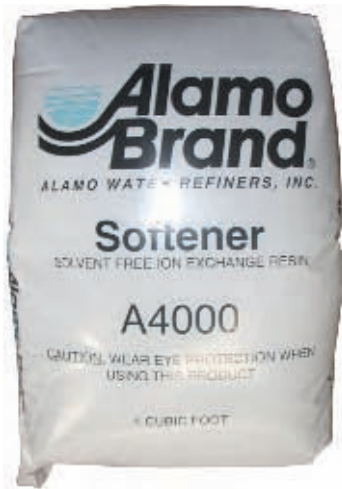


Top view with optional bypass

Section 7

Resins and Media

Ion Exchange Resin



Alamo Brand A4000 Resin

Alamo brand A4000 resin is a high purity, premium grade, prewashed, strong acid gel-type cation exchange resin specially designed for residential water treatment. A4000 is a bead type, cross-linked, polystyrene divinylbenzene resin that offers excellent bead integrity and very low extractables.

Design conditions

Bed depth	>30 in
Flow rate	2-5 gpm/ft ³
Freeboard	50-75%
Backwash expansion	50-75%
NaCl concentration for regeneration	5-25%
NaCl flow rate for regeneration	0.25-0.5 gpm/ft ³
Turbidity	<5.0 NTU
Free chlorine	<1 ppm

Resin properties

Type	8% crosslink polystyrene
Form	Gel- type, light amber bead
Ionic form	Na ⁺ (as shipped)
Functional group	Sulphonic acid
Bead size	16 x40 mesh
Effective size	0.45 ± 0.07 mm
Bulk density	53 lb/ft ³
Real density	1.28 g/cm ³
Bead count	>95%
Water retention	45-48%
Total capacity	>2.0meq/l
Volume change	Na ⁺ - H ⁺ <5%
Stability, temp.	<300°F
Stability pH	0 – 14

Ordering information

Part Number	Description	Application	Ionic Form	lbs. Cu. Ft.	Cu. Ft. Pallet
CATION					
A4000	Alamo Brand 8% crosslink	Softening	NA	52	42
A4005	Purolite C-100FM fine mesh	Softening	NA	52	40
A4004	Purolite C-100E	Softening	NA	52	40
A4012	Purolite C-100H	DI	H+	52	40
A4016	Purolite C-100X10 10% crosslink	Softening	NA	52	40
A9000-14	Thermax T-52 10% crosslink	Softening	NA	52	40
A9000-25	Thermax T-42MP 8% macro	Condensate	NA	52	40
ANION					
A4040	Purolite A-400 Type I	DI	CL	43	40
A4044	Purolite A-300 Type II	Alkalinity	CL	43	40
A4073	Purolite A-850 gel acrylic	Tannins	CL	43	40
A9000-35	Thermax A-72MP Type I styrene base	Tannins	CL	43	36
A9000-37	Thermax A-30MP Type I acrylic macro	Tannins	CL	43	36
A9000-36	Thermax A-62MP macro	Nitrates	CL	43	36
A4050	Purolite A-520E macro	Nitrates	CL	43	40
MIXED BED					
A4140	Purolite NRW-37SC Semiconductor 1:1 chem equiv	DI	H+/OH-	43	40
A9000-31	Thermax MB-108P 1:1 volume basis	DI	H+/OH-	43	36

Ion Exchange Media Cross Reference Chart



WATTS	THERMAX	RESINTECH	DOW	MITSUBISHI	PUROLITE	R & H	SYBRON	
STRONG ACID CATION								
	T 40	SAC 6.4%		HCR S(E)S		C 100 E	SR 1L	
A9000 09	T 42	SAC 8 %	CG8	HCR S	SK 1B	C 100	IR 120	C 249
	T 50						IR 130	
A9000 14	T 52	SAC 10%	CG 10 Na	HGR	SK 110	C 100 x 10	IR 122	C 250
	T 38				SK 106	C 120E	IR 100	
A9000 25	T 42 MP	SAC MP	SACMP	MSC 1	PK 220	C 150	IR 200	CFP 110
	T 56MP				PK 228			
STRONG BASE ANION								
	A 23	SBA TYPE I	SBG 1	SBR	SA 10A	A 600	IRA 400	ASB 1
	A 23 P	SBA TYPE I Porous	SBG 1P	SBR P	SA 12A	A 400	IRA 402	ASB 1 P
	A 27 MP	SBAMP TYPE I	SBMP 1	MSA I	PA 312	A 500	IRA 900	A 641
	A 32	SBA TYPE II	SBG 2	SAR	SA 20A	A 300	IRA 410	ASB 2
	A 36MP	SBA MP TYPE II		MSA 2	PA 412	A 510	IRA 910	A 651
	A 21MP	SBA, TYPE I			PK 312			
	A 21MP(OH)	SBA, TYPE I			PK 312(LOH)			
WEAK ACID CATION								
	CXO 12	WAC GEL	WACG	CCR 3		C 105	IRC 84	CNP
	CXO 12 MP	WAC MP	WACMP	MWC 1	WK 40	C 106	IRC 76	CNP 80
WEAK BASE ANION								
	A 2X MP	WBA MP	WBMP	DOWEX 66	WA 30	A 100	IRA 93	AFP 329
MIXED BED RESINS								
A9000 31	MB 108 P	MIXED BED						
	MB 115	MIXED BED	MBD 15	MR 3		NRW 37	IRN 150	NM 60
	MB 112	MIXED BED	MBD 20			NRW 38		NM 72
COLOR AND ORGANIC REMOVAL								
A9000 35	A 72 MP	SBA MP TYPE I			PA 308	A 500 P	IRA 904	A 642
A9000 37	A 30 MP	SBA MP TYPE I	SBACR			A 860	IRA 958	MACRO T
NITRATE REMOVAL								
A9000 36	A 62 MP	NITRATE SELECTIVE	SIR 100			A 520 E	IRA 996	SR 6
CHELATING RESINS								
	CH 90	IMONIDIACETATE	SIR 300	XFS 4196	CR 11	S 930	IRC 718	
	CH 93	AMINOPHOSPHONIC	SIR 500		CR 20	S 940/950	DUOLITE 467	
	CH 95	ISO THIOURONIUM	SIR 400	A 1		S 920		SR 3
	CH 99	BORON SELECTIVE			CRB 02	S 108	IRA 743	

Media Loading or Replacement Procedure

Media loading or replacement for water softeners or filters is sometimes required for units in the field. Replacement of media is relatively simple, if the following procedure is followed:

Replacement of Media Simplex Unit

Open bypass valve and close inlet/outlet isolation valves. Duplex Unit Close inlet/outlet isolation valve of unit to be rebedded. Manually turn timer dial to backwash position (Manual Regeneration) to relieve vessel pressure. Unplug electrical connection of unit. Disconnect inlet, outlet, drain, and brine lines. Unscrew valve head from tank. Remove

distribution tube from tank and visually inspect for any damage or wear replace if necessary. Empty media into a vessel with resin trap/strainer, to retain the resin/gravel and allowing water to drain. Dispose of used media. Relocate softener tank in original location.

Loading of Media

Install distribution tube in mineral tank. Place a cap or tape over the open end of distributor to prevent any media from entering. Fill tank approximately one third with water to act as a buffer. Slowly pour the required amount of media in each vessel: Gravel

to be loaded first. Resin to be loaded second. Clean top of tank and tank threads of any resin or gravel. remove cap or tape from distribution tube and clean. Visually check and clean valve and distribution "O" Ring of any foreign matter and lubricate with silicone or soap.

NOTE: Do not use Vaseline or grease. Locate control valve on tank making certain riser tube is centered. Tighten valve to tank. Reposition and level tank if necessary to assure proper alignment. Connect inlet, outlet, drain, and brine connections

MICRO-Z™

Superior filtration media

Alamo's Micro-Z™ granular filter media outperforms conventional multimedia materials due to its unique structure, allowing particulate to penetrate deeply into the filter bed to provide superior filtration at increased flow rates.



Features & benefits

- Higher solids loading capability
- Superior filtration performance
- Reduced backwash frequency
- Removes finer particles
- Reduces pressure drop
- Provides higher flow rates
- Light weight
- Reduces shipping costs
- Easy to handle

Physical properties

Color	Light green
Bulk density	55 lbs. per cu. ft.
Specific gravity	2.2 gm/cc
Mesh size	14x40
Uniform coefficient	1.9
Hardness (Mohs scale)	4

Conditions of operation

Recommended bed depth	36" - 48"
Recommended freeboard	50% of bed depth
Service flow rate	12-20 GPM/sq. ft.
Backwash flow rate	12-16 GPM/sq. ft.
Backwash bed expansion	30-40 percent

Note: Allow bed to soak overnight before initial backwash.

MICRO-Z vs Conventional Filter Media

Media	Nominal Micron Rating	Loading Capacity
Sand	20	1.0 X
Sand & Anthracite	15	1.4 X
Multimedia	12	1.6 X
Micro-Z	5	2.8 X

Micro-Z loading information

Vessel Diameter (Inches)	Media Quantity A7200 (Cubic Ft.)	Under Bed A7005 (Lbs.)	Service Flow Rate	Backwash Flow Rate (GPM)
9	1	12	5-9	5
10	1.5	15	7-10	7
12	2	25	9-15	10
14	3	40	13-21	15
16	4	55	17-28	20
22	6	100	30-50	32
24	8	200	38-62	40
30	10	300	59-98	60
36	20	500	85-140	85
42	30	700	115-190	110
48	40	900	150-250	150

Ordering information

Part Number	Description	Cubic Foot	Weight (Lbs.)	Package
A7200	Micro-Z	1	55	Bag
A7200-B	Micro-Z	40	2,200	Super Sack

Activated Carbon Media



Granular activated carbon

Activated carbon (AC) is a natural material derived from bituminous coal, lignite, wood, coconut shell etc., activated by steam and other means. Carbon is very popular due to its ability to correct many water quality problems.

Benefits

- Improve taste and remove odors
- Dechlorination of water
- Remove color from water
- Removal of organic substances
- Removal of synthetic organic substances
- Clear water for drinking, bathing and cooking!

Adsorption Influencing Factors

- Temperature** Most effective 60°F - 80°F.
- pH** Most organics in water are more soluble at pH lower than 7.0.
- Contact time** Very important to achieve proper flow rates for any adsorption system to function properly.

Carbon media types

- Bituminous** Basic coal based granular media
- Coconut shell** Superior level of hardness; high activity level; trihalomethane removal; longer life expectancy;
- Acid washed** Increases adsorptive capacity of carbon base and lowers the level of impurities.
- Catalytic** Specialized carbon media to remove hydrogen sulfide gas and chloramines.

Standard Operating Conditions

Service flow rate	2 - 6 gpm/cu.ft.
Freeboard	20%
pH	6.5 – 7.5

Contaminates adsorbed

- Chlorine
- Organic Chemicals
- Fertilizers
- TCE (Trichloroethylene)
- EDB (Ethylene dibromide)
- THM (Trihalomethanes)
- Sediment
- Chemical odor
- Pesticides
- Detergents
- Chloramines

Note: Service flow rates are calculated at 2-6 gpm/ft³ for standard taste, odor and chlorine removal application using bituminous carbon. Chloramines and TDS applications will require lower service flow rates and longer empty bed contact time or specialized carbon formulations.

Ordering information

Part Number	Description	Type	Mesh	Cubic Feet Per Bag	Container Wt. (Lbs)	Per Pallet
A9231 JCLF	Jacobi Low fine Aquasorb CS Carbon	Coconut	12 x 40	1	27.5	40
A9230 J	Jacobi acid wash Aquasorb HS Carbon	Coconut	12 x 40	1	27.5	40
A9030A	Acid washed, low fines	Bituminous	12 x 40	1	27.5	40
A9030 C	Calgon F 200 acid washed, low fines	Bituminous	12 x 40	1	31	40
A9231 J	Jacobi Aquasorb CS Carbon	Coconut	12 x 40	1	27.5	40
A9031A	Carbsorb™ 40	Bituminous	12 x 40	1	27.5	40
A9031 C	Calgon F 400 low fines	Bituminous	12 x 40	1	27.5	40
A9032A	Carbsorb™ 30	Bituminous	8 x 30	1	27.5	40
A9232 J	Jacobi Aquasorb CS Carbon	Coconut	8 x 30	1	27.5	40
A9044A	Calgon 20 x 50 mesh media	Bituminous	20 x 50	1	27.5	8
A9231 A	Calgon coconut shell carbon media	Coconut	12 x 40	1	27.5	40

SAFETY MESSAGE: Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate procedures for potentially low oxygen environment should be followed.

Catalytic[®] Granular Activated Carbon

Hydrogen sulfide and chloramines removal



Part # A8056

Catalytic carbon is a liquid phase virgin activated carbon that has been manufactured to develop catalytic functionality. The product is unique in that it concentrates reactants via adsorption and then promotes their reaction on the surface of the pores.

Features & benefits

- Catalytic activity allows for smaller more compact system sizing and lower capital requirements.
- No safety concerns with exotherms or toxicity like some impregnated medias.
- Improved trace organic capacity per unit volume.
- High hardness reduces fines and losses do to handling.
- Works with low oxidant levels and limits the need for chemicals.
- Simple and reliable equipment design that can handle spikes in concentration without metering of chemicals.
- Reduced carbon requirements reduce operating costs.
- Enhanced carbon media performance for a greater degree of contaminant removal at reduced costs.
- Thermal reactivation is an option for recycle and reuse to minimize operating costs and eliminates disposal concerns.

Properties

Carbon base	Bituminous
Peroxide No.	14 max
Iodine No.	825 mg/g min
Ash (by weight %)	7 max
Moisture (by weight %)	3 max
Abrasion No.	75 min
Apparent density	0.56 g/ml min
Through 12 mesh %	5 max
Through 40 mesh %	4 max

Applications

- Chloramines
- Hydrogen sulfide
- Taste and odor
- VOC removal
- Iron removal
- Residential water filters
- Commercial water filters
- Bottling and soft drink industries
- Aquarium water treatment

Design considerations

Catalytic carbon is produced from bituminous coal using a patented process for the use in liquid phase systems to promote catalytic reactions. The reactant concentration determines the effective contact time. Although it is not impregnated with metals or alkali, it displays the catalytic functionality of these materials.

Ordering information

Part Number	Description	Type	Mesh	Cubic Feet Per Bag	Container Wt. (Lbs.,)	Per Pallet
A8056	Calgon Centaur [®] Carbon	Catalytic	12 x 40	1	33	40
A8056-J	Jacobi Cx-MCA Carbon	Catalytic	12x40	1	27.5	40

Safety message: Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate sampling and work procedures for potentially low oxygen spaces should be followed, including all applicable federal and state requirements.

Filox-R™

Iron, Hydrogen Sulfide, and Manganese Removal



Filox-R™ media

Filox-R™ media is an economical Iron and Hydrogen Sulfide filtration media that out performs traditional Greensand and Birm.

Features & benefits

- Superior high efficiency media for filtration and removal capabilities
- No oxidizing chemicals needed for regeneration.
- High efficiency with 80% manganese dioxide for enhanced performance and capacity.
- Effective, from 5.0 pH to 9.0 pH
- Highest flow rate of any standard iron removal media.

Operating Conditions

Active Ingredient	75-85% Manganese Dioxide
Service Flow	6 gpm/cu.ft.
Freeboard	30-50%
Backwash rate	12-15 gpm/sq.ft @ 60F
Bed depth	20 inch Minimum
pH Range	5.0 – 9.0
Screen size	12 x 40
Bulk density	114 lbs/cu.ft.
Removal Capacity	
Iron	27 ppm
Hydrogen Sulfide	17 ppm
Manganese	11 ppm

Comparative information

Product Name	Active Ingredient	Relative Life
Birm	< 0.01% Manganese Dioxide	1
Greensand	0.5% Manganese Dioxide	50 X birm
Filox-R™	75% - 85% Manganese Dioxide	7500X birm



Ordering information

Part Number	Description	Cubic foot	Weight (Lbs.)	Package	Pallet Qty
A8033	Filox-R™ media	0.5	57	Bag	37

The use of additional oxidizing agents (oxygen, chlorine, ozone, hydrogen peroxide, potassium permanganate, etc.) is recommended. Oxidizers will not adversely affect Filox-R™. As a matter of fact, they will enhance its performance. They oxidize the media, which enables Filox-R™ to perform quicker and keep cleaner. It is always a safe practice to install an oxidation method upstream (in front) of the Filox-R™ bed.

Testing for ORP

Oxidation Reduction Potential (ORP) can be the most important factor to take into consideration in certain waters. Highly reducing waters may cause premature exhaustion or even destruction of the Filox-R™ bed. Precautions can be taken prior to installation that can prevent ORP problems. Use one of the screening tests and follow the instructions below if the subject water has reducing properties that will require additional oxidants.

Simple test

Mix 1.75 ounces (50 grams) water with 0.75 ounces (22 grams) of potassium permanganate crystals. Then take 2 drops of the mixture and stir into a fresh 1/4 gallon (1 liter) sample of the subject water. Let the subject water stand for 15 minutes. If the pink color remains, Filox-R™ can be installed without additional oxidants. If the pink color disappears, additional oxidants will be needed for Filox-R™ to function properly.

ORP meter test

Note: Must use a calibrated ORP meter. Any reading that is above a negative 170 millivolts indicates that Filox-R™ can be used effectively without additional oxidants. Any reading falling below a negative 170 millivolts indicates that additional oxidants will be required.

Additional Media Types

Sand

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A7002A	Filter sand 0.45-0.55 mm	Sediment turbidity	0.5	50	56
A7003A	Filter sand 0.6-0.8 mm	Sediment, turbidity	0.5	50	56
A7004A	Filter sand 0.8-1.2 mm	Sediment, turbidity	0.5	50	56

Gravel

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A7005A	Gravel flint #20 1/8"x1/16" red marking	Sediment, bed support	0.5	50	56
A7006A	Gravel 1/4"x1/8" orange marking	Sediment, bed support	0.5	50	56
A7007A	Gravel 1/2"x1/4" black marking	Sediment, bed support	0.5	50	56

Anthracite

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A7051	Anthracite #1.5 (0.85-0.95 mm) blue bags	Sediment, turbidity	1	52	50
A7052	Anthracite #2 (2-4 mm) yellow bags	Sediment, turbidity	1	52	50

Garnet

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A7080-50	Garnet #012 (1.45-1.7 mm)	Sediment, turbidity	0.5	50	80
A7084-50	Garnet #036 (0.5-0.65 mm)	Sediment, turbidity	0.5	50	80
A7085-50	Garnet #030/40 (0.32-0.39 mm)	Sediment, turbidity	0.5	50	80
A7086-50	Garnet #050 (0.24-0.33 mm)	Sediment, turbidity	0.5	50	80

Birm

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A8006	Birm (regular)	Iron, HS reduction	1	44	40

Greensand

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A8041-P	Greensand Plus	Iron, HS reduction	0.5	42	50

Neutralizer

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A8012A	Flomag PWT Magnesium Oxide similar to Corsex	Neutralizer	0.5	50	60
A8021-50	Calcite	NSF Neutralizer	0.5	50	60

KDF

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
KDF55-DRUM	KDF-55	Chlorine reduction	Drum	57	48
KDF85-DRUM	KDF-85	Fe, Chlorine reduction	Drum	57	48

Misc.

Part Number	Description	Application	Cubic Feet per bag	Container Wt. (Lbs.)	Per Pallet
A8014-FL	Filter Lite	Sediment, turbidity	1	25	80

Section 8

Water Conditioning Components

Valves



Fleck® 2510 plastic valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4022FM	2510	Filter, manual	3/4"	N/A	120/60	With cover, DLFC is separate.	1
K4022FM-Y075	2510	Filter, manual	3/4"	N/A	120/60	Cover, 3/4" MNPT plastic yoke, DLFC.	4
K4022SM	2510	Softener, man.	3/4"	N/A	120/60	Cover only. DLFC is separate.	1
K4022SM-Y075	2510	Softener, man.	3/4"	N/A	120/60	Cover, 3/4" MNPT plastic yoke, DLFC.	1
K4022FTC12-1206	2510	Filter	3/4"	N/A	120/60	Valve only, TC	4
K4022FTC-B075	2510	Filter	3/4"	3/4" plastic	120/60	With by-pass, cover, DLFC.	1
K4022FTC-B100	2510	Filter	3/4"	1" plastic	120/60	With by-pass, cover, DLFC.	1
K4022FTC-B100SS	2510	Filter	3/4"	1" stainless	120/60	With by-pass, cover, DLFC.	1
K4022STC-B075	2510	Softener, TC	3/4"	3/4" plastic	120/60	With cover, by-pass, DLFC.	1
K4022STC-B100	2510/1600	Softener, TC	3/4"	1" plastic	120/60	With cover, by-pass, DLFC.	1
K4022STC-B100SS	2510/1650	Softener, TC	3/4"	1" stainless	120/60	With cover, by-pass, DLFC.	1
K4022SMTS-1206	2510	Softener, meter	3/4"	N/A	120/60	Valve only (3/4" std. range).	1
K4022SMT-B075	2510	Softener, meter	3/4"	3/4" plastic	120/60	With by-pass, cover, 3/4" std., DLFC	1
K4022SMT-B100	2510	Softener, meter	3/4"	1" plastic	120/60	Includes by pass and cover.	4



Fleck® 2750 brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4010F	2750	Filter, manual	1"	N/A	120/60	Valve only; order DLFC separately.	9
K4010CF	2750	Filter	1"	N/A	120/60	Valve only; cover, DLFC separate.	4
K4010CF-AMS-ENV	2750	Filter	1"	N/A	120/60	Valve only with aux micro switch*	4
K4010C	2750/1600	Softener, TC	1"	N/A	120/60	Valve only.	4
K4010CM	2750/1600	Softener, meter	1"	N/A	120/60	Valve only (3/4" meter).	1
K4010CME	2750/1600	Softener, meter	1"	N/A	120/60	Valve only (3/4" range meter)* EXT	4
K4010DE	2750/1600	Softener, meter	1"	N/A	120/60	Valve only (1" ext range meter)*	4
K4010D	2750/1600	Softener, meter	1"	N/A	120/60	Valve only (1" meter)*	4
K4010-NT	2750/1600	Softener, NT	1"	N/A	120/60	NT valve & transformer. (3/4" M)*	1
K4010CM-SE	2750/1600	Softener, SE	1"	N/A	120/60	SE valve & transformer (3/4" M)*	4

M = Manual; TC = time clock; MTR = metered; A = automatic; SE = simple electronics; NT = networking timer; STD = standard range meter; EXT = extended range meter; HWBP = hard water bypass piston; NHWBP = no hard water bypass piston; AMS = auxiliary micro switch; ENV = environmental; DLFC = drain line flow control housing (order GPM button separately); PL = plastic; SS = Stainless steel; RM = remote meter; SYS = system.

Fleck valves, continued



Fleck® 2850 brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4050EFC7AN	2850	Filter	1-1/2"	N/A	120/60	Valve, micro switch, NHW by-piston*	1
K4050FC	2850	Filter	1-1/2"	N/A	120/60	Valve only*	4
K4050EF-NT	2850	Filter, NT	1-1/2"	N/A	120/60	NT valve w/ no hard water by piston*	1
K4050FNT	2850	Filter	1-1/2"	N/A	120/60	NT valve only*	1
K4051SC	2850/1600	Softener	1-1/2"	N/A	120/60	Valve only*	1
K4051SME1	2850/1600	Softener, meter	1-1/2"	N/A	120/60	Valve only (1" std. range)*	4
K4051SMS1	2850/1600	Softener, meter	1-1/2"	N/A	120/60	Valve only (1" std. range)*	4
K4051ESE	2850/1650	Softener, SE	1-1/2"	N/A	120/60	SE valve only w/o turbine*	1
K4050-SE	2850/1650	Softener, SE	1-1/2"	N/A	120/60	SE valve only with turbine*	1
K4050SC	2850/1700	Softener, TC	1-1/2"	N/A	120/60	Valve only*	4
K4050SME	2850/1710	Softener, meter	1-1/2"	N/A	120/60	Valve only with 1-1/2" ext range*	4
K4050SME1	2850/1710	Softener, meter	1-1/2"	N/A	120/60	Valve only with 1" ext. range*	4
K4050SMS1	2850/1710	Softener, meter	1-1/2"	N/A	120/60	Valve only with 1" std. range*	4
K4050ES-NTH	2850/1710	Softener, NT	1-1/2"	N/A	120/60	Valve, micro switch, NHW by-piston*	1
K4050ESE	2850/1710	Softener, SE	1-1/2"	N/A	120/60	SE valve w/o turbine*	1
K4050-SE1	2850/1710	Softener, SE	1-1/2"	N/A	120/60	SE valve only with turbine*	1



Fleck® 2900 brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4018F	2900	Filter	2"	N/A	120/60	Valve, C	4
K4018F-NT	2900	Filter NT	2"	N/A	120/60	Valve, C, ENV, NHWBP, w/trans	1
K4018B-E	2900/1600	Softener MTR	2"	N/A	120/60	Valve, C, 2" EXT	4
K4018B	2900/1600	Softener MTR	2"	N/A	120/60	Valve, C, 2" STD	1
K4018G	2900/1600	Softener MTR	2"	N/A	120/60	Valve, C, SYS 7, ENV, 2" RM, STD	4
K4018A	2900/1600	Softener TC	2"	N/A	120/60	Valve, C	1
K4018-NTH	2900/1650	Softener NT	2"	N/A	120/60	Valve, C, ENV, HWBP, w/trans	1
K4018-NT	2900/1650	Softener NT	2"	N/A	120/60	Valve, C, ENV, NHWBP, w/trans	1
K4017	2900/1700	Softener TC	2"	N/A	120/60	Valve, C	4
K4017CE	2900/1710	Softener MTR	2"	N/A	120/60	Valve, C, 2" EXT	4
K4017C	2900/1710	Softener MTR	2"	N/A	120/60	Valve, C, 2" STD	1
K4017DE	2900/1710	Softener MTR	2"	N/A	120/60	Valve, C, SYS 5, ENV, 2" EXT, NHWBP	4
K4017D	2900/1710	Softener MTR	2"	N/A	120/60	Valve, C, SYS 5, ENV, 2" STD, NHWBP	1
K4017G	2900/1710	Softener MTR	2"	N/A	120/60	Valve, C, SYS 7, ENV	1
K4017E	2900/1710	Softener MTR	2"	N/A	120/60	Valve, C, SYS 7, ENV, 2" RM, STD	1
K4017-NTH	2900/1710	Softener NT	2"	N/A	120/60	Valve, C, ENV, HWBP, w/trans	1
K4017-NT	2900/1710	Softener NT	2"	N/A	120/60	Valve, C, ENV, NHWBP, w/trans	1

M = Manual; TC = time clock; MTR = metered; A = automatic; SE = simple electronics; NT = networking timer; STD = standard range meter; EXT = extended range meter; HWBP = hard water bypass piston; NHWBP = no hard water bypass piston; AMS = auxiliary micro switch; ENV = environmental; DLFC = drain line flow control housing (order GPM button separately); PL = plastic; SS = Stainless steel; RM = remote meter; SYS = system.

Fleck valves, continued



Fleck® 3150 brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4024C	3150/1800	Softener	2"	N/A	120/60	Valve, C, SM, ENV	4
K4024CT	3150	Filter	2"	N/A	120/60	Valve, C, TM, ENV	4
K4024CT-NTH	3150	Filter NT	2"	N/A	120/60	Valve, C, TM, ENV, HWBP, w/trans	1
K4024TA	3150/1800	Softener MTR	2"	N/A	120/60	Valve, C, SM, SYS 7, ENV, 2" RM, STD	4
K4024A	3150/1800	Softener MTR	2"	N/A	120/60	Valve, C, SM, ENV, 2" STD	1
K4024	3150/1800	Softener TC	2"	N/A	120/60	Valve, C, SM, ENV	1
K4024-NTH	3150/1800	Softener NT	2"	N/A	120/60	Valve, C, SM, ENV, HWBP, w/trans	1
K4024-NT	3150/1800	Softener NT	2"	N/A	120/60	Valve, C, SM, ENV, NHWBP, w/trans	1
K4024T	3150/1800	Softener TC	2"	N/A	120/60	Valve, C, TM, ENV	1
K4024TN-NT	3150/1800	Softener NT	2"	N/A	120/60	Valve, C, TM, ENV, NHWBP, w/trans	1



Fleck® 3900 brass valve

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4040	3900	Filter	3"	N/A	120/60	Valve, C, ENV, SF/FL TM	4
K4040SM	3900	Filter	3"	N/A	120/60	Valve, C, ENV, SM	1
K4042E	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, 3" EXT	4
K4042	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, 3" STD	4
K4041	3900/1800	Softener TC	3"	N/A	120/60	Valve, C, ENV, SF/FL TM	4
K4045E-F	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, SYS 5 EXT	4
K4045-F	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, SYS 5 STD	4
K4045	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, 6/8 TM, SYS 5 STD	4
K4043E	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, SYS7 RM EXT	4
K4043	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, SYS7 RM STD	4
K4041-NTH	3900/1800	Softener NT	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, HWBP, w/trans	1
K4041-NT	3900/1800	Softener NT	3"	N/A	120/60	Valve, C, ENV, SF/FL TM, NHWBP, w/trans	1
K4042SM	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SM, 3" STD	1
K4043-SM	3900/1800	Softener MTR	3"	N/A	120/60	Valve, C, ENV, SM, SYS 7 RM STD	1
K4041SM	3900/1800	Softener TC	3"	N/A	120/60	Valve, C, ENV, SM	1
K4041SM-NTH	3900/1800	Softener NT	3"	N/A	120/60	Valve, C, ENV, SM, HWBP, w/trans	1
K4041SM-NT	3900/1800	Softener NT	3"	N/A	120/60	Valve, C, ENV, SM, NHWBP, w/trans	1

Fleck® 4650 hot water brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4020STCH-1206	4650/1600	Softener TC	3/4"	N/A	120/60	Valve only	1
K4020S-HOT	4650/1600	Softener TC	3/4"	3/4" SS	120/60	Includes cover, bypass	1

TC = time clock SS = stainless steel

M = Manual; TC = time clock; MTR = metered; A = automatic; SE = simple electronics; NT = networking timer; STD = standard range meter; EXT = extended range meter; HWBP = hard water bypass piston; NHWBP = no hard water bypass piston; AMS = auxiliary micro switch; ENV = environmental; DLFC = drain line flow control housing (order GPM button separately); PL = plastic; SS = Stainless steel; RM = remote meter; SYS = system.

Fleck valves, continued



FLECK 5600 Time Clock



FLECK 5600 Metered

Fleck® 5600 plastic valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4014U	5600	Filter	3/4"	N/A	120/60	Valve only	6
K4014F	5600	Filter	3/4"	3/4" SS	120/60	Includes cover, bypass	6
K4016F	5600	Filter	3/4"	1" SS	120/60	Includes cover, bypass	6
K4014K1	5600/1600	Filter	3/4"	N/A	120/60	Valve only for KMNO4	6
K4014PB	5600/1600	Filter	3/4"	3/4" SS	120/60	Includes cover, bypass, KMNO4	6
K4014Y-09	5600/1600	Softener TC	3/4"	N/A	120/60	Valve only for 9" tank	6
K4014Y-10	5600/1600	Softener TC	3/4"	N/A	120/60	Valve only for 10" tank	6
K4014Y-12	5600/1600	Softener TC	3/4"	N/A	120/60	Valve only for 12" tank	6
K4014Y-24	5600/1600	Softener TC	3/4"	N/A	24/60	Valve only	6
K4014FL	5600/1600	Softener TC	3/4"	3/4" SS	120/60	Includes cover, bypass	6
K4016	5600/1600	Softener TC	3/4"	1" SS	120/60	Includes cover, bypass	6
K4014W-09	5600/1600	Softener MTR	3/4"	N/A	120/60	Valve only for 9" tank, STD	6
K4014W-10	5600/1600	Softener MTR	3/4"	N/A	120/60	Valve only for 10" tank, STD	6
K4014W-12	5600/1600	Softener MTR	3/4"	N/A	120/60	Valve only for 12" tank, STD	6
K4014X-24	5600/1600	Softener MTR	3/4"	N/A	24/60	Valve only	6
K4014W-E	5600/1600	Softener MTR	3/4"	N/A	120/60	Valve only, 3/4" EXT	6
K4015S	5600/1600	Softener MTR	3/4"	3/4" SS	120/60	Includes cover, bypass, 3/4" STD	6
K4016A	5600/1600	Softener TC	3/4"	1" SS	120/60	Includes cover, bypass	6
K4014SE	5600/1600	Softener SE	3/4"	N/A	120/60	Valve only, 3/4" STD, w/trans	6



Fleck® 7000 plastic valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4037FC-0246T	7000	Filter	1.25"	N/A	24/60	Includes transformer	1
K4037SM09-0246T	7000/1610	Softener MTR	1.25"	N/A	24/60	Set for 9" tank, includes trans	1
K4037SM10-0246T	7000/1610	Softener MTR	1.25"	N/A	24/60	Set for 10" tank, includes trans	6
K4037SM12-0246T	7000/1610	Softener MTR	1.25"	N/A	24/60	Set for 12" tank, includes trans	6
K4038SM12-0246T	7000/1610	Softener MTR	1.25"	N/A	24/60	Set for 12" tank, includes trans HF	1

HF = high flow



Fleck® 9000 twin brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4026X	9000/1600	Softener MTR	3/4"	N/A	120/60	Valve only, STD, ICP	1
K4026XE	9000/1600	Softener MTR	3/4"	N/A	120/60	Valve only, EXT, ICP	1
K4026XSE	9000/1600	Softener SE	3/4"	N/A	120/60	Valve only, ICP, w/trans	1
K4026	9000/1600	Softener MTR	3/4"	3/4" SS	120/60	Valve, C, BY, STD, ICP	4
K4026-A	9000/1600	Softener MTR	3/4"	1" SS	120/60	Valve, C, BY, EXT, ICP	1
K4027XX	9000/1600	Softener MTR	1"	N/A	120/60	Valve only, STD	1
K4027	9000/1600	Softener MTR	1"	N/A	120/60	Valve, C, STD	1
K4027-B	9000/1600	Softener MTR	1"	N/A	120/60	Valve, C, EXT	1

Fleck valves, continued



Fleck® 9100 twin plastic valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4032X	9100/1600	Softener MTR	3/4"	N/A	120/60	Valve only, 3/4" STD	4
K4032XE	9100/1600	Softener MTR	3/4"	N/A	120/60	Valve only, 3/4" EXT	1
K4033X	9100/1600	Softener MTR	1"	N/A	120/60	Valve only, 1" STD	4



Fleck® 9500 twin brass valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K4028X	9500/1600	Softener MTR	1-1/2"	N/A	120/60	Valve only, 1-1/2" STD, ICP	4
K4028	9500/1600	Softener MTR	1-1/2"	N/A	120/60	Valve, C, 1-1/2" STD, ICP	4
K4028XE	9500/1600	Softener MTR	1-1/2"	N/A	120/60	Valve only, 1-1/2" EXT, ICP	4
K4028E	9500/1600	Softener MTR	1-1/2"	N/A	120/60	Valve C, 1-1/2" EXT, ICP	4
K4028SE	9500/1600	Softener SE	1-1/2"	N/A	120/60	Valve, T, ICP	1
K4028SE1	9500/1710	Softener SE	1-1/2"	N/A	120/60	Valve, T, ICP	1
K4029X	9500/1710	Softener MTR	1-1/2"	N/A	120/60	Valve only, 1-1/2" STD, ICP	4
K4029	9500/1710	Softener MTR	1-1/2"	N/A	120/60	Valve, C, 1-1/2" STD, ICP	1
K4029XE	9500/1710	Softener MTR	1-1/2"	N/A	120/60	Valve only, 1-1/2" EXT, ICP	1
K4029E	9500/1710	Softener MTR	1-1/2"	N/A	120/60	Valve, C, 1-1/2" EXT, ICP	1

MTR = metered SE = simple electronics C = cover included STD = standard range meter EXT = extended range meter
 ICP = interconnect pipes included

Fleck® valve parts

Part Number	Description	Case
K4541047	COMMUNICATION CABLE (12 FT PHONE CORD) FOR FLECK NT	1
K4560009	#900 AIR CHECK COMMERCIAL	12
K4510760	1.0GPM 3.0 LBS SALT/MIN	10
K4560029	1600 BRINE VALVE SHORT STEM (NO BLFC)	1
K4560029-100	1600 BRINE VALVE SHORT STEM W/FC 1.00 GPM	1
K4560080	1600 INJECTOR ASSY. #0 (CML. 1500 THRU 2900)	4
K4560037	1600/9500 BRINE VALVE	1
K4560034	1700 BRINE VALVE 2.0 GPM	1
K4560381	1700 INJECTOR ASSY. 1/2" SPEC. INJECTOR SIZE: _____	1
K4560039	1700/9500 BRINE VALVE 2.0 BLFC	1
K4560036-02	1800 BRINE VALVE ASSY. -STYLE #3-	1
K4515128-05	1800 INJECTOR NOZZLE #5 RED 30"	20
K4515128-06	1800 INJECTOR NOZZLE #6 WHITE 36"	6
K4515127-05	1800 INJECTOR THROAT #5 RED 30"	20
K4515127-06	1800 INJECTOR THROAT #6 WHITE 36"	4
K4560028	2300 FLOAT ASSY. BLUE/WHT	24
K4560027-FFA	2300 SAFETY BRINE VALVE BODY	24
K4102	2300 SBV W/FLOAT (BLUE/WHITE)	6
K4560014	2310 SAFETY BRINE VALVE	24
K4560038	2350 SAFETY BRINE VALVE (COMMERCIAL-NO FLOAT)	6
K4560050-21	25/2750/29DRIVE ASSY. STF 120V	1
K4560105	2850 PISTON ASSY.	1
K4560104	2900 PISTON ASSY. NO HARDWATER BYPASS	1
K4560103	2900 PISTON ASSY. STD. HARDWATER BYPASS	1
K4560616	3100 METER ASSY. 2" ELECTRONIC	1
K4025E	3100 REMOTE METER-EXT IMMED 2.0" 120/60	4

Fleck valve parts, continued

Part Number	Description	Case
K4025	3100 REMOTE METER-STD IMMED 2.0" 120/60	4
K4560106-00	3150 PISTON ASSY. STD.	1
K4560106-10	3150 PISTON ASSY. UPFLOW (HI BACKWASH 3900 UPPER)	1
K4560303-13	3200 7 DAY TIMER STF 120V 60HZ	1
K4560304-13	3200 12 DAY TIMER STF 120V 60HZ	1
K4560107-10	3900 PISTON ASSY. LOWER NO HARDWATER BYPASS	1
K4560032	4650/5600 BRINE VALVE (PLUNGER ASSY. ONLY)	6
K4560084	5600 INJECTOR ASSY. (PL 46/5600)	1
K4560102-10	5600 PISTON ASSY. FEEDER/FILTER (BLACK)	2
K4560102	5600 PISTON ASSY. STD. (WHITE F/SOFTENER)	2
K4560086	5600/9000 METER ASSY. .75" STD. RANGE	1
K4560350	9000 BRINE VALVE ASSY.	6
K4560385	9000 INJ/DRAIN MODULE ASSY.	1
K4560401	9000 PISTON ASSY. LOWER	1
K4560400	9000 PISTON ASSY. TOP	1
K4560109	9500 PISTON ASSY. LOWER	1
K4560108	9500 PISTON ASSY. UPPER	1
K4515078-01	ADAPTER 1" COUPLING W/O-RING	10
K4519620	ADAPTER COUPLING ASSY. 3/4" 90 W/O-RINGS, CLIPS,& SC	6
K4110-75	ADAPTER DLFC .75" F/2510 PVC	10
K4515131	BACKPLATE F/9000/9500	1
K4560020-25	BLFC ASSY. .25 GPM F/1600/3600	4
K4560710-2.0	BLFC ASSY. 2.0 GPM 1.00" FXM NPT	6
K4560710-5.0	BLFC ASSY. 5.0 GPM 1.00" FXM NPT	6
K4514775	CAM DRIVE F/2900/1600	10
K4512777	CAM SHUT-OFF VALVE BLACK STF 25/2700	10
K4541242-01	CONNECTOR, 1"/1.25" SWEAT SOLD EACH-NEED 2 PER VALVE	1
K4541241-01	CONNECTOR, 1.0" MPT PLASTIC SOLD EACH-NEED 2 PER VALVE	1
K4541244-01	CONNECTOR, 1.25" MPT PLASTIC SOLD EACH-NEED 2 PER VALVE	1
K4541243-01	CONNECTOR, 1.25"/1.5 SWEAT SOLD EACH-NEED 2 PER VALVE	1
K4560219-02	COVER ENVIRO BLACK/CLEAR F/2750/2900 UPPER	12
K4560232-110	DESIGNER COVER BLACK 1PC F/15-2850, 9000, 9500	24
K4560232-112	DESIGNER COVER BLACK 1PC W/LEFT WINDOW	24
K4560226	DESIGNER COVER BLACK/BLACK 5600 (for L back 5600 Valves)	24
K4512460	DISTRIBUTOR POINT TOP/BOTTOM STRAIGHT 13/16"WO/RISER	24
K4560700-8.0	DLFC .75" FXF NPT 8 GPM	2
K4560700-9.0	DLFC .75" FXF NPT 9 GPM	2
K4560700-10.0	DLFC .75" FXF NPT 10 GPM	2
K4560700-12.0	DLFC .75" FXF NPT 12 GPM	2
K4560700-15	DLFC .75" FXF NPT 15 GPM	2
K4560700-25	DLFC .75" FXF NPT 25 GPM	2
K4560365	DLFC .75" NPT BRASS NO BUTTON X1/2" (SPEC GPM 1.2-7.0)	6
K4560365-2.0	DLFC .75"X1/2" FXF BRASS 2.0 GPM	6
K4560365-2.4	DLFC .75"X1/2" FXF BRASS 2.4 GPM	6
K4560365-3.5	DLFC .75"X1/2" FXF BRASS 3.5 GPM	6
K4560365-4.0	DLFC .75"X1/2" FXF BRASS 4.0 GPM	6
K4560365-5.0	DLFC .75"X1/2" FXF BRASS 5.0 GPM	6
K4560365-7.0	DLFC .75"X1/2" FXF BRASS 7.0 GPM	6
K4560366-2.0	DLFC 1.0"X.75" FXF BRASS 2.0 GPM	2
K4560366-3.5	DLFC 1.0"X.75" FXF BRASS 3.5 GPM	2
K4560366-5.0	DLFC 1.0"X.75" FXF BRASS 5.0 GPM	2
K4560366-7.0	DLFC 1.0"X.75" FXF BRASS 7.0 GPM	2
K4560366	DLFC 1.00"FNPT X 3/4"F BRASS (SPEC GPM 1.2-7.0)	6
K4519480	DLFC HSG .75" X .75"FNPT F/8,9,10,12,15,20,25,30	20
K4560705-4.0	DLFC PLASTIC 4.0 GPM F/251/27/36/50/85	6
K4560705-7.0	DLFC PLASTIC 7.0 GPM F/251/27/36/50/85	6
K4560705-00	DLFC PLASTIC BLANK (HSNG LESS BUTTONF) 251/27/36/50/85	24
K4513640	FC DOLE 1.00" FXF 30.0 GPM	1
K4560068	FLOAT ASSY. F/2310 W/30" ROD	24
K4560026	FLOAT ASSY. F/400A/2350 (1-RED/WHT, 1-ROD, 2-GMT)	20
K4512094	FLOW WASHER .25 GPM	20
K4512095	FLOW WASHER .50 GPM	20
K4512097	FLOW WASHER 1.0 GPM	20
K4512085	FLOW WASHER 1.2 GPM	24
K4512086	FLOW WASHER 1.5 GPM	24
K4512087	FLOW WASHER 2.0 GPM	24
K4512088	FLOW WASHER 2.4 GPM	24
K4512089	FLOW WASHER 3.0 GPM	24
K4512090	FLOW WASHER 3.5 GPM	24
K4512091	FLOW WASHER 4.0 GPM	24
K4512092	FLOW WASHER 5.0 GPM	24
K4512408	FLOW WASHER 7.0 GPM	24



K4560226

Fleck valve parts, continued

Part Number	Description	Case
K4516529	FLOW WASHER 10 GPM	6
K4516735	FLOW WASHER 12.0 GPM	10
K4516736	FLOW WASHER 15.0 GPM	6
K4516737	FLOW WASHER 25.0 GPM	10
K4516046	GEAR DRIVE	4
K4513509	IMPELLER	6
K4512973	INJECTOR NOZZLE #0-#4 PVC KMNO4 9" 12"	10
K4510913-W	INJECTOR NOZZLE #1 WHITE DRILL .045/.047 8.0" 9.0"	10
K4510913-BL	INJECTOR NOZZLE #2 BLUE DRILL .060/.066 12.0"	10
K4510913-Y	INJECTOR NOZZLE #3 YELLOW DRILL .070/.076 14.0" 16.	10
K4514801-3CY	INJECTOR NOZZLE 3C .144 YELLOW F/1700	10
K4514801-5CW	INJECTOR NOZZLE 5C .246 WHITE F/1700	10
K4514801-6R	INJECTOR NOZZLE 6C .312 RED	10
K4512974	INJECTOR THROAT #0-#4 PVC KMNO4	10
K4510914-W	INJECTOR THROAT #1 WHITE 8.0" 9.0" 10.0"	10
K4510914-BL	INJECTOR THROAT #2 BLUE 12.0"	10
K4510914-Y	INJECTOR THROAT #3 YELLOW 14.0" 16.0"	10
K4514802-3Y	INJECTOR THROAT 3C .144 YELLOW	10
K4514802-5W	INJECTOR THROAT 5C .246 WHITE	10
K4514802-6R	INJECTOR THROAT 6C .312 RED	10
K4510302	INSULATOR LIMIT SWITCH F/MICRO SWITCH	100
K4560171-01	KIT MOTOR 120V 50/60HZ 1 RPM SAIA F/90/95 BF 12/93	1
K4560354-13	KIT P/H 5600 METER L-BACK 120/60 WO/CVR, PISTON	1
K4560353-13	KIT P/H 5600 TC L-BACK 120/60 WO/CVR, PISTON	1
K4560420	KIT P/H 9500 120/60 WO/CVR, BV, PISTON	1
K4561560-07	METER ASSY, IN-LINE, 1.0" BRASS ADAPT	1
K4514043	METER CABLE ASSY. 8.25" F/5600/5000	6
K4515425	METER CABLE ASSY. 13.25" F/9000 3/4" METER	6
K4515216	METER CABLE ASSY. 15.25" F/2900	4
K4515218	METER CAP ASSY. STD RANGE (BRASS 1", 1.5", 2")	1
K4515237	METER CAP ASSY. EXT RANGE (BRASS 1", 1.5", 2")	1
K4515150	METER CAP ASSY. EXT RANGE PLASTIC	1
K4514038	METER CAP ASSY. STD RANGE F/5600/2500	1
K4510218	MICRO SWITCH 25/2700 DR METER	10
K4519659-1	MOTOR 24V 60HZ 1/30 RPM F/5600/3200 METAL PINION	1
K4518738	MOTOR 120V 50/60HZ 1 RPM SAIA	1
K4519170	MOTOR 120V 60HZ 1/15 RPM F/3200	1
K4518743-1	MOTOR 120V 60HZ 1/30 RPM F/5600/3200 METAL PINION	1
K4540384	MOTOR DRIVE 115V 60HZ, 1500-2900	1
K4540387	MOTOR DRIVE, 115V 60HZ 2900 LOWER	1
K4510339	NUT HEX 4-40 F/MICRO SWITCH MOUNT	10
K4515210	O-RING F/PARK TANK TOP 2900/3150	6
K4511381	PIN ROLL 1/16X5/8	25
K4510338	PIN ROLL 3/32X7/8 F/DRIVE CAM 25/2700	100
K4560090	PISTON 1500/2500/2700 (2510)	1
K4560090-HF	PISTON 2750/2900 (2700 HI BACKWASH FLOW-UPPER)	1
K4511842	POWER CORD 6' F/5600	6
K4513061	PULLER TOOL 1500/25/2510/27/2750	1
K4517623	PULLER TOOL 2850/9500	1
K4112	RO LOCKOUT SWITCH KIT W/CAM,PIN,SCREWS,NUTS, ETC	10
K4510220	SCREW FIL HD MACH #4X1.12 F/MICRO SWITCH	10
K4513748	SCREW, FLT HD ST 6-20 X 1/2" F/TOP SCREEN	100
K4560121	SEAL & SPACER KIT 2500/2750 (1500,2510,2700,2900 UPPER)	4
K4560129	SEAL & SPACER KIT 2850	1
K4560128	SEAL & SPACER KIT 2900 LOWER	4
K4560131	SEAL & SPACER KIT 3150 (3900 UPPER)	1
K4560132	SEAL & SPACER KIT 3900 LOWER	1
K4560125	SEAL & SPACER KIT 5600/9000 UPPER	6
K4560421	SEAL & SPACER KIT 9000 BOTTOM	1
K4560133	SEAL & SPACER KIT 9500 LOWER	1
K4560134	SEAL & SPACER KIT 9500 UPPER	1
K4511726	SEAL BYPASS 3600/5600	6
K4516516	STUFFER 2850/9500	1
K4511098	STUFFER TOOL F/15/25/2510/27/2750	1
K4560376-13	TIMER 9000/9500 METER 1/30 RPM 120V 60HZ	1
K4515416	TUBE, BRINE VALVE, 2900/1700	6

Autotrol® valves



Autotrol® 255 plastic valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K2001	255/440i	Softener TC	3/4"	N/A	120/60	Valve, brass piping boss, 12V trans	4
K2001B	255/440i	Softener TC	3/4"	N/A	120/60	Valve, Noryl® piping boss, 12V trans	1
K2000M	255/440i	Softener TC	3/4"	N/A	120/60	Valve only	8
K2000AB	255/440i	Softener TC	3/4"	3/4" PVC	120/60	Valve, bypass, 12V trans	8
K2000MB	255/440i	Softener TC	3/4"	3/4" PVC	120/60	Valve, bypass	8
K2000B	255/460i	Softener DEM	3/4"	N/A	120/60	Valve only, 12V trans	8
K2005	255/460i	Softener DEM	3/4"	N/A	120/60	Valve, brass piping boss, 12V trans	4
K2005B	255/460i	Softener DEM	3/4"	3/4" PVC	120/60	Valve, bypass, 12V trans	8

TC = time clock (mechanical) DEM = demand (metered)



Autotrol® 263 / 268 plastic valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K2026344	263/440i	Filter	1"	N/A	120/60	Valve, cover, 1" PVC tails	4
K2026344-1206	263/440i	Filter	1"	N/A	120/60	Valve only	4
K2026344-1206B	263/440i	Filter	1"	1" PVC	120/60	Valve, cover, bypass, 1" PVC tails	1
K2026844-1206	268/440i	Softener TC	1"	N/A	120/60	Valve only	4
K2026844-1206B	268/440i	Softener TC	1"	1" PVC	120/60	Valve, cover, bypass, 1" PVC tails	1
K2026844FA-120	268FA/440i	Greensand	1"	N/A	120/60	Valve only	4
K2026844FA-120B	268FA/440i	Greensand	1"	1" PVC	120/60	Valve, cover, bypass, 1" PVC tails	1

TC = time clock DEM = demand (metered)



Autrol® 263 / 268 Logix valves

Part Number	Valve	Use	Pipe Size	By-Pass	Electrical	Description	Case Qty.
K2026876 0126	126/740	Filter	1"	N/A	120/60	Valve only	4
K2028762 0126T							

Autotrol® valve parts

Part Number	Description	Case Qty.
K221240601	COVER, OUTDOOR, W/FRONT INSERT, LOGIX, UV LT GRAY	1
K2299F-1	TRIPPER ARM 6 DAY	6
K221235448	TRANSFORMER, OUTDOOR, 120 TO 12 VDC	1
K2298F-1	MOTOR 440 TIMER 120V 60HZ	20
K2298F-3	MOTOR 440 TIMER 24V 60HZ	1
K221041174	KIT VALVE DISC F/263, 268, 269	20
K22100A213-801	KIT VALVE DISC F/255	6
K22155A152	KIT VALVE DISC F/155, 168, & 730	24
K22440I	KIT TIMER ASSY. 440I 6 DAY W/TRANSFORMER 120V 60HZ	1
K22440I-120	KIT TIMER ASSY. 440I 6 DAY 120/60 W/POWERCORD	1
K2201F-19	KIT BRINE CONTROL ASSY. 19LBS 100N108G2 1032996	24
K221000811	KIT 460I & 960, LOGIX INDOOR, TRANSFORMER	4
K221030272	INJECTOR "D" SIZE GREEN	20
K2228F-CC	INJECTOR "C" SIZE RED	24
K2228F-BB	INJECTOR "B" SIZE BLUE	24
K2304E-1	GEAR BLK 118 MIN-STD (420A43)	20
K2304E-3	GEAR BLK (420A44)	20
K221040763	FLOW CONTROL INSERT BLANK	20
K221040762	FC DISC BLANK W/O-RING F/5-40 GPM	1
K221002449	DRAIN FITTING 0.75" FNPT X 0.50" BARB (P8FE12-G)	20
K221236246	COVER, INDOOR, LOGIX, DK GRAY	1
K221040402	COVER I-LID F/263 & 268: OPT 255/460I	24

Fleck by-pass valves

Part Number	Description	Case Qty.
K4560040SS	5600 BYPASS VALVE .75" SS	12
K4560041SS	5600 BYPASS VALVE 1.00" SS	12
K4560049	BYPASS PLASTIC (NEEDS 3/4" OR 1" YOKE)	24
K4560049-04	BYPASS PLASTIC 1" W/ .75" PLASTIC YOKE	6
K4560049-02	BYPASS PLASTIC 1" W/1.00" NPT SS YOKE	6
K4540569	BYPASS, 7000	18
K4518706-02	YOKE .75" NPT PLASTIC NPT F/5000	6
K4513708	YOKE .75" SS NPT	24
K4518706	YOKE 1.00" NPT PLASTIC F/5000	6



Autotrol® by-pass valves

Part Number	Description	Case Qty.
K2101-ASSY	256 BYPASS F/255 WO/ADAPTERS	24
K2101B	256 BYPASS F/255 W/1.0" PVC ADAPTER	24
K2101A	256 BYPASS F/255 W/.75" PVC ADAPTER	1
K2101C	256 BYPASS F/255 W/.75" COPPER ADAPTER	24
K221040393	KIT TAIL 1.00" PVC (2@ ADAP, NUT, GASKET) CPVC MAT'L	24
K221040392	KIT TAIL .75" PVC (2@ ADAP, NUT, GASKET) CPVC MAT'L	24

Taras by-pass valves

Part Number	Pipe Size	Material	Comment	Case Qty.
K5065	3/4"	Plastic	Manual valve with adapters	1
K5065A	1"	Plastic	Manual valve with adapters	1
K5065B	1"	Plastic	Mipxunion without adapters	1
K5177136	1"	N/A	Mipxunion adaper (requires o-ring K5177140)	10
K5177140	3/4" OR 1"	N/A	By-pass Taras o-ring (for 3/4" or 1" adapter)	25

Clack bypass valve and tail pieces

Part Number	Description
KC11V3006	PART WTS KIT W100 BYPASS (ASSEMBLY REQUIRED)
KC11V3007	PART WTS KIT W100 1.0" MN (ELBOW ASSY PVD PAIR)
KC11V3007 01	PART WTS KIT W100 .75/1.0 (SOCKET ELBOW PAIR)
KC11V3007 02	PART WTS KIT W100 1" SWEAT (BRASS PAIR)
KC11V3007 03	PART WTS KIT W100 .75" (BRASS PAIR)
KC11V3007 04	PART WTS WS1 FITTING ASSY 1.0" (PLASTIC MNPT)
KC11V3007 05	PART WS100 FTG 1.25" PLASTIC (MAIL NPT ASSY)
KC11V3007 09	PART WTS KIT W100 1.25" 1.5" (BRASS SWEAT PAIR)
KC11V3007 12	PART WTS KIT W100 .75" (SHARKBITE PAIR)
KC11V3007 13	PART WTS KIT W100 1.0" (SHARKBITE PAIR)

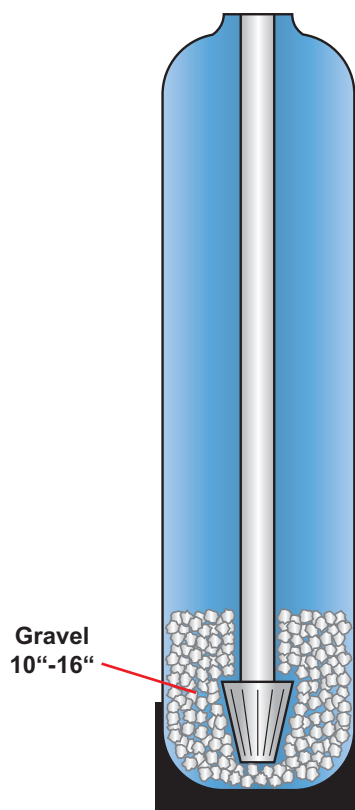


Vortech™ Systems by Watts®

Revolutionary new distribution technology

Old way...

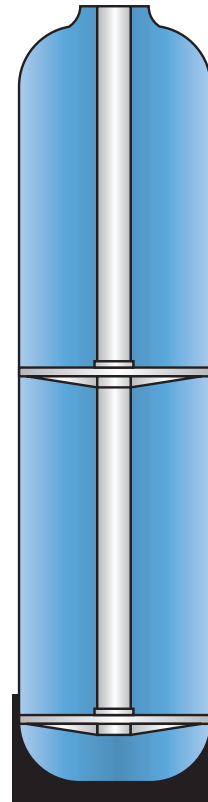
Smart tank way!



Up to 30% less
backwash is
required.



Riser Tube
permanently
attached!



You owe it to
yourself to try
Vortech tanks.
Try them
today!

OPTIONAL
Vortech distributor plate
(For dual media in a single tank.)

STANDARD
Vortech distributor plate
NO GRAVEL!

Features & benefits

- Up to 30% less backwash flow rate is required.
- High flow design maximizes today's high efficiency valve technology.
- Permanent attachment of dip tube to distributor, so when servicing a valve, distributor stays in place, no more re-bedding.
- Vortech distributor plate is designed for over 6,500 lbs load capacity.
- Elimination of gravel, save on net cost and unit weight, for shipping.
- Universal plate for use in filtration and softening applications.
- Self-cleaning nozzle design.
- Available for 7", 8", 9", 10", 12" 13" 14 and 16" tanks; 1" and 1-1/4" valves.
- Increase in softening capacity, due to improved flow through media.
- No channeling of media, providing a cleaner more efficient system.
- Optional secondary distributor plate for dual media systems without additional tanks, valves or efficiency reducing media migration.
- Environmentally friendly, reduction in required backwash times due to improved bed lift at lower flow rates.
- Most efficient softening regeneration, reducing salt consumption.



Vortech™ is the latest,
most innovative, and
most efficient bottom
distribution system.

The Vortech's high flow design maximizes today's high efficiency valve technology.

Enpress® Composite Pressure Vessels



Dome holes are available.



4" stainless threads standard on 16" - 24" tanks.

ENPRESS utilizes an industry exclusive co-polymer Polypropylene formulation for its liner assembly, providing superior performance in both hot and cold temperature environments and superior chemical and impact resistance far superior than traditional polyethylene. This allows the tanks to survive harsh climate extremes and provides the highest quality product

Features & benefits

- Dome hole option for 10", 12" and 13" diameter
- Co-polymer Polypropylene construction
- Computer controlled cut lengths
- Special high temperature and high-pressure injection process eliminates leaks
- Superior performance in both hot and cold temperature environments
- Threaded inlet is mechanically and chemically welded to dome to prevent leaks
- 4" stainless steel threads available on 16x65, 21x62, and 24x72
- **100% made in the USA**

Enpress® composite pressure vessels

Part Number	Size	Color	Top Opening	Height Inch/mm	Capacity Gal./Liters	Capacity Ft³	w/Base
C9053	7x24	Blue	2.5"	23.6 / 599	3.4 / 12.9	0.45	Yes
C9085-NB-TB	10x18	Black	2.5"	17.9 / 455	4.8 / 18.2	0.64	No
C9014-B	10x22	Black	2.5"	21.4 / 544	5.9 / 22.3	0.79	No
C9058	8X35	Almond	2.5"	34.9 / 886	6.6 / 25.0	0.88	Yes
C9058-1	8X35	Blue	2.5"	34.9 / 886	6.6 / 25.0	0.88	Yes
C9066	8x44	Almond	2.5"	44.2 / 1123	8.5 / 32.2	1.14	Yes
C9066B	8x44	Blue	2.5"	44.2 / 1123	8.5 / 32.2	1.14	Yes
C9084	9x48	Almond	2.5"	48.3 / 1227	11.9 / 45.0	1.59	Yes
C9084-B	9x48	Black	2.5"	48.3 / 1227	11.9 / 45.0	1.59	Yes
C9084-1	9x48	Blue	2.5"	48.3 / 1227	11.9 / 45.0	1.59	Yes
C9086-NB-DH-TB	10x24	Black	2.5"	23.1 / 587	6.6 / 25.0	0.88	No
C9088-B-DH	10x35	Black	2.5"	35.0 / 889	10.3 / 39.0	1.38	Yes
C9088-B	10x35	Black	2.5"	35.0 / 889	10.3 / 39.0	1.38	Yes
C9088	10x35	Almond	2.5"	35.0 / 889	10.3 / 39.0	1.38	Yes
C9090	10x44	Almond	2.5"	44.3 / 1125	13.3 / 50.3	1.78	Yes
C9090-1	10x44	Blue	2.5"	44.3 / 1125	13.3 / 50.3	1.78	Yes
C9090-B	10x44	Black	2.5"	44.3 / 1125	13.3 / 50.3	1.78	Yes
C9087-2-DH	10x47	Natural	2.5"	47.2 / 1199	14.2 / 53.8	1.9	Yes
C9092-DH	10x54	Almond	2.5"	54.4 / 1382	6.5 / 62.5	2.21	Yes
C9092	10x54	Almond	2.5"	54.4 / 1382	6.5 / 62.5	2.21	Yes
C9087-2-DH	10x47	Natural	2.5"	47.2 / 1199	14.2 / 53.8	1.9	Yes

Enpress® composite pressure vessels (cont.)

Part Number	Size	Color	Top Opening	Height Inch/mm	Capacity Gal./Liters	Capacity Ft³	w/Base
C9092-DH	10x54	Almond	2.5"	54.4 / 1382	6.5 / 62.5	2.21	Yes
C9092	10x54	Almond	2.5"	54.4 / 1382	6.5 / 62.5	2.21	Yes
C9092-B	10x54	Black	2.5"	54.4 / 1382	6.5 / 62.5	2.21	Yes
C9094X	12x52	Almond	2.5"	52.8 / 1341	22.9 / 86.6	3.06	Yes
C9094X-1	12x52	Blue	2.5"	52.8 / 1341	22.9 / 86.6	3.06	Yes
C9095-DH	13x54	Almond	2.5"	54.3 / 1379	28.0 / 106.0	3.74	Yes
C9095T	13x65	Almond	2.5"	65.1 / 1654	34.3 / 129.8	4.59	Yes
C9095T-1	13x65	Blue	2.5"	65.1 / 1654	34.3 / 129.8	4.59	Yes
C9095B	13x65	Blue	2.5"	65.1 / 1654	34.3 / 129.8	4.59	Yes
C9098	14x65	Almond	4" Poly	65.1 / 1654	38.1 / 144.3	5.1	Yes
C9099	16x65	ALM	4" Stainless Steel	65.6 / 1667	49.0 / 185.5	6.55	Yes
C9030	21x62	NAT	4" Stainless Steel	67.0 / 1702	84.0 / 318.0	11.23	Yes
C9031	24x72	NAT	4" Stainless Steel	73.1 / 1857	115.0 / 435.3	15.37	Yes

Portable Exchange Tanks

Part Number	Size	Color	Top Opening	Height Inch/mm	Capacity Gal./Liters	Capacity Ft³	w/Base
C9054A-DI	7x35	Almond	2.5"	34.9 / 886	5.0 / 18.9	0.67	Yes
C9062-DI	8x40	Natural	2.5"	39.8 / 1011	7.6 / 28.8	1.02	Yes
C9066-DI	8x44	Natural	2.5"	44.2 / 1123	8.5 / 32.0	1.14	Yes
C9083-DI	9x42	Natural	2.5"	42.3 / 1074	10.3 / 39.0	1.38	Yes
C9089-DI	10x40	Natural	2.5"	40.6 / 1031	12.1 / 45.8	1.62	Yes
C9090-DI	10x44	Almond	2.5"	44.3 / 1125	13.3 / 50.3	1.78	Yes
C9092-DI	10x54	Almond	2.5"	54.4 / 1382	16.5 / 62.5	2.21	Yes

Steel Mineral Tanks

Part Number	Size
B5151	Tank Steel 20" X 60" EP 2" TS 2" BC 2-4" x 6"
B5157	Tank Steel 24" X 60" EP 2" TS 2" BC 2-4" x 6"
B5157-3	Tank Steel 24" X 60" EP 3" TS 3" BC 2-4" x 6"
B5160	Tank Steel 24" X 72" EP 2" TS 2" BC 2-4" x 6"
B5163	Tank Steel 30" X 60" EP 2" TS 2" BC 2-4" x 6"
B5163-3	Tank Steel 30" X 60" EP 3" TS 3" BC 2-4" x 6"
B5166	Tank Steel 30" X 72" EP 2" TS 2" BC 2-4" x 6"
B5169	Tank Steel 36" X 60" EP 3" TS 3" BC 11" x 15" / 4" x 6"
B5172	Tank Steel 36" X 72" EP 3" TS 3" BC 11" x 15" / 4" x 6"
B5175	Tank Steel 42" X 60" EP 3" TS 3" BC 11" x 15" / 4" x 6"
B5181	Tank Steel 48" X 60" EP 4" TS 4" BC 12" x 16" / 4" x 6"
B5184	Tank Steel 48" X 72" EP 4" TS 4" BC 12" x 16" / 4" x 6"
B5187	Tank Steel 54" X 60" EP 4" TS 4" BC 12" x 16" / 4" x 6"
B5197	Tank Steel 72" X 60" EP 4" TS 4" BC 12" x 16" / 4" x 6"



Mineral Tanks



**Full line of mineral tanks,
in stock for immediate
shipment**

We carry a full line of Structure® and Park® tanks for a wide range of applications.

Specifications

Construction	Fiberglass wound
Lining	ABS or polyethylene
Pressure rating	150 psi
Temperature	120°F, maximum
Opening	2-1/2" #8
O-ring	EPDM or EPR*

*Use silicone lubricants. Do not use Buna-N o-rings.

Structural® tanks

Part Number	Size	Top Opening	Color	Base	Capacity	Unit Ctn. Lbs.	Bulk Pack Ctn. Lbs.
C1050	6x18	2.5"	Blue	Black	0.24	9/40	66/276
C1051	6x18	2.5"	Almond	Black	0.24	9/40	66/276
C1066	8x44	2.5"	Almond	Black	1.16	4/49	18/199
C1066-B	8x44	2.5"	Blue	Black	1.16	4/49	18/199
C1084	9x48	2.5"	Almond	Black	1.58	5/58	16/207
C1084-B	9x48	2.5"	Black	Black	1.58	5/58	16/207
C1084-1	9x48	2.5"	Blue	Black	1.58	5/58	16/207
C1092	10x54	2.5"	Almond	Black	2.19	4/76	16/273
C1092-B	10x54	2.5"	Blue	Black	2.19	4/76	16/273
C1094X	12x52	2.5"	Almond	Black	2.97	1/23	9/207
C1094X-1	12x52	2.5"	Blue	Black	2.97	1/23	9/207
C1095A	13x54	2.5"	Almond	Black	3.68	1/28	9/256
C1095B	13x54	4"	Almond	Black	3.68	1/28	9/256
C1095-2.5	13x54	2.5"	Blue	Black	3.68	1/28	9/256
C1098	14x65	4"	Almond	Black	5.43	1/48	9/336
C1099	16x65	4"	Almond	Black	6.55	1/45	9/374
C1030	21x62	4"	Almond	Black	11.38	1/90	---
C1031	24x72	4"	Natural	Black	15.9	1/139	---
C1036A	24x72	6"	Natural	Tripod Base	16	1/149	---
C1036	24x72	6"	Natural	SMC Base	16	1/149	---
C1037	30x72	6"	Natural	EXT Base	24	1/235	---
C1037A	30x72	6"	Natural	Tripod Base	24	1/240	---
C1038	36x72	6"	Natural	EXT Base	33.5	1/282	---
C1038A	36x72	6"	Natural	Tripod Base	33.5	1/282	---
C1040	48x72	6"	Natural	Tripod Base	61.7	1/780	---

Brine Tanks



Round Brine Tanks

G2001-1836A

Square Brine Tanks
(Easy to ship in quantity)

Round brine tanks

Part Number	Size	Color	Internals	Mfg. Type
G2001B	18X33	Black	Shell only	Blow Molded
G2001	18X33	Blue	With UVI CVR	Blow Molded
G2002	18X40	Blue	Shell only	Blow Molded
G2003	24X41	Black	Shell only	Blow Molded
G2004	24X50	Black	Shell only	Blow Molded
G2007	30X48	Black	Shell only	Rotational Molded
G2008	39X48	Black	Shell only	Rotational Molded
G2009	30X50	Black	Shell only	Blow Molded
G3010	30X60	Black	Shell only	Rotational Molded
G3015	39X60	Black	Shell only	Rotational Molded
G3020	42X60	Black	Shell only	Rotational Molded
G3025	50X60	Black	Shell only	Rotational Molded

Fully assembled round brine tanks

Part Number	Size	Color	Internals	Mfg. Type
G2001-1836A	18X36	Black	474 SBV w /well & tubing	Supplied
G2001BS	18X33	Black	474 SBV w/ well, grid, tubing	Supplied
G2002AS	18X40	Black	474 SBV w/ well, grid, tubing	Supplied
G2002BS	18X40	Almond	474 SBV w/ well, grid, tubing	Supplied
G2002S	18X40	Black	474 SBV w/ well, grid, tubing	Supplied
G2003A	24X41	Blue	2300 SBV, w/ well, grid, tubing	In house (Watts)
G2003B	24X41	Black	454 Hi flo, 6" well, 3/4" w/ grid	In house (Watts)
G2007A	30X48	Black	2300 air check, well	In house (Watts)
G2028	18X40	Black	2300 w/ air check, well	In house (Watts)
G2023	10X16	Blue	2300 Safety, grid	In house (Watts)
G2028A	18X40	Blue	2300 Safety, grid	In house (Watts)
G2004A	24X50	Almond	454 Safety, grid	In house (Watts)
G2007A	30X50	Black	2300 Safety, grid	In house (Watts)

Square brine tanks

Part Number	Size	Tank Color	Cover Color	Cover Type	Description	Case Qty.
G2018A	14x34	Almond	Almond	Blow molded	Tank and cover only	5
G2018B	14x34	Black	Black	Blow molded	Tank and cover only	5
G2018	14x34	Blue	Blue	Blow molded	Tank and cover only	5
G2017B	13.5x44	Almond	Black	Injection molded	Tank (cabinet) and cover only	1

Fully assembled square brine tanks

Part Number	Size	Tank & Cover	Cover	Included components (In addition to tank, cover & tubing.)	Case Qty.
G2018A-2	14x34	Almond	Blow molded	Overflow FTG, 2310 safety valve w/float, air check	6
G2025	14x34	Blue	Blow molded	Overflow FTG, 2300 safety valve w/float, air check	6

Brine tank components

Part Number	Description	Pack
H1016	BRINE WELL CAP 4.0"	50
H1018	BRINE OVERFLOW SET (2 PC)	50
H1024	BRINE WELL CAP 6.0"	10
H1030-14S	BRINE WELL 4.0"X14" SLOTTED 25/CASE	25
H1030-28S	BRINE WELL 4.0"X28" SLOTTED 25/CASE	25
H1030-36S	BRINE WELL 4.0"X36" SLOTTED 25/CASE	25
H1041-29	BRINE WELL 3.5"X29" ROUND SLOTTED W/T&B CAPS GLI	1
H1071	BRINE WELL 6.0"X60" AWR	4
H1071-54	BRINE WELL 6.0"X54" AWR	4
H1072	BRINE GRID SET 18" TP500 W/4" HOLE	25
H1075	BRINE GRID SET 24", MINIMUM SALTING (5"LEGS)	4
H1075AS	BRINE GRID SET 24" NO LEGS	5
H3006-26	BRINE PICKUP TUBE MPU-14X26"X .25"M	1
H6001	BRINE VALVE .75"MPT TYPE A SET BRINE CHECK	5
H6010	BRINE TUBE PVC RIDGID 3/8" OD (PER FT)	50
H6061	BRINE MPU-14 STRAINER ONLY .014" OPENING	20
H6061-28	BRINE PICKUP TUBE MPU-14X28"X .375" OD TUBE	20
H7005	BRINE ASSY SBV 2300/500AC & FLOAT AWR	6
H7005-SBV	BRINE ASSY 3.5" WELL W/SBV 2300/500AC	4
H7007	BRINE ASSY SBV 2310/500AC & FLOAT AWR	4
H7007-SBV	BRINE ASSY 3.5" WELL W/SBV 2310/500AC	4
H7027-03	BRINE VALVE 464 KMNO4 4OZ 3/8" F/G1015 & G1016	1
H7050	BRINE ASSY SBV 2350 W/COMM AIR CHECK 3/4", FLOAT AWR	4
H7050B	BRINE ASSY SBV 2350/900AC W/FLOAT & FIT	4
H7070	BRINE VALVE 454 KIT 3/4" W/36" FLOAT ROD	1
H7070-HF	BRINE VALVE 454 KIT HI-FLOW W/54" FLOAT ROD	4
H7070A	BRINE VALVE 454 3/4" W/48"PVC RISER ASSEMBLED AWR	4
H8000	BRINE ASSY 6" WELL W/CAP 2 PC OVERFLOW F/454 VALVE AWR	1
H8000-F	BRINE ASSY 6" WELL W/2350VALVE COMPLETE F/1/2" TUBING AWR	1
HBPU636	BRINE PICKUP TUBE MPU-14X36"X.375" OD TUBE	100
HBPU836	BRINE AIR CHECK BPUACX36"X.375" OD TUBE	100

Note: Not all brine tanks and components are stocked at all locations.

Float valves



Float valves to prevent brine water overflow.

Brine Valves & Assemblies

Potassium Permanganate Feeder (adjustable*)

Part Number	Color	Size	Weight
G1015	Blue	10" x 16"	12
G1016	Almond	10" x 16"	17

Note: Adjustable KMNO4 feeder assemble are set from factory at 4 oz. Adjustments are made from changing float assembly setting.

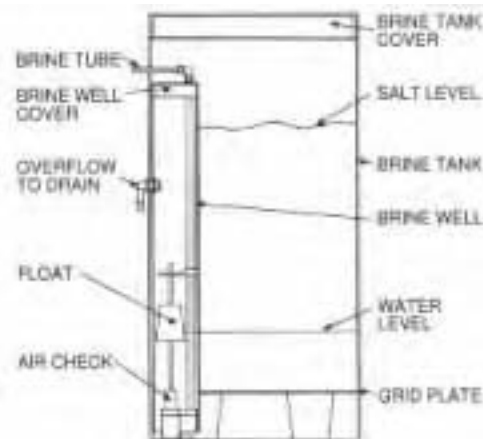


Brine Valves - Fleck® Controls

Part Number	Model	Connection	Description
K4560027-FFA	2300	3/8"	Brass safety brine valve only
K4102	2300	3/8"	Brass safety brine valve w/ float assembly
H7005	2300	3/8"	Brass safety brine valve, 500 air check & float
H7005-SBV	2300	3/8"	Brass safety brine valve, 500 air check & float w/ 3.5" well, lid and overflow
K4560014	2310	3/8"	Noryl® safety brine valve
H7007	2310	3/8"	Noryl® safety brine valve w/ float assembly
H7007-SBV	2310	3/8"	Noryl® safety brine valve, 500 air check & float w/ 3.5" well, lid and overflow
K4560038	2350	1"	Brass safety brine valve only
H7050B	2350	1"	Brass safety brine valve, 900 air check & float
H8000-F	2350	1"	Brass safety brine valve, 900 air check & float w/ 6" well, lid and overflow

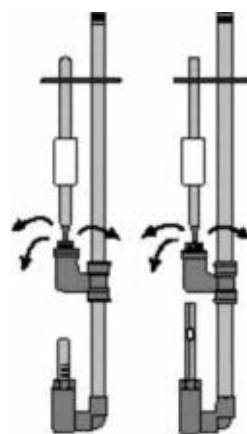
Brine Control Valves

Part Number	Model	Connection	Description
H6000-38	A	3/8" MPT	Preset ToughStuff® brine check assembly
H6000-A	A	1/2" MPT	Preset ToughStuff® brine check assembly
H6001	A	3/4" MPT	Preset ToughStuff® brine check assembly
H7073	A	1" MPT	Preset ToughStuff® brine check assembly
H7075	A	1-1/4" MPT	Preset ToughStuff® brine check assembly
H6001-B	B	3/4" MPT	Adjustable ToughStuff® brine check assembly
H6000-C	C	1/2" MPT	Overhead refill ToughStuff® brine check assembly
H6001-C	C	3/4" MPT	Overhead refill ToughStuff® brine check assembly



TYPICAL INSTALLATION
TANK BRINE ASSEMBLY

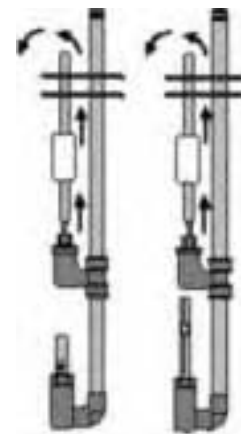
Conventional Type



Type A

Type B

Overhead Type



Type C

Type D

Spectrum Labs® Test and Demo Kits



Deluxe Demo Kit

Demo kits

Deluxe Demo Kit (DK2413)

Includes: mini-softener, hardness (2 oz) #1, #2, #3, soap solution (2 oz), 2 flasks, hardness test bottle, measuring tube, Iron and pH test, nitrate test, precipitation test, chlorine test, TDS meter, conductivity light (RO demonstrator).

Standard Demo Kit (DK2412)

Includes: mini-softener, hardness (2 oz) #1, #2, #3, soap solution (2 oz), 2 flasks, hardness test bottle, measuring tube, Iron and pH test, nitrate test, precipitation test.

Basic Demo Kit (DK2411)

Includes: mini-softener, hardness (2 oz) #1, #2, #3, soap solution (2 oz), 2 flasks, hardness test bottle, measuring tube.



Deluxe Field Analysis

Field test kits

Deluxe Field Analysis Kit (TK2404)

Includes: hardness (0.5 oz) #1, #2, #3, hardness test bottle, measuring tube, iron reagent foil pack (5 ml, 50 pk.), pH wide range indicator (1 oz), pH and Iron test stand, chlorine indicator solution (0.5 oz), chlorine comparator, TDS meter (0-999ppm).

Monitors and Test Kits

Hand held tests and monitors

Part Number	Description
DEM-375	Demo Kit RO 75GPD W/Case, TDS Meter Pressure Gauge
MO-LCS25	Leak Controller "LCS" 1/4" QC With Water Sensor
MO-LCS38	Leak Controller "LCS" 3/8" QC With Water Sensor
MO-P-RO-TEST	TDS Monitor Dual Probe 1/4" Tee
PH600	pH Portable, battery
WTDS-3	TDS TDS meter with temperature
DPG	Pressure Digital pressure meter
CHAMP	Hanna pH Pocket Tester 0.0 To 14.0pH +-0.1pH
PHEP3	Hanna pH Tester 1-14 Water Proof 0.1 Accuracy
PWT	(Hi) Pure H2O Meter,0.1-99.9 µS/cm
TDS-999-MINI	TDS Pocket Meter 1-1999 PPM 3V Battery Included
TDS-999-CS91	TDS Pocket Meter CS-91 0-999 PPM
WP-1000	Sprite TDS Pocket Meter 1-999 PPM Hard Case
WP-2000	Sprite TDS Pocket Meter Probe 0-1999 PPM W/Case
HI 98301	(HI) Hanna Pocket TDS Meter 0-1990PPM ATC
TDS-110ELE	Electrolyzer W/4 Legs (Iron+Alum) Switch 120/230V
WT-500	Sprite 32 Oz. TDS Indicator 110V
WT-700	Sprite 16 Oz. Dual TDS Indicator 110V



RO Demo Kit

DEM-375

TDS-999-CS91



TDS-999-MINI

Test kits

Part Number	Description
MO-480008	Test Strip for Iron Hardness Bottle Plus 2 Strips
MO-480009	Test Strip for Bacteria, Nitrate, Nitrite Bottle
MO-48LEAD	Test Strip for Lead Bottle
MO-77704	Test Strip for Arsenic 50ml per Bottle
MO-CHLORINE/25	Test Strip for Chlorine 25 Strips per Bottle
MO-HARDNESS/25	Test Strip for Hardness 25 Strips per Bottle
WST-P-145300	(1453-00) Hach 5B GPG Hardness Test Kit
HI 3831F	Chlorine Test Kit (Free Chlorine) 0-2.5 PPM
HI 3812	Hanna Hardness Test Kit 110 Test W/Case
HI 3822	Hanna Sulfate Test Kit Case
NDS-TESTGPG	Naiades Hardness Test Strips (0-59GPG) Pack of 2
T3002	Hardness, Hach 5B
T3007	Hardness, Soap Kit
T3012	Hardness / Iron, Hach HA-95A
T3001	Hydrogen Sulfide, Hach HS-C
T3003	Iron, Hach Cube
T3005	Chlorine & pH, "pool"
T3030	Salimeter 0-100% brine concentration
T3031	Alamo Brand SDI test
T3022	AquaChek Tests: Total & free Chlorine, pH, Hardness & alkalinity
T3023	SoftChek for hardness
T3010	Ferover 100 Pillows
R2021	Filter Discs 100/box
T2404	Deluxe Test Kit, Hardness, Iron, pH, Chlorine, & TDS meter

Water Test Kits



Test Strip



Silicone (2oz)
WST-PFL-16174

Stainless Steel Mineral Tank Jackets



Stainless Steel Welded Jackets



**Stainless Steel Crimped Jackets
With Black Plastic Cap**

Our standard stainless steel jackets are manufactured using number 430 bright stainless steel. Number 430 bright stainless steel is typically used for interior household appliances. The composition of the metals results in a very attractive, bright finish, fabrication flexibility and lower cost. Though it is magnetic, it is correctly called stainless steel. These jackets are designed for interior applications and will suffer from corrosion, especially in outdoor locations. Periodically applying a coat of paste wax will prolong the aesthetic appeal.

Part Number	Description	Systems Applications
WST-UO-SSP0948	Stainless Steel Jacket with Plastic Cap On the Base Style	Most 9x48's
WST-UO-SSW1054W	Stainless Steel Welded Jacket Over the Base Style	Most 10x54's
WST-UO-SSP1054	Stainless Steel Jacket with Plastic Cap On the Base Style	Most 10x54's
WST-UO-SSP1354	Stainless Steel Jacket with Plastic Cap On the Base Style	Most 13x54's
WST-UO-SS1465	Stainless Steel Jacket with S.S. Cap On the Base Style	Most 14x65's
WST-UO-SS1665	Stainless Steel Jacket with S.S. Cap On the Base Style	Most 16x65's

New stainless steel jackets, manufactured in San Antonio, TX (crimped jackets with protective coating).

Part Number	Description
C3609-E	304SS jacket for 9x48 mineral tanks with plastic black cap
C36010-E	304SS jacket for 10x54 mineral tanks with plastic black cap
C36013-E	304SS jacket for 13x54 mineral tanks with plastic black cap



Section 9

Watts® “QT” RO Systems and Filtration Systems

Watts® "QT" Drinking Water Systems With Quick Twist Cartridges & Membranes

They're so easy to change, anyone can do it!



Flow shuts off automatically when cartridges are removed.



Double o rings prevent leaks.



Features & benefits

- No trips to the store for bottled water
- Flow shuts off when cartridges are removed
- High quality water for only pennies a gallon
- Easy cartridge replacement!
- No sumps!
- No fuss!
- No mess!
- Two tank options
- Optional faucets
- Assembled in U.S.A.

Get high quality drinking water and easy maintenance with Watts QT Systems!

Booster pump ready!

When inlet pressure is not sufficient for the RO system to function efficiently, Watts QT Systems may be used with an optional booster pump.

Choose from two booster pump retro kits (pump included):

PART NUMBER

WQTBPRK110 - 110 volt
WQTBPRK220 - 220 volt

*Patent pending.



Electronic Sensor*

Booster pump retro kits come with an electronic sensor, which "knows" what position the automatic shut-off valve is in, allowing the pump to operate when greater pressure is needed.



Booster Pump Retro Kits

Retro kits come with booster pump, electronic sensor, 110 volt or 220 volt transformer, connectors, tubing and instructions. (See retro kit part numbers at left).

Feed water guidelines

FACTORS	REQUIREMENTS
Maximum Total Dissolved Solids (TDS)	1,800 ppm
Iron, Maximum	0.2 ppm
Hardness (less than)	7 gpg
Hydrogen Sulfide	0.0 ppm
Manganese (less than)	0.05 ppm
Turbidity (less than)	1 NTU
pH	3-11
Minimum pressure	40 psi (2.8 bar).
Maximum pressure	100 psi (7 bar)

Caution: Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. System must be maintained according to manufacturer's instructions. Note: Booster pump required if inlet pressure is below 40 psi.

Models

MODEL NUMBER	STAGE	MEMBRANE	TANK (4 GAL.)	FAUCET	TUBING SIZE (TO FAUCET)
WQT4RO11-50PT	4	50 GPD	RO PRO®	None	3/8"
WQT4RO11-50MT	4	50 GPD	Metal	None	3/8"

Booster pump retro kits

MODEL NUMBER	DESCRIPTION
WQTBPRK110	Booster pump, 110 V
WQTBPRK220	Booster pump, 220 V

Proprietary replacement elements

PART NUMBER	DESCRIPTION	MICRON	RECOMMENDED REPLACEMENT
WQTSC-10	Sediment cartridge	5	One year
WQTCBC-10	Carbon block cartridge	5	One year
WQTCM50-10	50 GPD TFC membrane	Membrane	Two years
WQTCGAC-10	GAC cartridge	10	One year

Two storage tank options



RO PRO® Tank
Saves space, 9" wide!



Metal Tank
11" x 14"

Top mount faucets

Faucets sold separately allowing consumer to select the faucet of their choice!



A full assortment of Watts Top Mount Faucets are available in chrome, brushed nickel, bronze, white and black. They may be used in air gap or non air gap installations.



Faucets with filter change monitors are available to provide quality assurance.

Notice:

Installation instructions for the product immediately preceding this page and any Watts® Water Quality Product may be obtained by contacting our customer service department at:

Email : wqp@watts.com

Eastern & Central Regions: 800-659-8400
(press 2 for sales)

Western Region: 800-840-1688

Please reference product number.

Section 10

Watts® Kwik-Change ROs

Watts® ROs with Kwik-Change™ Cartridges

Simply the “best” of the “best”!

Internal valve shuts-off flow during cartridge and membrane replacement.

Hinge bracket for easy cartridge removal and replacement.

Cartridge replacement is so easy, you or the homeowner can do it!

Proprietary filter cartridges and membranes are installed and removed by a simple 1/4 turn.

**Best Seller.
Try It Today!**

Cartridges have double o-rings to prevent leakage.



WQA Gold Seal
Certified to
NSF / ANSI
Std. 58



Features & Benefits

- Cartridges are connected and removed with a simple 1/4 turn.
- No filter sumps! No fuss! No mess!
- Automatic shut-off when cartridges are removed.
- Tank and faucet options available.
- Valves are built into the heads to prevent back-flow for water quality assurance.
- WQA Gold Seal Certified to NSF/ANSI Std. 58.

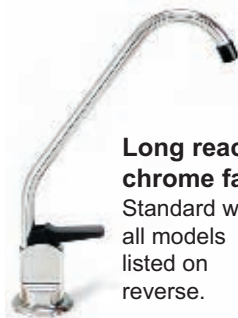
Watts® Kwik-Change™ Systems are designed for consumers that demand the “best”. Unlike conventional reverse osmosis systems, Watts drinking water systems with Kwik-Change cartridges have no sumps, so their proprietary filter elements and membranes are easy to replace.

Full Product Line Available, Including:

50 Gpd Models • 100 Gpd Models • Metal Tanks
Plastic Tanks • Top Mount Faucets • Standard Faucets
Models For Coolers • Custom Systems
Drinking Water Systems With Filter Elements
& Hollow Fiber Membranes.



Watts® top mount faucets are mounted from above the counter top.



Long reach chrome faucet. Standard with all models listed on reverse.



Metal storage tank



RO Pro® Storage Tanks Only 9” wide, takes less space and won’t chip, rust or dent!

**Watts® Kwik-Change RO systems are so easy to service
you'll get great quality water every time!**



Kwik-Change RO with Permeate Pump.

Conventional RO Systems

VS.

Kwik-Change RO System

Conventional RO systems may provide high quality water. However, cartridges and membranes are difficult to replace because they are installed in housings and must be removed. This procedure includes the need to shut off and drain down the system, open the housings with a wrench, remove cartridges, empty water from the sumps, clean the filter and membrane housings, replace cartridges, re-pressurize, and check for leaks.

Because conventional systems are difficult to service, routine maintenance may be delayed. Therefore, consumers may not get the quality water they desire, unless a qualified dealer is called to service their system.

No Sumps! No Mess! No Fuss!

- Hinge bracket for easy handling.
- Automatic shut off when cartridges are removed with a simple, 1/4 turn.
- No need to disconnect tubing when replacing membranes.
- Integrated check valves between cartridges and membrane prevent back-flow.
- Cartridges have double o-rings so they will not leak.
- Quick connect fittings for easy installation.

Models

MODEL NUMBER	PUMP	STAGE	CAPACITY (GPM)	SIZE ELEMENTS	FAUCET	TANK
WQC4RO11-50PT	No	4	50	11"	Top mount	RO-PRO®
WQC4RO11-50MT	No	4	50	11"	Top mount	Metal
WQC4RO11-50MTLR	No	4	50	11"	Long reach	Metal
WQC4RO13-100PT	No	4	100	13"	Top mount	RO-PRO®
WQC4RO13-100MT	No	4	100	13"	Top mount	Metal

Booster pump models

MODEL NUMBER	PUMP	STAGE	CAPACITY (GPM)	SIZE ELEMENTS	FAUCET	TANK
WQC4RO11-50PTPP	Yes	4	50	11"	No faucet	RO-PRO®
WQC4RO11-50MTPP	Yes	4	50	11"	No faucet	Metal
WQC4RO13-100PTPP	Yes	4	100	13"	No faucet	RO-PRO®
WQC4RO13-100MTPP	Yes	4	100	13"	No faucet	Metal

Note: All models listed above use 3/8" tubing from unit to tank to faucet. All models come with designer, top mount air gap faucets.

Replacement elements

MODEL	ELEMENT	SEDIMENT	CARBON	MEMBRANE	GAC
50 GPD System	11"	WQCSC11	WQCCC11	WQCM11-50	WQCGAC11
100 GPD System	13"	WQCSC13	WQCCC13	WQCM13-100	WQCGAC13

Water Quality Association

05/06/2008

CERTIFIED REVERSE OSMOSIS UNITS

NSF/ANSI-58 Reverse Osmosis Drinking Water Treatment Systems

This section of the directory lists those reverse osmosis units which have been WQA certified in accordance with "Voluntary Industry Standard For Reverse Osmosis Drinking Water Treatment Systems," NSF/ANSI-58, and is published periodically by the Water Quality Association (WQA), as a service to the industry and consumers. The WQA is a not-for-profit international association of manufacturers, distributors, and dealers of water treatment systems for household, commercial, and industrial applications. This on-line directory is continuously updated to identify those water treatment equipment products that have been tested and passed stringent industry standards to become certified by the Water Quality Association.

Certification means that a production model of the listed line of reverse osmosis units was tested at the Water Quality Association laboratory, or any of the other testing laboratories recognized by the Water Quality Association, and was found to have met the standards for reduction of total dissolved solids (TDS) and other contaminants in drinking water. In addition, the materials and components used in these certified drinking water treatment units have met the rigorous safety and structural integrity and strength requirements set by industry Standard NSF/ANSI-58.

Volatile Organic Chemical (VOC) Reduction Claim

VOC Reduction claims include reduction of the following chemicals:

alachlor	dinoseb	methoxychlor
atrazine	endrin	pentachlorophenol
benzene	ethylbenzene	simazine
carbofuran	ethylene dibromide (EDB)	styrene
carbon tetrachloride	haloacetonitriles (HAN)	1,1,2,2-tetrachloroethane
chlorobenzene	bromochloroacetonitrile	tetrachloroethylene
chloropicrin	dibromoacetonitrile	toluene
2,4-D	dichloroacetonitrile	2,4,5-TP (silvex)
dibromochloropropane (DBCP)	trichloroacetonitrile	tribromoacetic acid
o-dichlorobenzene	halo ketones (HK)	1,2,4-trichlorobenzene
p-dichlorobenzene	1,1-dichloro-2-propanone	1,1,1-trichloroethane
1,2-dichloroethylene	1,1,1-trichloro- 2-propanone	1,1,2-trichloroethane
1,1-dichloroethylene	heptachlor (H-34, Heptox)	trichloroethylene
cis-1,2-dichloroethylene	heptachlor epoxide	trihalomethanes
trans- 1,2-dichloroethylene	hexachlorobutadiene	chloroform
1,2-dichloropropane	hexachlorocyclopentadiene	bromoform
cis-1,3-dichloropropylene	lindane	bromodichloromethane
		chlorodibromomethane
		xylene

Watts Water Quality & Conditioning Products

11611 SW 147 Court
Dunnellon, FL 34432
Phone: (352) 465-2000

Brand Name	Model Number	Daily Production Rate (gpd)	Reduction Claims
Product Type: System with Storage Tank and Automatic Shut-off			
Kwik Change	WQC4RO10-35MT	15.8	Pentavalent Arsenic Barium Radium 226/228 Copper Cadmium Hexavalent Chromium Lead Selenium Trivalent Chromium Fluoride TDS
Kwik Change	WQC4RO10-35MLR	15.8	Pentavalent Arsenic Barium Radium 226/228 Copper Cadmium Hexavalent Chromium Lead Selenium Trivalent Chromium Fluoride TDS
Kwik Change	WQC4RO10-35PT	15.8	Pentavalent Arsenic Barium Radium 226/228 Copper Cadmium Hexavalent Chromium Lead Selenium Trivalent Chromium Fluoride TDS
Kwik Change	WQC4RO11-50MT	22.59	Pentavalent Arsenic Barium Radium 226/228 Copper Cadmium Hexavalent Chromium

			Lead
			Selenium
			Trivalent Chromium
			Fluoride
			TDS
Kwik Change	WQC4RO11-50MTLR	22.59	Pentavalent Arsenic
			Barium
			Radium 226/228
			Copper
			Cadmium
			Hexavalent Chromium
			Lead
			Selenium
			Trivalent Chromium
			Fluoride
			TDS
Kwik Change	WQC4RO11-50PT	22.59	Pentavalent Arsenic
			Barium
			Radium 226/228
			Copper
			Cadmium
			Hexavalent Chromium
			Lead
			Selenium
			Trivalent Chromium
			Fluoride
			TDS
Kwik Change	WQC4RO13-100MT	22.86	TDS
Kwik Change	WQC4RO13-100MTLR	22.86	TDS
Kwik Change	WQC4RO13-100PT	22.86	TDS

[Back](#)

Disclaimer:

Listing in these directories does not constitute an endorsement, guarantee, or warranty of any kind by Water Quality Association or its members of any of the products contained in them.

Every effort has been made to verify the accuracy of all listings in this directory. The association can assume no liability for errors or omissions.

Water Quality Association:



Tue, May 6, 2008

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Water Quality Association
International Headquarters & Laboratory

Watts® Drinking Water System With Kwik-Change™ Filter Elements and Hollow Fiber Membranes

The ideal low cost alternative to reverse osmosis technology.

Reduces:

NSF Standard 42

- Chlorine taste and odor (97%)
- Particulate
- Sand
- Silt
- Rust particles

NSF Standard 53

- Lead (95%)
- Chemicals (95%)
- VOC's (95%)
- Herbicides
- Pesticides
- Insecticides
- Cysts



Model WQCFU-T-11KIT



CERTIFIED TO NSF / ANSI Standards 42 & 53

NOTE: System function at only 20 PSI (1.4 bar) and pressure drop is only 3 PSI at 0.5 GPM.

Get superior water quality without wasting water with Watts drinking water systems using Kwik-Change filter elements and hollow fiber membranes. Systems come complete with sediment cartridge, carbon block cartridge, hollow fiber membrane, long reach chrome faucet, tapping valve and tubing. Model WQCFU-T-11KIT is WQA Certified to NSF / ANSI Standards 42 and 53.



NO SUMPS



NO TANK



NO REJECT WATER



NO PRESSURE PROBLEMS



LOW COST

Parts

Part Number	Description	Type	Size	Micron Rating
WQCFU-T-11KIT	Drinking water system	Triple	9" x 2.5" 12"	--
WQCSC11	Sediment cartridge	1st stage	11"	5
WQCCC11	Carbon block cartridge	2nd stage	11"	5
WQCHF11	Hollow fiber membrane cartridge	3rd stage	11"	0.1 - 0.3

Components



Cartridges have double o-rings so they won't leak!

10" Cartridges

PART NUMBER	DESCRIPTION	CASE
WQCSC10	10" Kwik-Change™ cartridge, 5 micron, sediment	32
WQCCC10	10" Kwik-Change™ cartridge, carbon block	32
WQCHFC10	10" Kwik-Change™ cartridge, hollow fiber	32
WQCABC10	10" Kwik-Change™ antibacterial carbon cartridge	32

11" Cartridges

PART NUMBER	DESCRIPTION	CASE
WQCSC11	11" Kwik-Change™ cartridge, 5 micron, sediment	25
WQCCC11	11" Kwik-Change™ cartridge, carbon block	25
WQCHFC11	11" Kwik-Change™ cartridge, hollow fiber	25
WQCABC11	11" Kwik-Change™ antibacterial carbon cartridge	25

13" Cartridges

PART NUMBER	DESCRIPTION	CASE
WQCSC13	13" Kwik-Change™ cartridge, 5 micron, sediment	25
WQCCC13	13" Kwik-Change™ cartridge, carbon block	25
WQCHFC13	13" Kwik-Change™ cartridge, hollow fiber	25
WQCABC13	13" Kwik-Change™ antibacterial carbon cartridge	25

Brackets for filter units



PART NUMBER	DESCRIPTION	CASE
WQCFUB-S	Bracket for filter unit, single	100
WQCFUB-D	Bracket for filter unit, dual	50
WQCFUB-T	Bracket for filter unit, triple	50

Heads for filter Units

PART NUMBER	DESCRIPTION	CASE
WQCH14-2	Head connector (2 port, 1/4" for pre and post filters)	100
WQCH14-3	Head connector (3 port, 1/4" for membrane)	100

Note: Head components and complete systems are not equipped with the "automatic shut off" feature.



Watts® Drinking Water Units With Kwik-Change™ Filter Elements



Watts now offers a complete line of filtration systems and components with Kwik-Change cartridges, including cartridges for taste, odors and chlorine reduction; sediment; hollow fiber membrane for ultra filtration; and cartridges with antibacterial activated carbon.

The low cost alternative to RO!

Kits with Kwik-Change™ Cartridges



Kits include long reach chrome faucet, saddle valve and tubing.

PART NO.	DESCRIPTION	CASE
WQCFU-AC-KIT	10" single sys. w/bracket, activated carbon	1
WQCFU-D-KIT	10" dual sys. w/bracket, sediment & carbon	1
WQCFU-T-KIT	10" triple sys. w/bracket, carbon, sediment, UF	1

Features & Benefits

- Kwik-Change cartridges are removed with a single turn. It's so easy!
- No filter sumps, no mess, no fuss!
- Cartridges have double o-rings to prevent leakage.
- Choice of cartridge types and sizes for residential, commercial and food service use.



13" 11" 10"



Four types.

Kwik-Change™ Filter Units



Filter units only; no faucet, saddle valve or tubing allows dealers more flexibility to choose from a wide range of faucets.

PART NO.	DESCRIPTION	CASE
WQCFU-AC	10" single cartridge, bracket & activated carbon block	1
WQCFU-S	10" single cartridge, bracket & sediment	1
WQCFU-D	10" dual sys., bracket, sediment & carbon block	1
WQCFU-T	10" triple, bracket, carbon, sediment, hollow fiber membrane	1

Kwik-Change Drinking Water Systems Compared to RO

- Low cost alternative to RO.
- No reject water (100% of the water is used).
- No pressure problems! Units work as low as 15 psi / 1 bar pressure.
- Installation is quick and easy.
- Leaves essential nutrients in water.
- Offered with three flexible purchase options.

Specifications

TYPE	MICRON	CAPACITY (GALLONS)		
		10"	11"	13"
SEDIMENT (melt blown PP)	5	900	1,000	1,100
CARBON	5	1,500	2,000	2,500
GRANULAR ACTIVATED CARBON	0.1 - 0.3	1,500	2,000	2,500
HOLLOW FIBER MEMBRANE (UF)	0.1 - 0.3	1,500	2,000	2,500

Cartridges are color coded for easy identification.

Notice:

Installation instructions for the product immediately preceding this page and any Watts® Water Quality Product may be obtained by contacting our customer service department at:

Email : wqp@watts.com

Eastern & Central Regions: 800-659-8400
(press 2 for sales)

Western Region: 800-840-1688

Please reference product number.

Section 11

E-Treat™ Drinking Water Systems

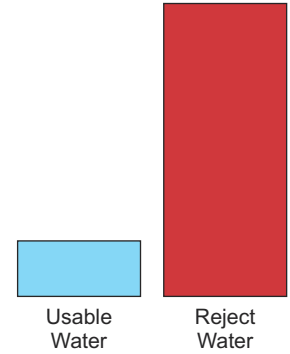
Watts® E-Treat™ Drinking Water Systems Using Zero-Waste RO® Technology

Good for the environment. Good for the planet. Good for you!

Reverse osmosis technology is generally considered the most effective and practical way to provide safe drinking water.

With conventional RO systems, however, the ratio between water that's rejected by the membrane and usable water may typically be seven to one in residential installations.

With E-Treat drinking water systems utilizing Zero-Waste technology, there's no wasted water because water that's rejected by the RO membrane is sent to the hot water pipe using a booster pump, allowing all of the water to be utilized. For this reason, Zero-Waste systems are 100% efficient!



Conventional RO Systems

E-Treat™ Drinking Water Systems with Zero-Waste™ technology are 100% efficient!



A small PC board controls the booster pump by determining the position of the automatic shut off valve. The pump also acts as a booster pump in low incoming pressure applications, serving a dual purpose.

Optional components



RO PRO®
Storage Tanks



Metal
Tanks



Top mount faucets in Chrome, Brushed
Nickel, Black, White and Bronze



Monitors
Available



Standard
Faucets

Standard RO Models

MODEL NUMBER	MEMBRANE (GPD)	STORAGE TANK	VOLTAGE (TRANSFORMER)	FAUCET	FEED WATER SADDLE VALVE
ETZWRO3-50PT	50	RO PRO	110 v / 60 hz	None	Adapt-A-Valve
ETZWRO3-50MT	50	Metal	110 v / 60 hz	None	Adapt-A-Valve
ETZWRO3-50PT220	50	RO PRO	220 v / 50 hz	None	Adapt-A-Valve
ETZWRO3-50MT220	50	Metal	220 v / 50 hz	None	Adapt-A-Valve
ETZWRETROKIT	50	None	110 v / 60 hz	None	Adapt-A-Valve
ETZWRETROKIT220	50	None	220 v / 50 hz	None	Adapt-A-Valve

Replacement elements & spare parts

PART NUMBER	DESCRIPTION
ETROM50	Membrane, 50 GPD
ETC10SEDCARB	Pre-filter for sediment and chlorine reduction
ETC10CARB	Post-filter for polishing
CDP-6800	Booster pump
TAS-114-19EP1	Transformer 24 volt
TAS-234-19EP	Transformer, 220 volt, 50 Hz, 2 amp with Euro plug.
W152040	Wire harness for W152012 booster pump and transformer
F134007	Adapt-A-Valve for angle stop for combo 3/8" / 1/2" connections.

Zero-Waste® retro kit

We also offer a retro kit, designed to convert exiting reverse osmosis systems to Zero-Waste technology. Kit includes booster pump, transformer, tubing and tapping valve for hot water pipe connection. The Zero-Waste retro kit is ideal for existing customers who wish to conserve water!



New, half-turn filter housings!

E-Treat RO systems use half-turn filter housings so no wrench is required!



Tapping valve

Our tapping valve connects to an angle stop with 3/8" compression fittings or onto a kitchen faucet fitting using 1/2" NPT fittings, provided.



Tapping Valve

E-Treat™ Environmentally Friendly Drinking Water Systems By Watts®

With Quick Twist Replacement Elements!



The ideal, low cost alternative to reverse osmosis technology!

- No tank
- No reject water
- No pressure problems
- No sumps
- No mess
- No fuss
- Easy installation
- Low cost



Consumer benefits:

- Great tasting drinking water for only pennies a gallon!
- No trips to the store to buy bottled water!
- Flow shuts off when cartridges are removed.
- Wide range of cartridges, including sediment, carbon block and hollow fiber membrane.

Three stage filtration system with sediment, carbon block and hollow fiber membrane filter elements.

Drinking water systems (with bracket, tapping valve & tubing; faucet additional).

MODEL NUMBER	DESCRIPTION
ETDWS38-S	Single unit with bracket, head, sediment element and 3/8" quick connect fittings
ETDWS38-AC	Single unit with bracket, head, activated carbon cartridge and 3/8" quick connect fittings
ETDWS38-D	Dual unit with bracket, heads, sediment & carbon cartridges, 3/8" quick connect fittings
ETDWS38-T	Triple unit with bracket, heads, sediment, carbon and hollow fiber membrane, 3/8"

Replacement elements

PART NUMBER	DESCRIPTION
ETRC S	E-Treat Melt blown sediment cartridge
ETRCAC	E-Treat carbon block cartridge
ETRCHFM	E-Treat hollow fiber membrane cartridge

Notice:

Installation instructions for the product immediately preceding this page and any Watts® Water Quality Product may be obtained by contacting our customer service department at:

Email : wqp@watts.com

Eastern & Central Regions: 800-659-8400
(press 2 for sales)

Western Region: 800-840-1688

Please reference product number.

Section 12

ROs and Drinking Water Systems

525 & 415 Premium Series RO Systems

Certified by NSF International

Best Selling Product. Try it today!



525 Series

Premium RO Systems

The most advanced reverse osmosis purification and extruded carbon filtration technology producing the best quality water available for home use.

These systems are assembled in the USA for quality assurance and are NSF certified. All systems come with metal storage tank and designer faucets.

Features & benefits

- Top quality components for superior performance.
- Premium quality 35 GPD thin film membrane (USA).
- Designer chrome faucet with ceramic disc.
- Genuine John Guest® fittings throughout for optimum security.
- 3/8" tubing to faucet for greater flow.
- Assembled in USA.
- Certified by NSF International (Standard 58).

Specifications

Model Number	Stage	GPD	Membrane	Faucet	Fittings	Tank	Shipping Wt.
TGI-525	5	35	TFC	Designer (703 chrome)	Quick Connect	Metal	27
TGI-415	4	25	TFC	Designer (703 chrome)	Quick Connect	Metal	23

Replacement elements

Model Number	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
TGI-525	IF-SP-1005	FI-CT0010	FI-GAC010HP	MM-TFF45/75	FI-CBA010J.38
TGI-415	IF-SP-1005	FI-CT0010	MM-TFF30/45	FI-CBA010J.38	X



System tested and certified by NSF International against NFS / ANSI Standard 58 for the reduction of Arsenic, Barium, Cadmium, Copper, Cyst, Fluoride, Hexavalent Chromium, Lead, Radium 226/228, Selenium, TDS, Trivalent Chromium, Turbidity.



System tested by WQA against NFS / ANSI Standard 58 for the reduction of Arsenic, Barium Cadmium, Copper, Cyst, Fluoride, Hexavalent Chromium, Lead Radium 226/228, Selenium, TDS, Trivalent Chromium, Turbidity.

Conforms to NSF/ANSI 58 for pentavalent arsenic reduction. See performance data sheet and Arsenic Facts section for an explanation.

Generic RO Drinking Water Systems



FMRO4J-USA & FMRO4G-USA

Four stage drinking water systems with sediment pre-filter, carbon pre-filter, 50 GPD membrane, carbon post-filter, long reach chrome faucet, our highly popular RO PRO® plastic storage tank and two available fitting types (quick connect and compression).



FMRO5-MT-USA & FMRO5-MT-USA-AG

Five stage drinking water system with sediment pre-filter, two carbon pre-filters, 50 GPD membrane, carbon post-filter, metal storage tank, quick connect fittings and two available faucet types (air gap and non air gap).



FMRO5G-USA

Five stage drinking water system with sediment pre-filter, two carbon pre-filters, 50 GPD membrane, carbon post-filter, long reach chrome faucet, quick connect fittings and our highly popular RO PRO® plastic storage tank.



FMRO4-ERP

Our highly popular system for installations with low pressure to boost water flow using non-electric permeate pump. These four stage systems come with RO PRO® plastic storage tank, long reach chrome faucet and quick connect fittings.



FMRO4-MAN

Four stage RO system with "manifold" design to reduce tube connections. Systems include sediment pre-filter, carbon pre-filter, 50 GPD membrane, carbon post-filter, metal storage tank, quick connect fittings and long reach chrome faucet.

*These models
are ideal for
private label marketing
and may be used
by customers
with web sites!*

Models

PART NUMBER	STAGE	GPD	TANK	FAUCET	TUBING TO FAUCET	FITTINGS	PUMP
FMRO4J USA	4	50	RO PRO	Standard	3/8"	Compression	None
FMRO4G USA	4	50	RO PRO	Standard	3/8"	Quick Connect	None
FMRO5G USA	5	50	RO PRO	Standard	3/8"	Quick Connect	None
FMRO5 MT USA	5	50	Metal	Standard	3/8"	Quick Connect	None
FMRO5 MT USA AG	5	50	Metal	Air Gap	3/8"	Quick Connect	None
FMRO4 MAN	4	50	Metal	Standard	3/8"	Quick Connect	None
FMRO4G ERP	4	50	RO PRO	Standard	3/8"	Quick Connect	Non electric

Counter Top Filters

Conventional and models with built-in alarm for cartridge replacement indicator.



Hydro-Safe® model with built-in alarm

Conventional models

- Fully assembled
- Easy installation
- Long reach spouts
- Adapters and fittings included
- Packaged in white retail cartons
- Ideal for private label marketing
- Model with audible alarm for cartridge replacement indicator

Hydro-Safe® model with audible alarm to indicate when to replace the cartridge

Model Number	Description	No. Per Case
HSCT-MW	Assembled system packaged in attractive retail carton with audible alarm.	6

Conventional models, packaged in white retail cartons

Model Number	Type	Housing	Spout	Inlet Fitting	Elbow	Diverter	No. Per Case
ACT-C	Chrome	SS-4000	LRS-C-OR	C-22N	C-21-1	SDV-14S	12
ACT-P	White	SS-4000	LRS-P	CI010822W	CI481222W	DV-800WM	12

Light Commercial RO Systems

All systems are frame mounted.



FMRO5-150G



LC-380PP



LC-200P

Specifications

Model Number	GPD	Pump	Stage 1	Stage 2	Stage 3	Stage 4	Carton Dimensions	Shipping Wt. (lbs.)
LC-200P	200	1	IF-SP-2005	FI-CT0020/2	MM-TFF90/160 (2)	FI-GAC020HP	36x21x10	46
LC-300P	260	1	IF-SP-2005	FI-CT0020/2	MM-TFF90/160 (3)	FI-GAC020HP	36x21x10	48
LC-380PP	380	2	IF-SP-2005	FI-CT0020/2	FI-CT0020/2	MM-1812-100D (3)	36x21x10	53
FMRO5-150G	150	None	Unit with two 75 GPD membranes, carbon block pre-filter, auto shot-off, 3/8" fittings. No pump.					

Spare parts

TGI Item No.	Descriptions	LC-100P	LC-200P	LC-200P-MINI	LC-300P	LC-380PP
FC DR550W	Flow restrictor 550 ML/Min	X				
FC DR850W	Flow restrictor 850 ML/Min		X	X		
FC DR1000W	Flow restrictor 1000 ML/Min				X	
FC DR1200W	Flow restrictor 1200 ML/Min					X
PU 8800ESO 38	Electric shut off valve, 3/8"	X	X	X	X	X
PU 8010TSO	Tank shut off valve	X	X	X	X	X

NOTE: All systems come with pressure gauges and booster pump. Tank and feed water saddle valves are not included.

Section 13

Replacement Filter Cartridges

C-MAX[®] Extruded Carbon Filter Cartridges

Full line of solid block activated carbon cartridges for water treatment.



Standard cartridges



Full-Flow(B-B)

Full product line with color coded end caps to indicate cartridge type



MAX-ETW



MAX-S



MAX-CYST



MAX-VOC



MAX-T



MAX-PB



MAX-CL

Cartridge selection guide

Cartridge type	Wall	Carbon Type	Micron	Particle Size	Very High Sediment Removal	Very High Chlorine Reduction	Cysts	VOCs	Lead
MAX-ETW	Thick	Bituminous	5	Medium					
MAX-S	Thick	Coconut shell	5	Medium	•				
MAX-CYST	Thick	Bituminous	0.5	Fine			•		
MAX-VOC	Thick	Coconut shell	0.5	Fine			•	•	
MAX-T	Thick	Coconut shell	5	Medium					
MAX-PB	Thick	Coconut shell	0.5	Fine			•		•
MAX-CL	Thick	Bituminous	0.5	Fine		•			



C MAX[®] carbon block cartridges are tested and certified by NSF International under NSF / ANSI Standard 42 for materials only. Performance claims are supported by company test results.

Note: C MAX cartridges are rated for temperatures to 165°F (74°C).

C-MAX[®] Extruded Carbon Filter Cartridges

Full line of solid block activated carbon cartridges for water treatment.

MAX-VOC, Coconut shell carbon block cartridges for reduction of VOC's, cysts and extended Chlorine taste and odor reduction

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXVOC-975	Water washed	2-7/8"	9-3/4"	0.5 nominal	20,000 gallons	12

MAX-T, Acid washed coconut shell carbon block cartridges for RO post treatment and improved, sweeter taste

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXT-975	Acid washed	2-7/8"	9-3/4"	5 nominal	5,000 gallons	12

MAX-PB, Coconut shell carbon block cartridges for lead and cyst reduction

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXPB-975	Lead + cysts	2-7/8"	9-3/4"	0.5 nominal	20,000 gallons	12
MAXPB-FF20	Lead + cysts	4-5/8"	20"	0.5 nominal	150,000 gallons	6

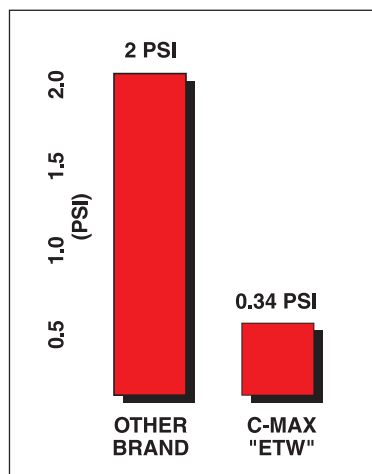
MAX-CL, Thick wall carbon block for long life and high chlorine reduction. Reduces tastes, odors, fine particles. The best choice when a "super chlorine guzzler" is needed!

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXCL-975	Thick Wall	2-7/8"	9-3/4"	0.5 nominal	20,000 gallons	12
MAXCL-20	Thick Wall	2-7/8"	20"	0.5 nominal	45,000 gallons	6
MAXCL-FF975	Thick Wall	4-5/8"	9-3/4"	0.5 nominal	70,000 gallons	4
MAXCL-FF20	Thick Wall	4-5/8"	20"	0.5 nominal	150,000 gallons	6

Premium quality and economically priced C-Max[®] cartridges are in stock for immediate shipment!

C-MAX[®] Extruded Carbon Filter Cartridges

Full line of solid block activated carbon cartridges for water treatment.



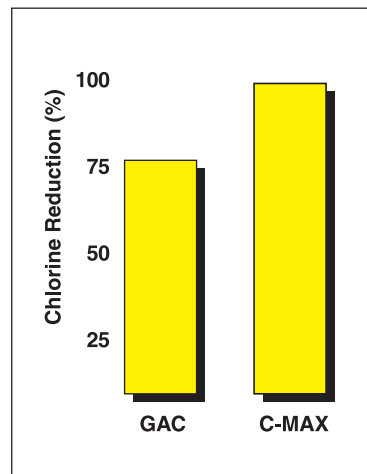
Low Pressure Drop

The chart above compares the pressure drop of MAXETW cartridges to another well known brand. This data demonstrates flow restrictions are dramatically reduced using MAXETW cartridges and not all carbon block cartridges perform the same.



C-MAX[®]

Your best choice when both price and performance are required!



High Chlorine Reduction

Chlorine reduction with MAXETW carbon block cartridges is dramatically greater than other cartridge types, including granular activated carbon cartridges. The above data is typical for GAC and C-MAX cartridges during their usable life.

MAX-ETW, Economical, thick wall carbon block cartridges for Chlorine taste and odor

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXETW-975	Thick Wall	2-7/8"	9-3/4"	5 nominal	3,000 gallons	12
MAXETW-20	Thick Wall	2-7/8"	20"	5 nominal	6,000 gallons	6
MAXETW-30	Thick Wall	2-7/8"	30"	5 nominal	9,000 gallons	6
MAXETW-FF975	Thick Wall	4-5/8"	9-3/4"	5 nominal	11,000 gallons	4
MAXETW-FF20	Thick Wall	4-5/8"	20"	5 nominal	20,000 gallons	6

MAX-S, Thick wall coconut shell carbon block cartridges for high dirt holding capacity

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXS-975	Thick Wall	2-7/8"	9-3/4"	5 nominal	6,000 gallons	12
MAXS-20	Thick Wall	2-7/8"	20"	5 nominal	12,000 gallons	6
MAXS-FF20	Thick Wall	4-5/8"	20"	5 nominal	40,000 gallons	6

MAX-CYST, Thick wall carbon block cartridges for fine particles, cyst reduction & extended Chlorine taste & odor reduction

Part Number	Type	OD	Length	Micron Rating	Chlorine Reduction	No. / Case
MAXCYST-975	Long life + cysts	2-7/8"	9-3/4"	0.5 nominal	20,000 gallons	12

Watts® Extruded Carbon Block Filter Cartridges

Thick wall carbon construction for superior performance. Low cost for economy!

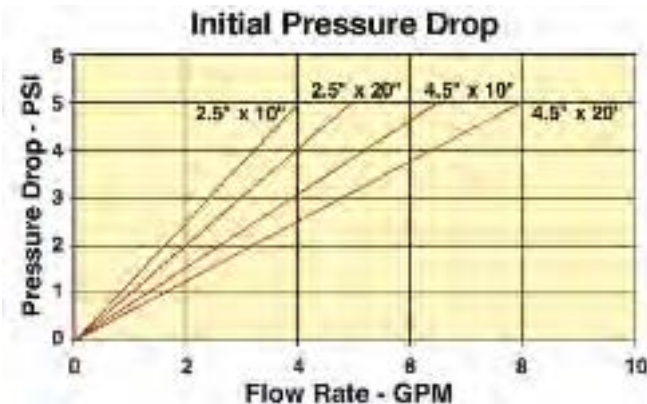


Top-of-the-line coconut shell carbon block filter cartridge for chlorine, taste, odor and sediment reduction.

- Competitively priced!
- Outperform GAC cartridges four ways:
 1. Superior chlorine reduction
 2. Lower pressure drop.
 3. Will not channel
 4. Lower cost
- Media wrap between center tube and carbon block to reduce carbon fines.
- 100% Coconut shell Carbon.
- Up to 99% chlorine reduction*.
- FDA grade components & materials.

Recommended flow rate

Part Number	OD	Length	GPM
WCBCS975	2.5"	9-3/4"	1
WCBCS20	2.5"	20"	2
WCBCFF975	4.5"	9-3/4"	4
WCBCFF20	4.5"	20"	8



Maximum operating pressure: 125 PSIG
 Operating temperature: 50° F to 125° F
 10° C to 52° C

*Performance tested @ flow with 2ppm chlorine.

* Tested and verified by independent laboratory testing.

WCBCFF20 have been tested and certified under NSF/ANSI standard 42 for materials only. For more information related to this certification please contact Watts Water Quality Products, 11611 S.W. 147 Ct., Dunnellon, FL 34432



COMPONENTS

Part Number	Type	OD	Length	MICRON Rating*	Chlorine Reduction*	No. / Case
WCBCS975	Thick Wall	2.5"	9-3/4"	5 nominal	>4,000 Gal @ 1 gpm	20
WCBCS20	Thick Wall	2.5"	20"	5 nominal	>8,000 Gal @ 2 gpm	12
WCBCFF975	Thick Wall	4.5"	9-3/4"	5 nominal	>10,000 Gal @ 2 gpm	12
WCBCFF20	Thick Wall	4.5"	20"	5 nominal	>20,000 Gal @ 4 gpm	6

NOTE: Use only with microbiologically safe and adequately disinfected water, do not use with water of any unknown origin or water quality.

GAC filter cartridges

Full line, including standard GAC and GAC with KDF.



GAC cartridge specifications

Media	Water washed coconut shell activated carbon
Cartridge body	NSF listed polypropylene
Minimum / maximum working pressure	20 psi / 125 psi
Minimum / maximum temperature	40° F / 100° F (4° C / 38°C)
Maximum flow rate	1 GPM, std. 9-3/4"; 3 GPM, 4.5"x9-3/4"; 5 GPM 4.5"x20"

Watts® GAC cartridge (granular coconut carbon)

Part Number	Type	O.D.	Length	Capacity (gals.)	No. / case
WGAC-975	Coconut shell	2-3/4"	9-3/4"	2,500	20
WGAC-20	Coconut shell	2-3/4"	20"	5,000	15

Water washed coconut shell granular activated carbon cartridges (GAC)

Part Number	Type	O.D.	Length	Capacity (gals.)	No. / case
GAC10N	GAC	2-3/4"	9-3/4"	2,500	24
GAC20NRW	GAC	2-3/4"	20"	5,000	24
GAC-BB10	GAC	4-1/2"	9-3/4"	7,500	8
GAC-BB20	GAC	4-1/2"	20"	15,000	4

GAC + KDF 55 for longer life and enhanced performance for municipal water

Part Number	Type	O.D.	Length	Capacity (gals.)	No. / case
GAC10N/KDF	GAC + KDF55	2-3/4"	9-3/4"	4,000	24
GAC-BB20K/1800	GAC + KDF55	4-1/2"	20"	20,000	4

GAC + KDF85 for longer life and enhanced performance for well water

Part Number	Type	O.D.	Length	Capacity (gals.)	No. / case
FPKDF85-975	GAC + KDF 85	2-3/4"	9-3/4"	4,000	24
FPKDF85-BB-20	GAC + KDF 85	4-1/2"	20"	20,000	4

Intelifil Activated Carbon Filter Cartridges

Inline-filters, GAC and Carbon Block



Intelifil Inline Filters

Carbon Block

In-line - Carbon

Part Number	Size	Description	Capacity (Gals.)	Fittings	No. / Case
T200400	2" x 6"	Coconut shell GAC	1,500	1/4" FPT	25
T200410	2" x 10"	Coconut shell GAC (NSF)	3,000	1/4" FPT	25
T200411	2" x 10"	Coconut shell GAC (NSF)	3,000	1/4" FQC	25

In-line - Sediment

Part Number	Size	Description	Capacity (Gals.)	Fittings	No. / Case
T200412	2" x 10"	Melt Blown (NSF)	5	1/4" FPT	25

Scale control

Part Number	Size	Description	Capacity (Gals.)	Fittings	No. / Case
T200414	2" x 10"	2 Oz. Polyphosphate / GAC	1,500	1/4" FPT	25
T200420	2" x 10"	2 Oz. Polyphosphate/GAC/0.5 KDF #55	3,000	1/4" FPT	25

GAC

Part Number	Length	Diameter	Type	Capacity (Gals.)	No. / Case
IF-UDF010/3	9-3/4"	2-1/2"	CC	2,000	25
FI-UDF010	9-3/4"	2-1/2"	CC	2,000	25
FI-UDF020	20"	2-1/2"	CC	4,000	15
IF-GAC010BB/3	9-3/4"	4-1/2"	CC	10,000	8
IF-GAC020BB/3	20"	4-1/2"	CC	20,000	4

Carbon block

Part Number	Length	Diameter	Type	Capacity (Gals.)	No. / Case
IF-CB-010	9-3/4"	2-1/2"	Standard	3,000	20
IF-CB-020	20"	2-1/2"	Standard	6,000	15
IF-CB-010BB	9-3/4"	4-1/2"	Big-Blue	10,000	8
IF-CB-020BB	20"	4-1/2"	Big-Blue	20,000	4

Specialty Media Cartridges



Each cartridge is individually wrapped and labeled.

Cartridges with specialized media

Part Number	Status	OD	Length	Type	Resin	Capacity	No./Case
FPMBDIR-975	S	2-1/2"	9-3/4"	Mixed bed	Purolite® DI Resin	300 gals. at 1.0 gpm	24
FPMBDIR-20	S	2-1/2"	20"	Mixed bed	Purolite® DI Resin	700 gals at 1.0 gpm	12
FPMBDIR-BB-975	S	4-1/2"	9-3/4"	Mixed bed	Purolite DI Resin	900 gals at 2.0 gpm	8
FPCATR-975	S	2-1/2"	9-3/4"	Cation	Dow®	800 gals at 1.0 gpm	24
FPCATR-BB-975	S	4-1/2"	9-3/4"	Cation	Dow®	2700 gals at 2.0 gpm	12
FPNSR-975	S	2-1/2"	9-3/4"	Nitrate	Tulsion®	4000 gals at 0.5 gpm	24
FPNSR-975	S	2-1/2"	9-3/4"	Calcite	Calcite + GAC	2500 gals at 1.0 gpm	24
FPGACP-975	S	2-1/2"	9-3/4"	Phosphate	Phosphate + GAC	2000 gals at 1.0 gpm	24
FPKDF85-975	S	2-1/2"	9-3/4"	KDF85 + GAC	KDF85 + CC GAC	2500 gals at 1.0 gpm	12
FPKDF85-BB-20	S	4-1/2"	20"	KDF85 + GAC	KDF85 + CC GAC	5000 gals at 2 gpm	4
FPAR-975	S	2-1/2"	9-3/4"	Arsenic	Arsenic reduction	1000 gals at 0.75 gpm	24

In-Line Filters

In-line filters for reverse osmosis systems, ice makers and other water treatment needs.



In-line filters

For pre & post RO and ice maker filtration.

- AICRO® (our best selling in-line filter)
- AICRO-JGK* (With J. Guest fittings.)

* Coconut shell activated carbon. Rated for flow rates to 0.75. GPM and 1,500 gallons capacity



CERTIFIED
ANSI / NSF
STANDARD 42
(AICRO)

Coconut shell GAC

Part Number	O.D.	Length	Media	Type	Fitting Size	Fitting Type	No./Case
AICRO	2"	10"	GAC	Coconut shell	1/4"	FNPT	25
AICRO-JGK	2"	10"	GAC	Coconut shell	1/4"	Quick ct	25
K2533SS	2"	10"	GAC	Coconut shell	1/4"	JG Elbow	25
CL6ROT33	2"	6"	GAC	Acid wash coconut shell	1/4"	FNPT	25
CL10ROT33	2"	10"	GAC	Acid wash coconut shell	1/4"	FNPT	25
K2333JJ	2"	6"	GAC	Acid wash coconut shell	1/4"	J. Guest	25
K2533JJ	2"	10"	GAC	Acid wash coconut shell	1/4"	J. Guest	25
GS10ROB	2"	10"	GAC	Coconut shell	1/4"	FNPT	25

GAC with phosphate for scale reduction

Part Number	O.D.	Length	Media	Type	Fitting Size	Fitting Type	No./Case
SCL10	2"	10"	GAC	Phosphate	1/4"	FNPT	25

In-line filters with GAC and Calcite to raise TDS

Part Number	O.D.	Length	Media	Type	Fitting Size	Fitting Type	No./Case
GS10CAL/ROB	2"	10"	GAC	With Calcite	1/4"	FNPT	25

In-line filters for sediment

Part Number	O.D.	Length	Media	Type	Fitting Size	Fitting Type	No./Case
AIPRO	2"	10"	PP SPUN	5	1/4"	FNPT	25
CL10PF5	2"	10"	PP SPUN	5	1/4"	FNPT	25
K2505JJ	2"	10"	PP SPUN	5	1/4"	J. Guest	25
K5605JJ	2"	12"	PP SPUN	5	1/4"	J. Guest	25

Warning: Do not use filters listed in this section with water that is microbiologically unsafe or unknown quality without proper disinfection before or after the filter.

Flowmatic® Empty Refillable Canisters

Plastic refillable canisters for activated carbon and other filter media for water treatment.

Refillable canisters for granular media

Plastic refillable canisters for activated carbon and other granular filter media. Low cost and reusable! Made using FDA grade polypropylene. Available in white and clear.



Refillable canisters for granular filter media

Part Number	Length	OD	Color	Volume (ml)	Volume (cu. in.)	No. Per Case
RC-C-975	9-3/4"	2-1/2"	Clear	803	49	24
RC-W-975	9-3/4"	2-1/2"	White	803	49	24
RC-C-20	20"	2-1/2"	Clear	1,786	109	24
RC-W-20	20"	2-1/2"	White	1,786	109	24
RC-C-BB-975	9-3/4"	4-1/2"	Clear	2,130	130	8
RC-W-BB-975	9-3/4"	4-1/2"	White	2,130	130	8
RC-C-BB-20	20"	4-1/2"	Clear	4,572	279	4
RC-W-BB-20	20"	4-1/2"	White	4,572	279	4



Doulton® brand ceramic filters

Cleanable Doulton self-sterilizing elements can be used over and over to reduce filtration costs. Capable of removing 99.99% of suspended solids and 100% of Cryptosporidium, Giardia Lamblia cysts and bacteria. Designed to comply with the most stringent potable water standards.

- Cleanable
- Self-sterilizing
- Can be used over and over, reducing cost
- Capable of removing 99.99% of suspended solids and 100% of Cryptosporidium, Giardia Cysts, and bacteria.

Part Number	Size	Model	No. Per Case
DS-1000	1/4" BSP thread	Sterasyll	25
DUC-1000	1/4" BSP thread	Ultra Carbon	25
DS-OBE	Double open ends	Sterasyll	25
DSC-OBE	Double open ends	Super Carbon	25
DUC-OBE	Double open ends	Ultra Carbon	25

Flow-Max[®] Pleated Filter Cartridges

Greater surface area for longer life and reduced filtration costs.

Flow-Max filter cartridges outperform wound, spun, melt blown, resin bonded and other "depth" type filter elements because our cartridges are pleated to provide increased surface area and longer life.

Lower pressure drop is another significant advantage, using Flow-Max pleated cartridges, which allows for increased flow rates and the use of smaller filter housings to reduce capital equipment costs.

Further savings are provided because our 100% synthetic filter media is cleanable, five micron and up, to lower cartridge replacement costs.



Flow-Max filter cartridges outperform other pleated elements because our high-performance filter media is systematically produced using 100% synthetic fibers, with no binders or additives to leave a residue, foam or contaminate.

Our filter media is dramatically thicker than other products. For this reason, Flow-Max cartridges provide "depth" filtration for greater sediment removal, along with more surface area with our pleated design.

A multi ply laminate is used with our sub and one micron absolute grades for longer life and greater solids removal. (See right.)



Features

Filter media is pleated for greater surface area.

Synthetic filter media is cellulose-free.

"Thicker" filter media has a greater capacity to capture and retain particles, compared to thin, more rigid media types, which have less void space for particle retention.

One micron absolute and 0.35 media use a multi-ply laminate for superior performance.

Long lengths have netting to hold pleats in place.

All cartridge types and lengths are wrapped.

Full product line (types, lengths & micron ratings).

Benefits

Low pressure drop; long life; reduced filtration costs, compared to wound and spun cartridges.

No additives or binders, which may cause foaming.

Increased dirt holding capacity; longer life; fewer cartridge replacements needed; and reduced filtration costs, compared to other pleated cartridge suppliers.

Increased particle removal efficiency; longer life; and reduced cost per gallon filtered.

Superior performance and appearance.

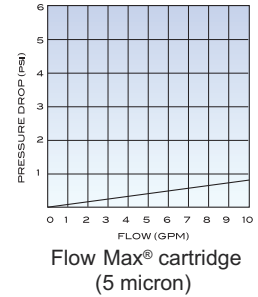
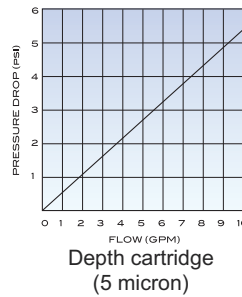
Provides security at no additional cost.

Greater selection from your single source supplier!

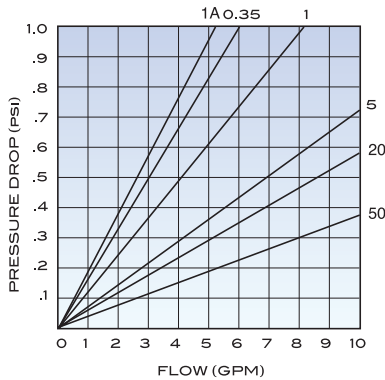
Flow-Max[®] cartridges cost less to use . . . regardless what they cost to buy!

Lower pressure drop for higher flow rates

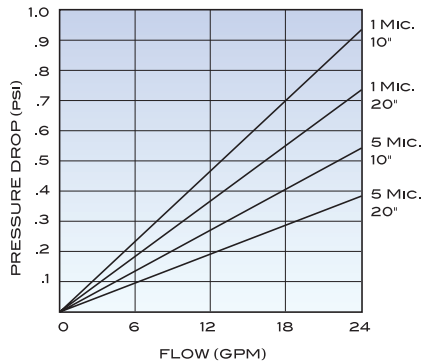
Flow-Max® cartridges are pleated, so initial pressure drop is significantly less compared to depth cartridges, such as a wound, spun, melt blown and resin bonded. As a result, higher flow rates are possible, reducing filter housing size requirements to lower capital equipment costs.



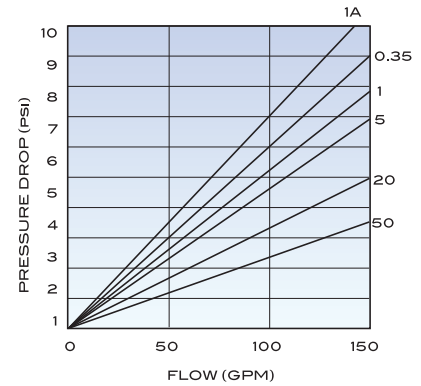
Use the pressure drop charts shown below to help determine the ideal flow rate for your particular application:



Standard cartridges (9 3/4")



Full Flow (B B) cartridges



Jumbo cartridges

Note: Pressure drop data shown above include filter housing and cartridge.

Flow rates

Maximum flow rate guidelines for Flow-Max cartridges are shown below:

Micron Rating	Maximum Flow Rates Per Cartridge (GPM)							
	Standard Cartridge			10" Full-Flow	20" Full-Flow	Jumbo Cartridge		
	9-3/4"	20"	29-1/4"			40	90	170
1 Absolute	3	6	9	8	12	20	40	80
0.35 Micron	4	8	12	9	13	25	50	100
1 Micron	4	8	12	10	15	30	60	120
5 Micron	7	14	21	15	25	50	100	150
20 Micron	8	16	24	15	25	50	100	150
50 Micron	10	20	30	15	25	50	100	150

Note: Filter housing selection should also be considered when flow rate per cartridge is determined.



Washable & reusable

Flow-Max® cartridges are washable and reusable, five micron and up to reduce filtration costs. For best results, direct spray into pleats to dislodge sediment. Or, let dry and brush off filter cake from surface of the media.

All Flow-Max® cartridges are individually shrink wrapped for purity



Flow-Max[®] Pleated Filter Cartridges

Greater surface area for longer life and reduced filtration costs.



Standard 2-3/4" OD x 9-3/4" length

Product Code	Media Type	Micron Rating	Number Per Case
FM-1A-975	Synthetic	1 Absolute	24
FM-0.35-975	Synthetic	0.35	24
FM-1-975	Synthetic	1	24
FM-5-975	Synthetic	5	24
FM-20-975	Synthetic	20	24
FM-50-975	Synthetic	50	24
FM-100-975	Synthetic	100	24

Standard 2-3/4" OD x 19-1/2" length

Product Code	Media Type	Micron Rating	Number Per Case
FM-1-195	Synthetic	1	24
FM-5-195	Synthetic	5	24
FM-20-195	Synthetic	20	24

Standard 2-3/4" OD x 20" length

Product Code	Media Type	Micron Rating	Number Per Case
FM-1A-20	Synthetic	1 Absolute	24
FM-0.35-20	Synthetic	0.35	24
FM-1-20	Synthetic	1	24
FM-5-20	Synthetic	5	24
FM-20-20	Synthetic	20	24
FM-50-20	Synthetic	50	24

Standard 2-3/4" OD x 29-1/4" length

Product Code	Media Type	Micron Rating	Number Per Case
FM-1A-2925	Synthetic	1 Absolute	24
FM-0.35-2925	Synthetic	0.35	24
FM-1-2925	Synthetic	1	24
FM-5-2925	Synthetic	5	24
FM-20-2925	Synthetic	20	24
FM-50-2925	Synthetic	50	24

Standard 2-3/4" OD x 40" length

Product Code	Media Type	Micron Rating	Number Per Case
FM-1-40	Synthetic	1	24
FM-5-40	Synthetic	5	24
FM-20-40	Synthetic	20	24
FM-50-40	Synthetic	50	24

Specifications

Filter media	Synthetic (100% cellulose-free)
End caps	Plastisol (PVC)
Center tubes	Polypropylene
Temperature range	40°F - 140°F (4.4°C - 60°C)
Maximum Pressure	40 PSID
Recommended change out	20 - 30 PSID
Flow rate per 10" cartridge	3-10 GPM, depending on micron rating



Flow-Max® Pleated Filter Cartridges

Greater surface area for longer life and reduced filtration costs.



Highly efficient, five ply filter media

Our one micron absolute and 0.35 micron filter cartridges use a five ply filter media for greater efficiency and longer life. They are ideal for surface water filtration to reduce Cryptosporidium and Giardia cysts.

Full-Flow (B-B) 4-1/2" OD x 9-3/4" length

Product Code	Length	Media Type	Micron Rating	Number Per Case
FM-BB-10-1A	9-3/4"	Synthetic	1 Absolute	8
FM-BB-10-0.35	9-3/4"	Synthetic	0.35	8
FM-BB-10-1	9-3/4"	Synthetic	1	8
FM-BB-10-5	9-3/4"	Synthetic	5	8
FM-BB-10-20	9-3/4"	Synthetic	20	8
FM-BB-10-50	9-3/4"	Synthetic	50	8

Note: Cartridges listed above fit in Full Flow and Big Blue® filter housings.

Full-Flow (B-B) 4-1/2" OD x 20" length

Product Code	Length	Media Type	Micron Rating	Number Per Case
FM-BB-20-1A	20"	Synthetic	1 Absolute	4
FM-BB-20-0.35	20"	Synthetic	0.35	4
FM-BB-20-1	20"	Synthetic	1	4
FM-BB-20-5	20"	Synthetic	5	4
FM-BB-20-20	20"	Synthetic	20	4
FM-BB-20-50	20"	Synthetic	50	4

Note: Cartridges listed above fit in Full Flow and Big Blue® filter housings.

Specifications (synthetic media for sediment)

Maximum temperature	140°F (60°C)	Center tubes	PVC
Minimum temperature	40°F (4.4°C)	End caps	Molded Urethane
Maximum pressure	40 PSID	Maximum flow rate, model 40	50 GPM (12m ³ HR)
Recommended change out	25-30 PSID	Maximum flow rate, model 90	100 GPM (24m ³ HR)
Filter media	PE & PP	Maximum flow rate, model 170	150 GPM (36m ³ HR)

Flow-Max[®] Jumbo Filter Cartridges

With cellulose-free synthetic and mesh media in a wide range of micron ratings.



Standard Synthetic Media



Flow-Max jumbo filter cartridge



PP Mesh Media

Model 40

Filter Housing Model Number	Micron Rating	Product Code with Synthetic Media	Product Code with Mesh Media	Number Per Case
40	1 Absolute	FMHC-40-1A	N. A.	1
	0.35	FMHC-40-0.35EZ	N. A.	1
	1	FMHC-40-1EZ	N. A.	1
	5	FMHC-40-5EZ	N. A.	1
	20	FMHC-40-20EZ	N. A.	1
	50	FMHC-40-50	N. A.	1
	100	FMHC-40-100EZ	N. A.	1
	150	N. A.	FMHC-40-150M	1

Model 90

Filter Housing Model Number	Micron Rating	Product Code with Synthetic Media	Product Code with Mesh Media	Number Per Case
90	1 Absolute	FMHC-90-1A	N. A.	1
	0.35	FMHC-90-0.35	N. A.	1
	1	FMHC-90-1EZ	N. A.	1
	5	FMHC-90-5EZ	N. A.	1
	20	FMHC-90-20EZ	N. A.	1
	50	FMHC-90-50EZ	N. A.	1
	100	FMHC-90-100EZ	N. A.	1
	150	N. A.	FMHC-90-150M	1

Model 170

Filter Housing Model Number	Micron Rating	Product Code with Synthetic Media	Product Code with Mesh Media	Number Per Case
170	1 Absolute	FMHC-170-1A	N. A.	1
	0.35	FMHC-170-0.35EZ	N. A.	1
	1	FMHC-170-1EZ	N. A.	1
	5	FMHC-170-5EZ	N. A.	1
	20	FMHC-170-20EZ	N. A.	1
	50	FMHC-170-50EZ	N. A.	1
	100	FMHC-170-100EZ	N. A.	1
	150	N. A.	FMHC-170-150M	1

Flow-Max[®] Phenolic Cellulose Cartridges

Ideal for high temperature industrial water and oil filtration.



Specifications

Maximum temperature	250°F (121°C)
Minimum temperature	-20°F (-29°C)
Maximum pressure	70 PSID (482 k PA)
Recommended change out	25 PSID (172 k PA)
End caps, cores, outer body	Electro plated tin
Media	Phenolic impregnated cellulose

Standard 2-1/2" OD x 9-3/4" length with electro tin plated outer body

Part Number	OD	Length	Micron	No. / case
FMPIC-5-975	2-1/2"	9-3/4"	5	30
FMPIC-20-975	2-1/2"	9-3/4"	20	30
FMPIC-50-975	2-1/2"	9-3/4"	50	30

Jumbo Model 40 (7-3/4" x 9-5/8")

Part Number	OD	Length	Micron	No. / case
FMPIC-40-5-HT	7-3/4"	9-5/8"	5	1
FMPIC-40-20-HT	7-3/4"	9-5/8"	20	1
FMPIC-40-50-HT	7-3/4"	9-5/8"	50	1

Jumbo Model 90 (7-3/4" x 19-1/2")

Part Number	OD	Length	Micron	No. / case
FMPIC-90-5-HT	7-3/4"	19-1/2"	5	1
FMPIC-90-20-HT	7-3/4"	19-1/2"	20	1
FMPIC-90-50-HT	7-3/4"	19-1/2"	50	1

Jumbo Model 170 (7-3/4" x 30-3/4")

Part Number	OD	Length	Micron	No. / case
FMPIC-170-5-HT	7-3/4"	30-3/4"	5	1
FMPIC-170-20-HT	7-3/4"	30-3/4"	20	1
FMPIC-170-50-HT	7-3/4"	30-3/4"	50	1

Note: Phenolic impregnated cellulose cartridges are not to be used for potable water. Jumbo cartridges fit in Flow Max jumbo housings only.

Flow-Max® HP Series Filter Cartridges

High efficiency pleated filter cartridges

Flow-Max HP series filter cartridges are cost effective, disposable, filter elements for a wide range of applications. Flow-Max HP cartridges are constructed of highly efficient pleated polypropylene filter media with extended filter area to provide high flow rates, low pressure drop and increased dirt holding capacity.

Features

- 100% polypropylene
- Ratings from 0.2 to 50 micron
- FDA listed polypropylene components
- Removal efficiencies to 99.98%
- High surface area
- Long service life & reduced maintenance costs
- Fixed pore construction for reliability

Applications

- High purity water
- Traps for DI resin
- Electronics
- Pre filtration for RO
- Magnetic tape coatings
- Aqueous solutions
- Plating solutions
- Chemicals
- Cosmetics
- Inks
- Food & beverage
- Bottled water
- Edible oils
- Waste water

Specifications

Components	Data
Filter media	Polypropylene
End caps	Polypropylene
Center tubes	Polypropylene
Cage	Polypropylene
Gaskets & o-rings	EPDM, standard. (Buna-N, Viton and Silicone are optional.)
Micron ratings	0.2, 0.45, 1, 2, 5, 10, 25 & 50
Operating temperature	175° F (80° C) maximum
Collapse pressure	130 psid (8.9 bar) maximum
Change out	35 psid (2.4 bar) maximum
FDA	All materials comply with FDA 174.5, 177.1520 & 177.1630 for contact with foods & beverages

Dimensions

Nominal lengths	4-7/8", 9-3/4", 10", 20", 30" & 40"
Outside diameter	2.5" (6.35 cm)
Inside diameter	1.0" (2.54 cm)

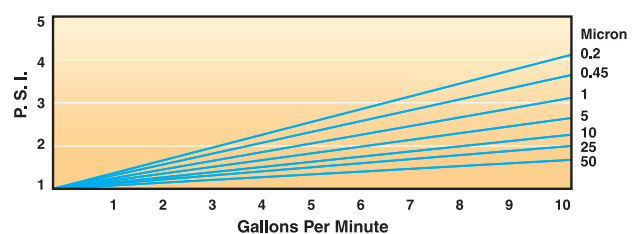


Filter removal efficiency

Beta ratio	10000	5000	100	50	10
Efficiency	99.99%	99.98%	99%	98%	90%
0.2 micron	0.35	0.2	0.1	----	----
0.45	0.6	0.45	0.3	0.2	----
1 micron	1.2	1.0	0.6	0.3	0.25
2 micron	2.5	2.0	1.5	1.0	0.8
5 micron	8.0	5.0	4.0	3.0	2.0
10 micron	13.0	10.0	8.0	7.0	5.0
25 micron	32.0	25.0	19.0	15.0	13.0
50 micron	66.0	50.0	44.0	32.0	26.0

Relative performance data was developed using laboratory tests, which may be used for guidelines in cartridge selection. The single pass test method was used with particle counters and 3 GPM flow per 10" cartridge. Results vary, and actual field tests may be necessary to determine final cartridge selection.

Initial pressure drop per 10" cartridge



DOE



222 or 226 / Flat



222 or 226 / Fin

Flow-Max® HP Series Filter Cartridges

Product code	Micron	Length	End Cap	No./case	Ship weight
FPP-0.2-975-DOE	0.2	9-3/4"	DOE	24	12 lbs.
FPP-0.2-20-DOE	0.2	20"	DOE	12	11 lbs.
FPP-0.2-30-DOE	0.2	30"	DOE	12	17 lbs.
FPP-0.2-40-DOE	0.2	40"	DOE	12	21 lbs.
FPP-0.2-10-222	0.2	10"	222 / flat	24	12 lbs.
FPP-0.2-20-222	0.2	20"	222 / flat	12	11 lbs.
FPP-0.2-30-222	0.2	30"	222 / flat	12	17 lbs.
FPP-0.2-40-222	0.2	40"	222 / flat	12	21 lbs.
FPP-0.2-10-222F	0.2	10"	222 / fin	24	12 lbs.
FPP-0.2-20-222F	0.2	20"	222 / fin	12	11 lbs.
FPP-0.2-30-222F	0.2	30"	222 / fin	12	17 lbs.
FPP-0.2-40-222F	0.2	40"	222 / fin	12	21 lbs.
FPP-0.45-975-DOE	0.45	9-3/4"	DOE	24	12 lbs.
FPP-0.45-20-DOE	0.45	20"	DOE	12	11 lbs.
FPP-0.45-30-DOE	0.45	30"	DOE	12	17 lbs.
FPP-0.45-40-DOE	0.45	40"	DOE	12	21 lbs.
FPP-1-975-DOE	1	9-3/4"	DOE	24	12 lbs.
FPP-1-20-DOE	1	20"	DOE	12	11 lbs.
FPP-1-30-DOE	1	30"	DOE	12	17 lbs.
FPP-1-40-DOE	1	40"	DOE	12	21 lbs.
FPP-1-10-222	1	10"	222 / flat	24	12 lbs.
FPP-1-20-222	1	20"	222 / flat	12	11 lbs.
FPP-1-30-222	1	30"	222 / flat	12	17 lbs.
FPP-1-40-222	1	40"	222 / flat	12	21 lbs.
FPP-5-975-DOE	5	9-3/4"	DOE	24	12 lbs.
FPP-5-20-DOE	5	20"	DOE	12	11 lbs.
FPP-5-30-DOE	5	30"	DOE	12	17 lbs.
FPP-5-40-DOE	5	40"	DOE	12	21 lbs.
FPP-5-10-222	5	10"	222 / flat	24	12 lbs.
FPP-5-20-222	5	20"	222 / flat	12	11 lbs.
FPP-5-30-222	5	30"	222 / flat	12	17 lbs.
FPP-5-40-222	5	40"	222 / flat	12	21 lbs.

Note: 2, 10, 25, and 50 micron ratings are also available by special order. (Substitute micron rating at appropriate place in product code.) Standard gaskets and o rings are EPDM. Buna N, Viton and Silicone are also available. (For special gaskets or o rings, add "B" for Buna N, "V" for Viton or "S" for Silicone at end of product code.) For 226 cartridges, substitute "226" for "222".

Watts® Pleated Cartridges

Greater surface area, longer life, reduced filtration costs!



Watts pleated cartridges outperform wound, spun, melt blown, resin bonded and other “depth” style filter elements because our pleated cartridges provide increased surface area, lower pressure drop and longer service life. Our 100% synthetic media is washable and cleanable, five micron and up, to reduce filtration costs.

Features

Filter media is pleated...

Cellulose-FREE, 100% synthetic media

Wide range of lengths and micron ratings

Individually wrapped for purity

Washable and reusable, 5 micron and up

Color-coded end caps (2-3/4" OD)

Economical price

Benefits

More surface area for greater dirt holding capacity; lower initial pressure drop; higher flow rates; longer life; reduced filtration costs.

Superior performance with no additives or binders to break down which may cause foaming and filter degradation.

Full product line to satisfy your application.

Additional security at no additional charge.

Reduce filter replacement costs.

Easily identify standard OD replacements.

Reduced filter costs for higher profits.

Pleated cartridges have eight times the surface area as depth cartridges!

**This is why Watts® pleated cartridges cost less to use,
regardless of what they cost to buy!**

Watts® Pleated Cartridges

Not all pleated cartridges perform the same!

“Ours”



“Theirs”



VS.

The difference is the media!

Watts, cellulose-free, 100% synthetic filter media allows the pleats to retain their form, maintaining a large amount of surface area. This allows the cartridge to handle higher solids loading and flow rates with a lower pressure drop that increases the filter efficiency and life, while reducing filter change out costs and frequency.

VS.

The cellulose blended pleats collapsed on one another, blinding off large amounts of the cartridges surface area. Premature blinding of the surface area reduces the flow capacity and efficiency while it raises the differential pressure, and contributes to a limited filter life and frequent filter change outs.

Flow rates

Maximum flow rate guidelines for watts cartridges are shown below:

Micron rating (Nominal)	Standard Cartridges (2-3/4" OD)			Full-Flow (B-B)	
	9-3/4"	20"	29-1/4"	9-3/4"	20"
1 Micron	4	8	12	10	15
5 Micron	7	14	21	15	25
20 Micron	8	16	24	15	25
50 Micron	10	20	30	15	25

Watts pleated specifications

Maximum temperature	140°F (60°C)
Minimum Temperature	40°F (4.4°C)
Maximum pressure	40 psid
Recommended change out	25 psid
Filter media (1 & 5 micron)	Polypropylene
Filter media (20 & 50 micron)	Polyester
Material - center tube	Polypropylene
Material - end caps	Molded Polyurethane
ID	1-1/6"

Washable and reusable

Watts pleated cartridges are washable and reusable, five micron and up to reduce filtration costs. For best results, direct spray into the pleats to dislodge the sediment.

Watts® Pleated Cartridges



Standard cartridges (2-3/4" OD)



Full-Flow (B-B) Cartridges (4-1/2" OD)

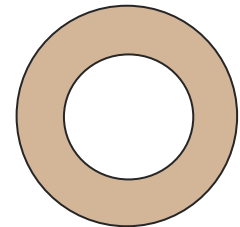
Standard 2-3/4" OD X 9-3/4" length

Product code	Media type	Micron	Color	Case / qty
WPC1-975	Synthetic	1	Tan	50
WPC5-975	Synthetic	5	White	50
WPC20-975	Synthetic	20	Blue	50
WPC50-975	Synthetic	50	Yellow	50

Identify cartridges easily with color coded end caps

Standard 2-3/4" OD X 20" length

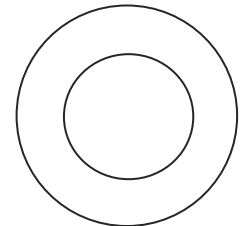
Product code	Media type	Micron	Color	Case / qty
WPC1-20	Synthetic	1	Tan	25
WPC5-20	Synthetic	5	White	25
WPC20-20	Synthetic	20	Blue	25
WPC50-20	Synthetic	50	Yellow	25



1 - Micron

Standard 2-3/4" OD X 29-1/4" length

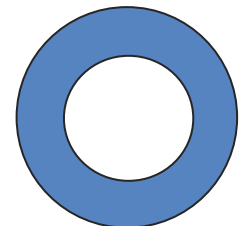
Product code	Media type	Micron	Color	Case / qty
WPC1-2925	Synthetic	1	Tan	25
WPC5-2925	Synthetic	5	White	25
WPC20-2925	Synthetic	20	Blue	25
WPC50-2925	Synthetic	50	Yellow	25



5 - Micron

Standard 2-3/4" OD X 40" length

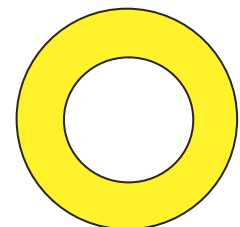
Product code	Media type	Micron	Color	Case / qty
WPC1-40	Synthetic	1	Tan	25
WPC5-40	Synthetic	5	White	25
WPC20-40	Synthetic	20	Blue	25
WPC50-40	Synthetic	50	Yellow	25



20 - Micron

Full-Flow (B-B) 4-1/2" OD X 9-3/4" length

Product code	Media type	Micron	Color	Case / qty
WPC1FF975	Synthetic	1	Embossed	18
WPC5FF975	Synthetic	5	Embossed	18
WPC20FF975	Synthetic	20	Embossed	18
WPC50FF975	Synthetic	50	Embossed	18



50 - Micron

Full-Flow (B-B) 4-1/2" OD X 20" length

Product code	Media type	Micron	Color	Case / qty
WPC1FF20	Synthetic	1	Embossed	9
WPC5FF20	Synthetic	5	Embossed	9
WPC20FF20	Synthetic	20	Embossed	9
WPC50FF20	Synthetic	50	Embossed	9

FLOW-PRO®

MELT BLOWN FILTER CARTRIDGES

**Best Seller
And
Value Priced!**



Features & benefits

- Low cost
- Excellent chemical resistance
- Food grade for food and beverages
- No media migration
- High dirt holding capacity
- Wide range of lengths
- Five micron ratings

Applications

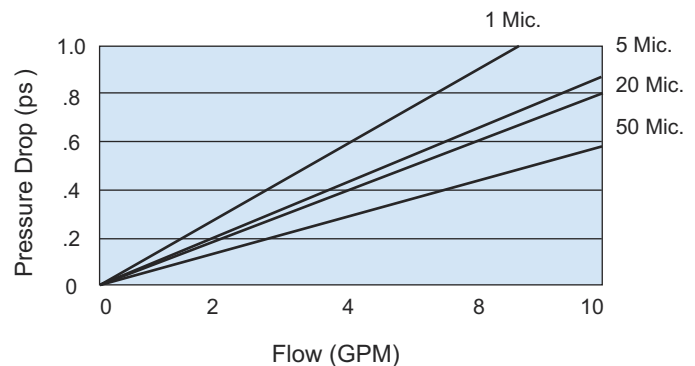
- Potable water
- Beverages
- Pre-filtration for RO
- Fine chemicals
- Electronics
- Metal finishing
- Plating solutions
- And more!



ANSI / NSF
STANDARD 42
COMPONENT
CERTIFIED

Specifications

Material	Melt blown polypropylene
Maximum temperature	140° F / 60° C
Maximum pressure	40 PSID
Recommended change out	30 PSID
Maximum flow rate	2-8 GPM based on micron
Cartridge packaging	Shrink wrapped for purity



Flow-Pro® Melt Blown Cartridges



ANSI / NSF
STANDARD 42
COMPONENT
CERTIFIED

Standard diameter (2-1/2") 5"

Part Number	Length	OD	Micron	No. / case
FPMB1-5	5"	2-1/2"	1	48
FPMB5-5	5"	2-1/2"	5	48
FPMB20-5	5"	2-1/2"	20	48
FPMB50-5	5"	2-1/2"	50	48

9-7/8"

FPMB1-978	9-7/8"	2-1/2"	1	48
FPMB5-978	9-7/8"	2-1/2"	25	48
FPMB5-978-NL	9-7/8" (no label)	2-1/2"	5	48
FPMB10-978	9-7/8"	2-1/2"	10	48
FPMB20-978	9-7/8"	2-1/2"	20	48
FPMB50-978	9-7/8"	2-1/2"	50	48

20"

FPMB1-20	20"	2-1/2"	1	24
FPMB5-20	20"	2-1/2"	5	24
FPMB20-20	20"	2-1/2"	20	24
FPMB50-20	20"	2-1/2"	50	24

29-1/4"

FPMB5-2925	29-1/4"	2-1/2"	5	24
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30"

FPMB1-30	30"	2-1/2"	1	24
FPMB5-30	30"	2-1/2"	5	24
FPMB20-30	30"	2-1/2"	20	24
FPMB50-30	30"	2-1/2"	50	24

40"

FPMB1-40	40"	2-1/2"	1	24
FPMB5-40	40"	2-1/2"	5	24
FPMB20-40	40"	2-1/2"	20	24
FPMB50-40	40"	2-1/2"	50	24

Full-Flow (B-B) 9-3/4" x 4-1/2" O.D. cartridges

Part Number	Length	OD	Micron	No. / case
FPMB-BB1-10	9-3/4"	4-1/2"	1	24
FPMB-BB5-10	9-3/4"	4-1/2"	5	24
FPMB-BB20-10	9-3/4"	4-1/2"	20	24
FPMB-BB50-10	9-3/4"	4-1/2"	50	24

Full-Flow (B-B) 20"x 4-1/2" O.D. cartridges

Part Number	Length	OD	Micron	No. / case
FPMB-BB1-20	20"	4-1/2"	1	12
FPMB-BB5-20	20"	4-1/2"	5	12
FPMB-BB20-20	20"	4-1/2"	20	12
FPMB-BB50-20	20"	4-1/2"	50	12

Grooved cartridges for increased surface area

Part Number	Length	OD	Micron	No. / case
FPMBG-1-975	9-3/4"	2-1/2"	1	48
FPMBG-5-975	9-3/4"	2-1/2"	5	48
FPMBG-20-975	9-3/4"	2-1/2"	20	48
FPMBG-1-20	20"	2-1/2"	1	24
FPMBG-5-20	20"	2-1/2"	5	24

Shower Filters



Great "add on sale"

The Flowmatic® shower filter is a great "add on sale", used to reduce chlorine from shower water. The media is 100% KDF 55, to provide superior performance.

Dial-A-Date

Flowmatic shower filters come with a unique "save-the-date" ring, which is used to remind your customers when to change cartridges, buy moving the dial to the current month, plus six months.

Features & benefits

- Virtually eliminates chlorine from shower water.
- No chemical damage to hair!
- No dry skin!
- Uses KDF 55 media for superior performance.
- Available in an attractive retail box or plain cartons.
- Plastic components will not rust or corrode.
- Dial-A-Date ring reminds customers when to change cartridges.

Ordering information

Part Number	Description	Number Per Carton
FMSHWR-KDF55	Shower filter in retail box.	1
FMSHWR-KDF55-PLAIN	Shower filter in white plain box.	1

Wound Filter Cartridges

Exceptional value when depth filtration is required.



Features & benefits

- Low cost
- Polypropylene media for chemical resistance
- Food grade ingredients for potable water
- No leachables to contaminate downstream
- Wide range of lengths and micron ratings
- Cartridges with stainless steel center tubes for temperature applications

Product Number	Length	OD	Micron	No. / case
SF1-978	9-7/8"	2-1/2"	1	30
SF5-978	9-7/8"	2-1/2"	5	30
SF20-978	9-7/8"	2-1/2"	20	30
SF50-978	9-7/8"	2-1/2"	50	30
SF1-20	20"	2-1/2"	1	15
SF5-20	20"	2-1/2"	5	15
SF20-20	20"	2-1/2"	20	15
SF50-20	20"	2-1/2"	50	15
SF1-30	30"	2-1/2"	1	15
SF5-30	30"	2-1/2"	5	15
SF20-30	30"	2-1/2"	20	15
SF1-40	40"	2-1/2"	1	10
SF5-40	40"	2-1/2"	5	10
SF20-40	40"	2-1/2"	20	10

Full-Flow (BB) 4-1/2" OD cartridges

Product Number	Length	OD	Micron	No. / case
SF1-10-425	9-3/4"	4-1/2"	1	8
SF5-10-425	9-3/4"	4-1/2"	5	8
SF20-10-425	9-3/4"	4-1/2"	20	8
SF50-10-425	9-3/4"	4-1/2"	50	8
SF1-20-425	20"	4-1/2"	1	4
SF5-20-425	20"	4-1/2"	5	4
SF20-20-425	20"	4-1/2"	20	4
SF50-20-425	20"	4-1/2"	50	4

Wound cartridges with 304 stainless steel center tubes for temperatures to 200°F (93°C)

Product Number	Length	OD	Micron	No. / case
MS10FS5	9-7/8"	2-1/2"	5	30
MS10FS20	9-7/8"	2-1/2"	20	30
MS10FS50	9-7/8"	2-1/2"	50	30
MS20FS5	20"	2-1/2"	5	15
MS20FS20	20"	2-1/2"	20	15
MS30FS5	30"	2-1/2"	5	15
MS30FS20	30"	2-1/2"	20	15
MS40FS5	40"	2-1/2"	5	10
MS40FS20	40"	2-1/2"	20	10

Section 14

Drinking Water Components

Watts® Top Mount Faucets

You'll never need to crawl below a sink again!

New!



Top mount faucets in Chrome, Brushed Nickel, Black, White and Bronze



Monitors are available.

Top mount faucet models

PART NUMBER	FINISH	MONITOR
WTMFAG-C-M	Chrome	Yes
WTMFAG-C	Chrome	No
WTMFAG-BN-M	Brushed Nickel	Yes
WTMFAG-BN	Brushed Nickel	No
WTMFAG-W-M	White	Yes
WTMFAG-W	White	No
WTMFAG-B-M	Black	Yes
WTMFAG-B	Black	No
WTMFAG-ORG-M	Oil Rubbed Bronze	Yes
WTMFAG-ORG	Oil Rubbed Bronze	No

Monitor faucets eliminate guesswork and provide drinking water quality assurance!

How they work:

1. Monitors track time and estimate gallons based on handle turns.
2. LED flashes red after six months or after it estimates 4,000 gallons of water have been used by the system.
3. Each time cartridges are replaced a new battery is recommended.
4. A new replacement battery will reset the monitor and indicate blue.



Certified by NSF International against NSF/ANSI Standard 42 for material requirements.



Feed attached tubing and toggle bolt through counter top.



Set toggle bolt with Phillips head screwdriver from above the counter top.



Replace spout and connect tubing to drinking water system.

Specialty RO Faucets

Best Selling Product. Try it today!



703 Series faucets

Part No.	Type	Style	Finish	Case Qty
FU-WDF-703-CP	Non Air Gap	Designer 703 Series Forge	Chrome	30
FU-WDF-703-BN	Non Air Gap	Designer 703 Series Forge	Brushed Nickel	30
FU-WDF-703-ORB	Non Air Gap	Designer 703 Series Forge	Oil Rubbed Bronze	30

903 Series faucets

Part Number	Style	Finish	Case Qty
FU-WDF-903-4	Ceramic Disc Faucet Column Handle	Chrome	30

905 Series faucets

Part No.	Style	Finish	Certification	Case Qty
FU-WDF-905-CP	Ceramic Disc Quarter Turn Faucet	Chrome	NSF61 Certified	30
FU-WDF-905-NP	Ceramic Disc Quarter Turn Faucet	Brushed Nickle	NSF61 Certified	30

888 Series faucets

Part No.	Style	Finish	Certification	Case Qty
FU-WDF-888-AB	Faucet Ceramic Disc	Antique Brass	NSF61 Certified	20
FU-WDF-888-AW	Faucet Ceramic Disc	Antique Wine	NSF61 Certified	20
FU-WDF-888-CP	Faucet Ceramic Disc	Bright Chrome	NSF61 Certified	20
FU-WDF-888-NP	Faucet Ceramic Disc	Brushed Nickel	NSF61 Certified	20
FU-WDF-888-ST	Faucet Ceramic Disc	Satin Nickel	NSF61 Certified	20

RO Storage Tanks

**Best Seller.
Try it today!**



RO PRO®
NSF certified to 100 psi. Only 9" wide.
(Takes less space below sink!)



TK-PRO-10W
NSF Certified metal tank.



PRO400W
Plastic tank NSF Certified.



FRO-132-W
NSF Certified metal tank.

RO storage tanks

Part Number	Capacity (Gals.)	Diameter	Height	Fitting Size (NPT)	Color	Certification	Ship. Wt. (Lbs.)
ROPRO4-W	4	9"	20"	1/4"	White	NSF 58 (100 psi)	10
ROPRO4-K	4	9"	20"	1/4"	Black	NSF 58 (100 psi)	10
ROPRO4-B	4	9"	20"	1/4"	Blue	NSF 58 (100 psi)	10
PRO4000WF	4	12"	14"	1/4"	White	NSF 58 (50 psi)	10
FRO-132-WH	3	12"	16"	1/4"	White	NSF 58 (50 psi)	11
TK-PRO-10W	10	16"	19"	1/4"	White	NSF 58 (50 psi)	20

NOTE: All tanks are individually boxed.

Amtrol® Tanks



Residential tanks

Part Number	Capacity (Gals.)	Diameter	Height	Pipe Size (NPT)	Color	Ship. Wt. (Lbs.)
TK-AM002U	2	8	13	1/4"	Blue	5
TK-AM003W	3	10	15	1/4"	White	7
TK-AM005U	4.4	11	15	1/4"	Blue	9
TK-AM005W	4.4	11	15	1/4"	White	9

Commercial tanks

Part Number	Capacity (Gals.)	Diameter	Height	Pipe Size (NPT)	Color	Ship. Wt. (Lbs.)
TK-AM014	14	16	24	3/4"	Blue	24
TK-AM020	20	16	32	1"	Blue	32
TK-AM034U	34	23	31	1-1/4"	Blue	59
TK-AM044	44	23	37	1-1/2"	Blue	69
TK-AM086	86	27	50	1-1/4"	Blue	123

Residential RO Membranes

Top quality membranes for residential reverse osmosis systems.



Made in U.S.A.

Watts® residential membranes (thin film composite)

Part Number	Application	O.D.	Length	Capacity (GPD)	No. Per Case
W-1812-24	Tap water	1.8"	11.75"	24	25
W-1812-36	Tap water	1.8"	11.75"	36	25
W-1812-50	Tap water	1.8"	11.75"	50	25
W-1812-75	Tap water	1.8"	11.75"	75	25
W-1812-100	Tap water	1.8"	11.75"	100	25

Note: W 1812 100 membranes are packaged in preservative and should be kept in a cool environment if stored for a prolonged period of time.

Watts membrane specifications

Data	W-1812-24	W-1812-36	W-1812-50	W-1812-75	W-1812-100
Membrane type	TCF	TCF	TCF	TCF	TCF
Material	Polyamide	Polyamide	Polyamide	Polyamide	Polyamide
Charge	Negative	Negative	Negative	Negative	Negative
Configuration	Spiral-wound	Spiral-wound	Spiral-wound	Spiral-wound	Spiral-wound
Salt rejection	96%	96%	96%	96%	96%
Max. operating temp.	113°F / 45°C	113°F / 45°C	113°F / 45°C	113°F / 45°C	113°F / 45°C
Max. operating pressure	125 psi	125 psi	125 psi	125 psi	125 psi
Max. turbidity (NTU)	1	1	1	1	1
Max. SDI	5	5	5	5	5
pH range	3-10	3-10	3-10	3-10	3-10
Flux	24 gpd	36 gpd	50 gpd	75 gpd	100 gpd

Note: Specifications based on 77°F (25°) temperature and 60 psid pressure.



Filmtec® by Dow® residential membranes (thin film)

Part Number	Application	O.D.	Length	Capacity (GPD)	No. Per Case
TW30-1812-24	Tap water	1.8"	11.75"	24	25
TW30-1812-36	Tap water	1.8"	11.75"	36	25
TW30-1812-50	Tap water	1.8"	11.75"	50	25
TW30-1812-75	Tap water	1.8"	11.75"	75	25
CTA-16	Desal chlorine tolerant		11.25"	16	25

Residential RO Membranes



TGI (1.8" x 11.75")

Part Number	Type	Size	Capacity	No./Case
MM-TFF30/45	TFC Dry	1.8"x12"	30GPD@60PSI/45GPD@100PSI	25
MM-TFF45/75	TFC Dry	1.8"x12"	45GPD@60PSI/75GPD@100PSI	25
MM-TFF60/105	TFC Dry	1.8"x12"	60GPD@60PSI/105GPD@100PSI	25
MM-TFF90/160	TFC Dry	1.8"x12"	90GPD@60PSI/160GPD@100PSI	25



GE (1.8" x 11.75")

Part Number	Type	Size	Capacity	No./Case
MM-TFM018	TFC Dry	1.8"x12"	18GPD	25
MM-TFM025	TFC Dry	1.8"x12"	25GPD	25
MM-TFM035	TFC Dry	1.8"x12"	35GPD	25
MM-TFM050	TFC Dry	1.8"x12"	50GPD	25
MM-TFM075	TFC Dry	1.8"x12"	75GPD	25
MM-TFM100	TFC Dry	1.8"x12"	100GPD	25
MM-TFM150	TFC Dry	1.8"x12"	150GPD	25

Booster Pumps



ERP-1000



CDP-6800

Permeate pumps

Part Number	MFG.	Fitting	Electrical	Notations	No. Per Case
ERP-1000	Aquatech	1/4" JG	Non-Elec.		30

Booster pumps (low flow)

Part Number	MFG.	Fitting	Electrical	Notations	No. Per Case
CDP-6800	Aquatech	1/4" JG	24 VAC	CE MARK	12
W152012	Import	1/4" JG	24 VAC		12



Booster pumps (high flow)

Part Number	MFG.	Fitting	Electrical	Notations	No. Per Case
CDP-8800	Aquatech	3/8" JG	24 VAC	CE MARK	12

Delivery / transfer pumps

Part Number	MFG.	Fitting	Shut-Off Pressure (PSI)	Electrical	Notations	No. Per Case
F5852-7F12-J604	Aquatech	3/8" JG	70	115V	w/cord 1.4 gpm	1
F5852-1E13-J574	Aquatech	3/8" JG	70	115V	w/cord 0.6 gpm	1

Variable speed pumps

Part Number	MFG.	Fitting	Shut-Off Pressure (PSI)	Electrical	Notations	No. Per Case
F5853-GB12-V81D	Aquatech	3/8" JG	40	115V	W/CORD	1
F5853-GE12-V81D	Aquatech	3/8" JG	60	115V	W/CORD	1
F5502-IDN2-V77D	Aquatech	3/8" ports*	50	115V	W/CORD	1

Note: Pumps above come with power cords. *Ports only. QJS553 (3/8" tube) or QJS554 (3/8" tube) fitting required. See accessories.

Transformers

Part Number	Description	Pump	Electrical
TAS-114-19-EP1	Transformer	6800	115V 0.8 AMP
TAS-234-19EP	Transformer	6800	230V 0.8 AMP
TAS-104-19	Transformer	6800	100V 0.8 AMP
TACS-114-48	Transformer	8800, 5800	115V 2 AMP
TACS-234-48RF	Transformer	8800, 5800	230V 2 AMP
TAS-104-48	Transformer	8800, 5800	100V 2 APM
W152018	Transformer	W152012	110V
W152029	Transformer	W152012	220V

Note: All transformers are shipped individually.

Pump accessories

TGI Part Number	Description	Pump	No./Case
AFR-603	Auto flush valve	6800 & 8800	1
PSW-240	Tank psi switch 1/4" JG	6800 & 8800	1
PSW-340	Tank psi switch 3/8" JG	6800 & 8800	1
ESO-460-093	Electronic solenoid valve	6800 & 8800	1
LPS	Low pressure switch	6800 & 8800	1
TLC-DC	Tank level controller	6800 & 8800	1
ASV2000	Shut-off valve	ERP-1000	1
M53-095-AC	Rear end bell	6800	1
F68011	Pump head	6800	1
QJS553	3/8" x 3/8" fitting	5502-IDN2-V77D	1
QJS554	1/2" x 1/2" fitting	5502-IDN2-V77D	1

Plastic Filter Housings

Top quality and economically priced plastic filter housings in generic packaging.



Butress thread design

Provides superior sealing and greater security.



Heavy Duty Construction

Housings are made entirely of the highest quality FDA grade NSF listed polypropylene.



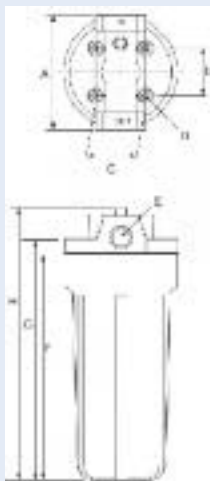
Features & benefits

- Full product line for more types, models, pipe fittings and options than anyone in the business!
- Heavy duty construction, made using high quality FDA grade polypropylene.
- Superior chemical resistance from many aggressive chemicals.
- Butress thread design for superior sealing and security.
- Thick side walls with heavy-duty ribs to provide greater strength.
- Temperature rated to 125°F (52°C).
- Pressure rated to 125 psi (8.75 bar).
- Cap, sump and top-seated o-rings compress to provide leak proof sealing.
- NSF Standard 42 certified (FH4200WW14, FH4200BB14, FH4200WW34).



ANSI / NSF 42
CERTIFIED
FH4200WW14
FH4200WW34
FH4200BB14

Dimensions



Model	Size	A	B	C	D	E	F	G	H
500 Series	5"	4.28"	1.57"	1.18"	0.16"	X	5.7"	7.0"	7.5"
4000 Series	10"	4.72"	1.57"	1.18"	1.18"	X	10.5"	11.0"	11.8"
4200 Series	10"	4.72"	1.57"	1.18"	1.18"	X	10.5"	11.0"	11.8"
7000 Series	20"	4.72"	1.57"	1.18"	1.18"	X	20.47"	21.26"	22.8"
4500 Series	10"	5.35"	2.22"	2.28"	0.23"	X	10.43"	11.49"	12.5"
8000 Series	20"	5.35"	2.22"	2.28"	0.23"	X	20.47"	21.26"	22.8"
Full-Flow (B-B)	10"	7.28"	3.03"	3.03"	0.275"	X	11.33"	11.57"	14.0"
Full-Flow (B-B)	20"	7.28"	3.03"	3.03"	0.275"	X	21.25"	21.65"	24.0"

x = Depends on size of pipe fitting selected

Types & Models



Residential Series
4200 (10") & 7000 (20")



Commercial Series
4500 (10") & 8000 (20")



Full-Flow (B-B) Series
5000 (10") & 10000 (20")



Valve-In-Head
Opaque & Clear



High Temp
4500HT (10") & 8000HT (20")



Virgin Polypro
DOE & "222"



White



Black



Blue / Black



Clear

Specifications

Material, sumps & caps	FDA grade polypropylene.
Material, o-rings	EPDM is standard; Viton is available as a spare part.
Maximum temperature (standard)	125° F (52°C)
Maximum temperature (high temp)	200°F (93°C)
Minimum temperature	40°F (4°C)
Maximum pressure (standard)	125 psi (8.75 bar)
Maximum pressure (full flow)	90 psi (6.3 bar)
Burst test	Tested to 500 psi. (150,000 cycles from 0 to 125 psi)

Plastic Filter Housings

5" clear and opaque housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH500WW14	5"	No	White	White	1/4"	12	18	19x14x8
FH500WW12	5"	No	White	White	1/2"	12	18	19x14x8
FH500CW14	5"	No	Clear	White	1/4"	12	19	19x14x8
FH500CW12	5"	No	Clear	White	1/2"	12	19	19x14x8



Clear housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
10" Residential								
FH4200CW14	10"	No	Clear	White	1/4"	12	31	19x14x13
FH4200CW14PR	10"	Yes	Clear	White	1/4"	12	31	19x14x13
FH4200CW38	10"	No	Clear	White	3/8"	12	31	19x14x13
FH4200CW38PR	10"	Yes	Clear	White	3/8"	12	31	19x13x14
FH4200CW12	10"	No	Clear	White	1/2"	12	31	19x14x13
FH4200CW12PR	10"	Yes	Clear	White	1/2"	12	31	19x14x13
FH4200CW34	10"	No	Clear	White	3/4"	12	31	19x14x13
FH4200CW34PR	10"	Yes	Clear	White	3/4"	12	31	19x13x14

10" Commercial clear

HD4500CB34	10"	No	Clear	Black	3/4"	12	38	22x17x13
HD4500CB34PR	10"	Yes	Clear	Black	3/4"	12	38	22x17x13

20" Commercial clear

FH8000CB34PR	20"	Yes	Clear	Black	3/4"	6	33	18x12x24
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10" Full-Flow (BB) clear

FH5000CB1PR	10"	Yes	Clear	Black	1"	4	34	16x16x14
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Valve-In-Head housings (three function valve with flow, shut-off & by-pass)

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
VIH34APC-NP-SS	10"	No	Clear	White	3/4"	12	37	20x17x14

Plastic Filter Housings



Natural polypropylene housings (ideal for high purity water)

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH4200NP34	10"	No	NP	NP	3/4"	12	24	19x14x13
FH8000NP34	20"	No	NP	NP	3/4"	6	29	18x12x24
FH8000NP34-222	20"	No	NP	NP	3/4"	6	29	18x12x24



All white housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH4200WW14	10"	No	White	White	1/4"	12	24	19x14x13
FH4200WW38	10"	No	White	White	3/8"	12	24	19x14x13
FH4200WW12	10"	No	White	White	1/2"	12	24	19x14x13
FH4200WW12PR	10"	Yes	White	White	1/2"	12	24	19x14x13
FH4200WW34	10"	No	White	White	3/4"	12	24	19x14x13
FH7000WW38	20"	No	White	White	3/8"	6	26	17x12x24
FH7000WW38PR	20"	Yes	White	White	3/8"	6	26	17x12x24
FH8000WW34PR	20"	Yes	White	White	3/4"	6	33	18x12x24
FH5000WW1PR	10BB	Yes	White	White	1"	4	22	16x16x14
FH5000WW15PR	10BB	Yes	White	White	1-1/2"	4	22	16x16x14
FH10000WW1PR	20BB	Yes	White	White	1"	4	35	16x16x26
FH10000WW15PR	20BB	Yes	White	White	1-1/2"	4	35	16x16x26

Plastic Filter Housings



High-Temp housings (rated for temperatures to 200°F (93°C))

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
HD4500HT34	10"	No	Red	Red	3/4"	12	50	22x17x13
FH8000HT34	20"	No	Red	Red	3/4"	12	44	18x12x24



All black housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH4200BB14	10"	No	Black	Black	1/4"	12	24	19x14x13
FH4200BB34	10"	No	Black	Black	3/4"	12	24	19x14x13
HD4500BB34PR	10"	Yes	Black	Black	3/4"	12	38	22x17x13
FH8000BB34PR	20"	Yes	Black	Black	3/4"	6	33	18x12x24
FH5000BB1PR	10BB	Yes	Black	Black	1"	4	22	16x16x14
FH10000BB1PR	20BB	Yes	Black	Black	1"	4	35	16x16x26

10" Residential Blue / Black housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH4200BL14	10"	No	Blue	Black	1/4"	12	24	19x14x13
FH4200BL14PR	10"	Yes	Blue	Black	1/4"	12	24	19x14x13
FH4200BL38	10"	No	Blue	Black	3/8"	12	24	19x14x13
FH4200BL38PR	10"	Yes	Blue	Black	3/8"	12	24	19x13x13
FH4200BL12	10"	No	Blue	Black	1/2"	12	24	19x14x13
FH4200BL12PR	10"	Yes	Blue	Black	1/2"	12	24	19x14x13
FH4200BL34	10"	No	Blue	Black	3/4"	12	24	19x14x13
FH4200BL34PR	10"	Yes	Blue	Black	3/4"	12	24	19x13x13

Plastic Filter Housings

20" Residential Blue / Black housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH7000BL38	20"	No	Blue	Black	3/8"	6	26	17x12x24
FH7000BL12	20"	No	Blue	Black	1/2"	6	26	17x12x24
FH7000BL12PR	20"	Yes	Blue	Black	1/2"	6	26	17x12x24



10" Commercial Blue / Black housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
HD4500BL34	10"	No	Blue	Black	3/4"	12	38	22x17x13
HD4500BL34PR	10"	Yes	Blue	Black	3/4"	12	38	22x17x13

20" Commercial Blue / Black housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH8000BL34	20"	No	Blue	Black	3/4"	6	33	18x12x24
FH8000BL34PR	20"	Yes	Blue	Black	3/4"	6	33	18x12x24



10" Full-Flow (B-B) housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH5000BL34PR	10"	Yes	Blue	Black	3/4"	4	22	16x16x14
FH5000BL1	10"	No	Blue	Black	1"	4	22	16x16x14
FH5000BL1PR	10"	Yes	Blue	Black	1"	4	22	16x16x14
FH5000BB1PR	10"	Yes	Black	Black	1"	4	22	16x16x14
FH5000BL15	10"	No	Blue	Black	1-1/2"	4	22	16x16x14
FH5000BL15PR	10"	Yes	Blue	Black	1-1/2"	4	22	16x16x14
FH5000WW1PR	10"	Yes	White	White	1"	4	22	16x16x14
FH5000WW15PR	10"	Yes	White	White	1-1/2"	4	22	16x16x14
FH5000CB1PR	10"	Yes	Clear	Black	1"	4	34	16x16x14

Plastic Filter Housings



20" Full-Flow (B-B) housings

Model Number	Size	PR	Sump	Cap	Pipe Size	No./ case	Shipping Wt. (Lbs.)	Carton Size (")
FH10000BL34PR	20"	Yes	Blue	Black	3/4"	4	35	16x16x26
FH10000BL1	20"	No	Blue	Black	1"	4	35	16x16x26
FH10000BL1PR	20"	Yes	Blue	Black	1"	4	35	16x16x26
FH10000BB15PR	20"	Yes	Black	Black	1-1/2"	4	35	16x16x26
FH10000BL15	20"	No	Blue	Black	1-1/2"	4	35	16x16x26
FH10000BL15PR	20"	Yes	Blue	Black	1-1/2"	4	35	16x16x26
FH10000WW1PR	20"	Yes	White	White	1"	4	35	16x16x26
FH10000WW15PR	20"	Yes	White	White	1-1/2"	4	35	16x16x26

Wrenches

Part Number	For Housing Series	Material	Color	No. Per Package
WR100	500, 4000, 4200, 7000	Polypropylene	White	100
WR200	4500 & 8000	Polypropylene	White	100
WR500	5000 & 10000	Polypropylene	Black	90
WR-APC	VIH housing only	Polypropylene	White	100

O-Rings

Part Number	For Housing Series	Material	No. Per Package
OR1W	SS-1000	EPDM	10
OR4	500, 4000, 4200, 7000	EPDM	10
OR4V	500, 4000, 4200, 7000	Viton	10
OR5	5000 & 10000	EPDM	10
OR5V	5000 & 10000	Viton	10
OR8	4500 & 8000	EPDM	10
OR8V	4500 & 8000	Viton	10

Mounting brackets



FM-10 & FM10W
(For 500, 4200 & 7000)



FM-20
(For 4500 & 8000)



FM25A
(For 5000 & 10000)



FM-30
(500, 4000, 4200, 7000)



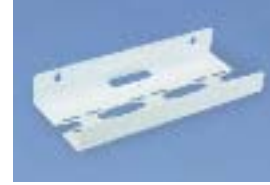
FM-35
(For 5000 & 10000)



FM-40
(For 500, 4200, 7000)



FM-50
(For 500, 4200, 7000)



FM-60
(For 500, 4200, 7000)

Brackets

Part Number	Housing Series	Number	Type	Material	No. Per Pkg.
FM10 (w/screws)	500, 4000, 4200, 7000	Single	Steel	Zinc plated	150
FM15	Valve-In-Head	Single	Steel	Zinc Plated	10
FM20	4500, 8000	Single	Steel	White	100
FM30	500, 4000, 4200, 7000	Double	Steel	White	30
FM40	500, 4000, 4200, 7000	Double	Steel	White	24
FM50	500, 4000, 4200, 7000	Triple	Steel	White	25
FM60	500, 4000, 4200, 7000	Triple	Steel	White	25
FM-10AW	500, 4000, 4200, 7000	Single	Aluminum	White	150
FM-20AW	4200, 4500, 8000	Single	Aluminum	White	100
FM-25A	5000, 10000	Single	Aluminum	White	25
FM-25W	5000, 10000	Single	Steel	White	10
FM-30AW	500, 4000, 4200, 7000	Double	Aluminum	White	24
FM-40AW	500, 4000, 4200, 7000	Double	Aluminum	White	24
FM-50AW	500, 4000, 4200, 7000	Triple	Aluminum	White	25
FM-50AB	500, 4000, 4200, 7000	Triple	Aluminum	Black	25
FM-60AW	500, 4000, 4200, 7000	Triple	Aluminum	White	25
FM-80AW	500, 4000, 4200, 7000	Quadruple	Aluminum	White	10
FM-99AW	500, 4000, 4200, 7000	Triple w/pump bkt.	Aluminum	White	20
FM100SS	4500, 8000	Double	Stainless	Stainless	25

Bracket dimensions

Bracket	Dimensions
FM10 & FM-10W	3-1/2" x 1-5/16" x 2-1/8"
FM20	4-1/2" x 2-1/4" x 3"
FM25	7" x 5-1/2" x 4-1/2"
FM30	2-1/4" x 5-3/4" x 9-1/4" x 1-1/2"
FM40	2-1/4" x 5-3/4" x 9-1/4" x 1-1/2"
FM50	2-1/4" x 5-3/4" x 14-1/8" x 1-1/2"
FM60	2-1/4" x 5-3/4" x 14-1/8" x 1-1/2"

Mounting screws

Part Number	Housing Series	Number	Length	Material	No. Per Pkg.
MS1012	SS-1000	#10	1/2"	SS	100
MS1034	4000, 4200	#10	3/4"	SS	100
MS1010	4000, 4200 with clip	#10	1"	SS	100
MS1410	4500 & 8000	#14	1"	SS	100
MS0812	For mounting clip	#8	1/2"	SS	100
MS5161	5000 & 10000	5/16	1"	SS	100
GAFFSCREW	WattsBB	5/16	1"	SS	4/pkg.

Individually Boxed Plastic Housings

Complete with filter, housing wrench, bracket and mounting screws.



Individually boxed filter housings

We are happy to announce a number of our filter housings are now available, individually boxed and come complete with housing, wrench, bracket and mounting screws. Housings are master packaged; however, the individual boxes are sturdy enough to ship separately in the individual carton.



Individually boxed plastic housings in master cartons

Model Number	Housing	Type	Sump	Cap	Wrench	Bracket	Number
HD4500CB34PR-IB	HD4500CB34PR	Commercial	Clear	Black	WR200	FM20	6
VIH34APC-IB	VIH34APC*	Valve-In-Head	Clear	White	WR-APC	FM-15	6
FH5000BL1PR-IB	FH5000BL1PR	Full-Flow (B-B)	Blue	Black	WR500	FM25	4
FH10000BL1PR-IB	FH10000BL1PR	Full-Flow (B-B)	Blue	Black	WR500	FM25	4

*With stainless steel inserts.



SS-4000



SS-1000



CT-4000



APO-CTW

Flowmatic® counter top housings

Part Number	Size	Pipe Size	Sump	Cap	Carton Size	Ship Weight	No./ Case
APCCTW	10"	1/4"	Clear	White	19x14x13	31	12
APOCTW	10"	1/4"	White	White	19x14x13	26	12
CT4000WW14	10"	1/4"	White	White	19x14x13	26	12
SS1000CTPW*	10"	1/4"	White	White	19x14x13	10	12
SS4000VWW	10"	1/4"	White	White	19x14x13	26	12

*Accepts 1/4" candle mount cartridge. All housings have molded threads.

Blue-White® Flowmeters



F-400 Series



F-410N Series



F-440 Series



F-410N Series



F-452 Series

Standard flowmeters for liquid with 316 ss guide rods

Part No.	BW Part No.	Series	GPM	Connection	Adapter Material	Float Material
R5126	F-40375LN-6	F-400N	0.1 to 1.0	3/8"	Polypropylene	PVC
R5129	F-40376LN-8	F-400N	0.2 to 2.0	1/2"	Polypropylene	316 SS
R5138	F-40500LN-8	F-400N	0.5 to 5.0	1/2"	Polypropylene	316 SS
R5397	F-451003LHN	F-451	3.0 to 30	1"	Polysulfone	316 SS
R5398	F-451004LHN	F-451	4.0 to 40	1"	Polysulfone	316 SS
R5408	F-452060LHN	F-452N	6 to 60	2" FNPT	Polysulfone	316 SS
R5409	F-452080LHN	F-452N	8 to 80	2" FNPT	Polysulfone	316 SS

Atmospheric Storage Tanks

Non-pressure polypropylene.



Part No.	Dia. x Hgt.	Gallons	Thickness	Opning	Points	Weight
C8005	23X38	65	1/4"	7" Lid / 2" Drain	TCIP	26
C8006	23x64	100	1/4"	7" Lid / 2" Drain	TCIP	33
C8009	31x58	165	1/4"	8" Lid / 2" Drain	TnTCIP	50
C8013	35x81	300	1/4"	16" Lid / 2" Drain	TCIP	80
C8017	48x72	500	5/16"	16" Lid / 2" Drain	TnTCIP	100
C8029	64x81	1000	3/8"	16" Lid / 2" Drain	TnTCIP	365
C8035	86x52	1200	3/8"	16" Lid / 2" Drain	TnTCIP	375
C8045	86x74	1700	13/32"	16" Lid / 2" Drain	TCIP	340
C8049	87x87	2100	7/16"	16" Lid / 2" Drain	TCIP	340

Tanks designed for 12# liquids or 1.5 specific gravity. Manufactured using FDA approved materials.

Accessories for Commercial RO Systems

Liquid level controls, pressure switches & metal pressure tanks.



Liquid level controls

Float switch used with atmospheric storage tanks to shut-off system when tank is full.

Part Number	Description
L75222	Control with single stage suction and 1/2" NPT PP fittings.

Important:
Install level control so the float will hinge upward (as shown). Not downward.

Pressure switch

Used with bladder pressure tanks to shut-off system with tank is full.



Part Number	Description
U217-2E	Switch pre-set 30-60 psi with 1/4" NPT fittings.



Watts® pressure regulators

Part Number	Description
P50-0/25	1/4" Pressure reg 0-25 PSI 4 port
P60	2 port pressure regulator valve
P60-4	Pressure regulator 1/4" 0-125 PSI 4 port

Section 15

Commercial Water Softeners

LC-100 Light Commercial Single Tank Softeners (1")



Ideal for commercial applications with capacities to 120,000 grains.

LC-100 series softeners with Fleck 2750 brass control valves are our best selling light commercial softeners because they are ideal, considering price and performance!

Specifications

Valve	Fleck 2750 SXT top mount valve
Valve body	Brass
Pipe size	1"
Types	Time clock and metered
By-pass	None
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- Economical pricing!
- Top quality components.
- Models for capacities to 120,000 grains.
- User friendly Fleck 2750 control valves.
- Brine tanks with grid plate for maximum saturation of brine (some models).
- Safety brine valve with air check.

Time clock models (with FT2750SE brass valve without flow meter)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4040-SE	60,000	1"	12x52	2	10	18x40	400	15-20	15-25	4	200
M4042-SE	90,000	1"	14x65	3	15	18x40	400	18-23	15-25	5	240
M4046-SE	120,000	1"	16x65	4	30	18x40	400	19-25	15-25	7	320

Metered models (with FM2750SE brass valve with flow meter)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4040B-SE	60,000	1"	12x52	2	10	18x40	400	15-20	15-25	4	200
M4042B-SE	90,000	1"	14x65	3	15	18x40	400	18-23	15-25	5	240
M4046B-SE	120,000	1"	16x65	4	30	18x40	400	19-25	15-25	7	320

LC-150 Light Commercial Single Tank Softeners (1-1/2")



Ideal for commercial applications with capacities to 300,000 grains.

LC-150 series softeners with Fleck 2850 brass control valves are suitable for flow rates to 55 GPM. Models with time clock and metered controls are available.

Specifications

Valve	Fleck 2850 top mount valve
Valve body	Brass
Pipe size	1-1/2"
Types	Time clock and metered
By-pass	None
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- 1-1/2" valves for high flow rates
- Top quality components
- Models for capacities to 300,000 grains
- User friendly Fleck 2850 control valves
- Brine tanks with grid plate for maximum saturation of brine (some models)
- Safety brine valve with air check.

Time clock models (with FT2850 brass valve)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4210SE	60,000	1-1/2"	12x52	2	30	18x40	400	15-20	15-25	4	210
M4214SE	90,000	1-1/2"	14x65	3	60	18x40	400	15-20	15-25	5	240
M4218SE	120,000	1-1/2"	16x65	4	80	18x40	400	20-40	15-25	7	320
M4222SE	150,000	1-1/2"	18x65	5	100	24x41	600	25-50	15-25	11	380
M4226SE	210,000	1-1/2"	21x62	7	100	24x50	800	28-53	15-25	13	585
M4230SE	300,000	1-1/2"	24x72	10	200	30x50	1400	30-55	15-25	15	710

Metered models (with FM2850 brass valve with flow meter)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4210BSE	60,000	1-1/2"	12x52	2	30	18x40	400	15-20	15-25	4	210
M4214BSE	90,000	1-1/2"	14x65	3	60	18x40	400	15-20	15-25	5	240
M4218BSE	120,000	1-1/2"	16x65	4	80	18x40	400	20-40	15-25	7	320
M4222BSE	150,000	1-1/2"	18x65	5	100	24x41	600	25-50	15-25	11	380
M4226BSE	210,000	1-1/2"	21x62	7	100	24x50	800	28-53	15-25	13	585
M4230BSE	300,000	1-1/2"	24x72	10	200	30x50	1400	30-55	15-25	15	710

LC-200 Light Commercial Single Tank Softeners (2")



Ideal for commercial applications with capacities to 600,000 grains.

LC-200 series softeners with Fleck 2900 brass control valves are suitable for flow rates to 105 GPM. Models with time clock and metered controls are available.

Specifications

Valve	Fleck 2900 top mount valve (2")
Valve body	Brass
Types	Time clock and metered
By-pass	None
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- 2" valves for high flow rates
- Top quality components
- Models for capacities to 600,000 grains
- User friendly Fleck 2900 control valves
- Brine tanks with grid plate for maximum saturation of brine (some models)
- Safety brine valve with air check.

Time clock models (with FT2900 brass valve)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4043-29NT	90,000	2"	14x65	3	60	18x40	400	15-30	15-25	5	265
M4047-29NT	120,000	2"	16x65	4	80	18x40	400	20-40	15-25	7	350
M4048-29NT	150,000	2"	18x65	5	100	24x41	600	57-65	15-25	10	400
M4052-29NT	210,000	2"	21x62	7	100	24x50	600	60-77	15-25	13	600
M4058-29NT	300,000	2"	24x72	10	200	30x50	1200	74-97	15-25	15	710
M4059-29NT	450,000	2"	30x72	15	400	39x48	2200	80-100	15-25	25	1160
M4060-29NT	600,000	2"	36x72	20	500	39x48	2200	84-105	15-25	35	1560

Metered models (with FM2900 brass valve with flow meter)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4043B-29NT	90,000	2"	14x65	3	60	18x40	400	15-30	15-25	5	265
M4047B-29NT	120,000	2"	16x65	4	80	18x40	400	20-40	15-25	7	350
M4048B-29NT	150,000	2"	18x65	5	100	24x41	600	57-65	15-25	10	400
M4052B-29NT	210,000	2"	21x62	7	100	24x50	600	60-77	15-25	13	600
M4058B-29NT	300,000	2"	24x72	10	200	30x50	1200	74-97	15-25	15	710
M4059B-29NT	450,000	2"	30x72	15	400	39x48	2200	80-100	15-25	25	1160
M4060B-29NT	600,000	2"	36x72	20	500	39x48	2200	84-105	15-25	35	1560

LC-300 Light Commercial Single Tank Softeners (3")



High flow commercial softeners with capacities to 1,050,000 grains.

LC-300 series softeners with Fleck 3900 brass control valves are suitable for flow rates to 280 GPM. Models with time clock and metered controls are available.

Specifications

Valve	Fleck 3900 top mount valve
Valve body	Brass
Pipe size	3"
Types	Time clock and metered
By-pass	None
Mineral tanks	Corrosion resistant FRP. NSF.
Brine tanks	Polyethylene; fully assembled
Media	Cation resin; high capacity

Features & benefits

- 3" valves for high flow rates.
- Top quality components.
- Models for capacities to 1,050,000 grains.
- 3900 controller operates on demand.
- Brine tanks with grid plate for maximum saturation of brine (some models).
- Safety brine valve with air check.

Time clock models (with FT3900 brass valve)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4110-39NT	300,000	3"	24x72	10	200	30x50	1400	120-170	15-25	15	1070
M4112-39NT	450,000	3"	30x72	15	400	39x48	2200	158-212	15-25	25	1600
M4114-39NT	600,000	3"	36x72	20	500	39x60	2700	185-250	15-25	35	2015
M4116-39NT	900,000	3"	42x72	30	700	42x60	3100	200-268	15-25	45	3245
M4118-39NT	1,050,000	3"	48x72	35	900	50x60	4500	213-280	15-25	60	4295

Metered models (with FM3900 brass valve with 3" strap on sensor)

Part Number	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
			Size	Resin Cubic Ft.	Gravel #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M4110B-39NT	300,000	3"	24x72	10	200	30x50	1400	120-170	15-25	15	1070
M4112B-39NT	450,000	3"	30x72	15	400	39x48	2200	158-212	15-25	25	1600
M4114B-39NT	600,000	3"	36x72	20	500	39x60	2700	185-250	15-25	35	2015
M4116B-39NT	900,000	3"	42x72	30	700	42x60	3100	200-268	15-25	45	3245
M4118B-39NT	1,050,000	3"	48x72	35	900	50x60	4500	213-280	15-25	60	4295

Water Softeners with Fleck 9500 Valves

Our Most Efficient Models

Water softeners with Fleck 9500 control valves offer twin-alternating meter initiated operation, resulting in 24/7 soft water capability. Check out the features, specifications, benefits and options described below.



Specifications

Valve	Fleck 9500 mechanical or digital valve
Electrical	120 Volt 60 Hz standard
Valve body	Brass
Distributor	1.9" O.D., 1.5" pipe
Types	1.5" meter immediate initiated
Connection	1.5" FNPT
Mineral Tank	Corrosion resistant FRP
Brine Tank	Fully assembled polyethylene
Media	High capacity cation resin

Features & benefits

- Top quality components.
- High efficiency, no reserve capacity required.
- Digital SE version includes attached 24V transformer.
- Mechanical version includes 1.5" brass meter.
- SE digital version includes 1.5" plastic meter.
- Capacities up to 300,000 grains per regeneration.
- Decorative mineral tank jacket options available.
- Multiple brine tank options available.
- Safety brine valve with air check included.

Twin softeners with metered Fleck 9500 brass valves (1-1/2")

Part Number	Capacity @ 15 Lbs. / Cu. Ft.	Media (Cu. Ft.)	Mineral Tank	Brine Tank	Dry Salt (lbs.)	Flow Rate (GPM)	Ship Wt. (Lbs.)
M2218SE	60,000	2	(2)12x52	24X41	600	13 TO 19	370
M2220SE	90,000	3	(2)14x65	24X41	600	14 TO 21	550
M2222SE	120,000	4	(2)16x65	24X41	600	15 TO 21	720
M2224SE	150,000	5	(2) 18X65	24X41	600	15 TO 21	900
M2228SE	210,000	7	(2) 21X62	24X50	800	17 TO 22	1215
M2235SE	300,000	10	(2) 24X72	30X50	1200	17 TO 24	1750

Heavy-Duty Steel Tank Commercial Softeners

Heavy duty softeners for heavy duty commercial applications!



Suitable for commercial applications ranging from 300,000 to 1,200,000 grains of hardness removal capacity and flow rates to 280 GPM. Models with time clock and meters available.

Specifications

Valve	(See below).
Valve body	Brass.
Pipe sizes	2" and 3" (see below).
Types	Time clock (meter optional).
By-pass	None
Mineral tanks	Epoxy lined steel interior.
Brine tanks	Brine maker / salt storage is PE.
Brine supply	Automatic brine refill.
Media	Cation resin; high capacity

Features & benefits

- Regeneration by time clock or meter
- Automatic brine refill by timer or controller
- Models for capacities to 1,200,000 grains
- Fleck control valves
- Steel tanks rated for 100 psi
- Exterior tanks primed for protection
- Face piping is galvanized
- Electronic controls are available
- All systems shipped with high capacity Cation resin

Heavy-duty steel tank commercial softeners

Part Number	Fleck Valve No.	Capacity (Max.)	Pipe Size (In.)	Mineral Tank			Brine Tank		Flow Rate & Pressure Drop			Shipping Weight (Lbs.)
				Size	Resin Cubic Ft.	Gravel 1/4x1/8 / #20 (Lbs.)	Size	Salt Fill (Lbs.)	Service Flow (GPM)	Drop (PSI)	Back Wash (GPM)	
M5076-29	2900	300,000	2"	20x60	10	100 / 100	30x50	900	68-94	15-25	15	1930
M5078-29	2900	450,000	2"	30x60	15	200 / 100	39x48	2200	72-102	15-25	25	2525
M5080-31	3150	600,000	2"	36x60	20	200 / 200	39x48	2200	78-107	15-25	35	2700
M5080-39	3900	600,000	3"	36x60	20	200 / 200	39x48	2200	185-250	15-25	35	2850
M5082-31	3150	900,000	2"	42x60	30	400 / 300	42x60	3000	84-118	15-25	45	4650
M5082-39	3900	900,000	3"	42x60	30	400 / 300	42x60	3000	200-268	15-25	45	4800
M5084-31	3150	1,200,000	2"	48x60	40	600 / 400	50x60	4500	87-120	15-25	60	4950
M5084-39	3900	1,200,000	3"	48x60	40	600 / 400	50x60	4500	213-280	15-25	60	4100

Note: All units are shipped from the factory, set at minimum capacity and minimum salt usage to reduce salt usage by 40%. Use the minimum capacity when sizing systems to gain salt savings, if desired. Water quality, TDS and other factors will influence performance and flow rates. End users should prepare a complete water analysis and consult the distributor, dealer or factory for technical support.

ASME mineral tanks, twin, triplex, quadplex models available.

Limited warranty: Softener components carry a one year limited warranty from installation date. Beginning of warranty period shall not exceed six months from manufacturing date.

Section 16

Commercial Backwashing Filters

Commercial Backwashing Filters

With high efficiency Micro-Z™ filter media.



Outperforms sand & multimedia filters!

Watts® engineered commercial filtration systems for sediment removal incorporate the use of our performance Micro-Z filter media for superior performance.

Micro-Z is a granular filter media that outperforms conventional multimedia materials due to its unique Zeolite structure, allowing particulate to penetrate deeply into the filter bed to provide superior filtration at increased flow rates.

The increased surface area and deep bed filtration allows Micro-Z to outperform conventional sand filters in every way, including reduced water consumption because the need to backwash is dramatically reduced!

Features & benefits

- Higher solids loading capability.
- Designed for higher flow rates.
- Superior filtration performance.
- Reduced backwash frequency.
- Removes finer particulate.
- Reduced pressure drop.
- Lightweight for lower shipping costs.
- Easy to handle.
- Eliminates need for multimedia

MICRO-Z™ vs Other Filter Media

Media	Nominal Micron Rating	Loading Capacity
Sand	20	1.0 X
Sand & Anthracite	15	1.4 X Sand
Multimedia	12	1.6 X Sand
Micro-Z	5	2.8 X Sand

Performance Recommendations

Service flow rate	12-20 GPM/sq. ft.
Backwash flow rate	16-18 GPM/sq. ft.
Backwash bed expansion	30-40 percent

Note: Allow bed to soak overnight before initial backwash.

Models

Part Number	Description	Valve	Pipe Size	FRP Tank Size	Media Cu. Ft.	Service Flow GPM	Pressure Drop PSI	Backwash Flow GPM	Ship Wt. (lbs)
N5245-14	AMZ14F2850	2850	1.5"	14X65	3	13/21	15/25	15	200
N5245-16	AMZ16F2850	2850	1.5"	16X65	4	17/28	15/25	20	265
N5245-22	AMZ22F2850	2850	1.5"	21X62	7	30/50	15/25	40	822
N5245-24-3150	AMZ24F3150	3150	2.0"	24X72	8	38/62	15/25	50	1160
N5245-30-3150	AMZ30F3150	3150	2.0"	30X72	10	59/98	15/25	85	1838
N5245-36-3150	AMZ36F3150	3150	2.0"	36X72	20	85/130	15/25	100	2585
N5245-48-DVN	AMZ48FDVN	DVN	3.0"	48x72	35	150/250	15/25	200	4757

NOTE: Lower flow rates are recommended for RO pre treatment. Higher flow rates are recommended for general filtration.

Commercial Activated Carbon Filters

Engineered activated carbon water filtration systems.



Custom twin system with valve nest shown above. Standard models are listed below.

Contaminates adsorbed:

- Chlorine
- Organic Chemicals
- Fertilizers
- TCE (Trichloroethylene)
- EDB (Ethylene dibromide)
- THM (Trihalomethanes)
- Sediment
- Odors
- Pesticides
- Detergents
- Chloramines

Selection & sizing concerns:

- Contaminant
- EBCT (Empty bed contact time).
- Service flow rate
- Hours of operation
- Carbon base
- Carbon mesh size
- Backwash requirement
- Installation space
- Drain location

Tank material FPR

Max. Pressure 150 psi

Max. Temp 120°

Adsorption Influencing Factors

Temperature Most effective 60°F - 80°F.

pH Most organics in water are more soluble at pH lower than 7.0.

Contact time Contact time is a very important consideration related to performance. Please contact tech support for more information.

Models

Part Number	Description	Valve	Pipe Size	FRP Tank Size	Media Cu. Ft.	Service Flow GPM	Pressure Drop PSI	Backwash Flow GPM	Ship Wt. (lbs)
N2058-14	AC14F2850	2850	1.5"	14X65	3	5/11	15/25	10	125
N2058-16	AC16F2850	2850	1.5"	16X65	4	7/15	15/25	12	190
N2058-22	AC22F2850	2850	1.5"	21X62	6	11/22	15/25	26	672
N2058-24-3150	AC24F3150	3150	2.0"	24X72	8	16/30	15/25	30	960
N2058-30-3150	AC30F3150	3150	2.0"	30X72	15	25/56	15/25	50	1463
N2058-36-3150	AC36F3150	3150	2.0"	36X72	20	35/75	15/25	70	2085
N2058-48-DVN	AC48FDVN	DVN	3.0"	48X72	35	60/130	15/25	125	3882
N2058-63-DVN	AC63FDVN	DVN	3.0"	63X86	50	75/187	15/25	210	6175

NOTE: Use lower flow rates (above) for increased contact time. Typical flow rates are from 4 and 2 minutes, empty bed contact time. Chloramines and some organics may require up to 10 minutes EBCT. For more information please contact technical support.

SAFETY MESSAGE: Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate procedures for potentially low oxygen environment should be followed.

Section 17

Commercial RO Systems

R13 Compact Wall Mount RO



R-13 with optional stand

R-13 Compact Wall Mount RO

Three models for flow rates to 1200 GPD

Standard features

- Powder coated steel frames
- Inlet solenoid valve
- Pre-filter
- 1/2 HP motor
- Brass pump
- Liquid filled pre-filter pressure gauge
- 2 1/2" liquid filled pump pressure gauge
- Product water & reject water flow meters
- High pressure, non-metallic membrane housings
- SS needle valves for concentrate and recycle lines
- Stainless steel product water check valve
- On / Off toggle switch
- Low-pressure shut-off with auto restart
- Feed water and product water TDS monitor

Specifications

Feed water connection	3/4" NPTF
Product water connection	3/8" Tubing OD
Reject water connection	3/8" Tubing OD
Feed water required (max.)	2.4 GPM
Feed water pressure (min.)	10 PSI
Drain required (max.)	2.4 GPM
Electrical requirements	120 VAC 60 Hz
Amps	8
Pump (H.P.)	1/2



Proprietary Membranes
(for R-13 systems)

Options

Part Number	Description
R2868	Leg Kit
R2353-SD	Product float switch
R2288	Whole house option*

*Includes 300 gal tank, product float switch and repressurization pump with built in controls.

Applications

- Whole house
- Beverages
- Ice makers
- Coffee shops
- Labs
- Restaurants

Note: For indoor installation only.

Models

	R13-0250	R13-0600	R13-1200
Maximum production (gallons per day)	250	600	1200
Average membrane rejection rate	98 %	98 %	98 %
Recovery (adjustable)	8 - 75 %	17 -75%	34 - 75 %
Membrane size	3" x 10"	3" x 20"	3" x 20"
Number of membranes	1 (P/N R96310)	1 (P/N R96320)	2 (P/N R96320)
Pre-filter (system ships with one 5 micron cartridge)	10"	20"	20"
Dimensions, approximate (W x H x D)	26" x 26" x 9"	26" x 36" x 9"	26" x 36" x 9"
Shipping Weight, estimated (lbs.)	50	60	75

Note: Performance specifications are based on 77°F feed water, SDI < 3, TDS below 1000 ppm and pH of 8. Individual membrane productivity and rejection rates are based on manufactures specifications. Please see water temperature conversion charts for production factor. Chlorine reduction and other pretreatment may be required. Systems are designed for use with municipal and well water.

R4X40 Series Whole House RO

Three models for flow rates up to 6,600 GPD



Model: R4X40-1

Standard features

- Powder coated steel frame
- Inlet solenoid valve
- 20" prefilter
- Prefilter pressure gauge
- Multistage centrifugal pump
- Low-pressure protection with microprocessor auto reset
- 2 1/2" liquid filled pump pressure gauge
- Stainless steel pressure vessel(s)
- Product flow meter
- Reject flow meter
- Concentrate needle valve
- Non metallic recycle needle valve
- Feed water and product water TDS monitor

Applications

- Whole house
- Boiler feed water
- Humidifiers
- Greenhouses
- Process Water
- Electronics

Specifications

Membrane Size	4" x 40"
Average membrane rejection	98 %
Feed Water Connection	3/4" NPTF
Prefilter	2.5" x 20"
Product Water Connection	5/8" tubing OD
Reject Water Connection	5/8" tubing OD
Feed Water Pressure (minimum)	10 psi
Electrical Requirement *	120 VAC 60 Hz

Options

Part Number	Description
R2353-SD	Product float switch
R2288-165	165 gal tank whole house option*
R2288	300 gal tank whole house option*
R2288-500	500 gal tank whole house option*

*Includes atmospheric storage tank, product float switch, and repessure pump with built in controls.

Note: For indoor installation only.

Models

	R4X40-1	R4X40-2	R4X40-3-230
Maximum Productivity (gallons per day)	2200	4400	6600
Recovery (user adjustable)	15 - 75 %	25 - 75%	32 - 75 %
Number Of Membranes	1	2	3
Feed Water Required (maximum)	10gpm	12 gpm	14 gpm
Drain Required (maximum)	10gpm	12 gpm	14 gpm
Motor Horse Power	3/4	1	1 1/2
Electrical Requirement*	15 amps	20 amps	25 amps
Dimensions W x D x H	20 x 20 x 50	20 x 20 x 50	20 x 26 x 50
Shipping Weight (estimated lbs)	120	150	180

Notes: Maximum production based on a feed water of 77°F, SDI < 1, 1000 ppm TDS, and pH 7. Individual membrane productivity may vary (± 15%). May be operated on other feed waters with reduced capacity. Percent Rejection is based on membrane manufactures specifications; overall system percent rejection may be less. *R4X40 3 is available only in 230 volt single phase.

R12 Series Wall-Mounted RO Systems



R12-1200-2 system with optional legs

Compact, wall-mounted systems

Four models for flow rates to 1200 GPD.

Standard features (package #1)

- Stainless steel frame
- Automatic inlet valve
- Pre-filter housing and cartridge, 10"
- Procon pump (brass)
- 1/2 HP motor
- Liquid filled pump pressure gauge (2-1/2")
- Stainless steel pressure vessels
- Needle valve for concentrate line
- Needle valve for recycle line
- Check valve for product water (stainless steel)
- Product pressure switch with Auto/Off
- Low-pressure shut-off with automatic restart

Additional features included in package #2

- Pre-filter pressure gauges
- Product water flow meter
- Reject water flow meter

Additional features included in package #3

- Automatic fast flush for concentrate

Specifications

Product water & reject water connection (tubing)	3/8"
Feed water requirement (maximum)	2.4 GPM
Feed water pressure requirement (minimum)	10 PSIG
Drain requirement (maximum)	2.4 GPM
Electrical requirement	120v/60hz
Amps	8
Pump	1/2 HP

Options

Part Number	Description
R2864	Stainless steel leg kit
R2353-SD	Product water float switch
R2288	Whole house option*

*Includes 300 gallon tank, product water float switch and repressurization pump with built in controls.

Models

Model Number	Package	GPD	Recovery (Adjustable)	Membrane Size	Number Of Membranes	Feed Water Connection	Typical Rejection	Dimensions	Ship Wt. (lbs.)
R12-0150-1	1	150	15%-75%	2-1/2"x14"	1	1/2" NPT	98%	22"x32"x12"	50
R12-0150-2	2	150	15%-75%	2-1/2"x14"	1	1/2" NPT	98%	22"x32"x12"	50
R12-0150-3	3	150	15%-75%	2-1/2"x14"	1	1/2" NPT	98%	22"x32"x12"	50
R12-0250-1	1	250	15%-75%	2-1/2"x21"	1	1/2" NPT	98%	22"x32"x12"	50
R12-0250-2	2	250	15%-75%	2-1/2"x21"	1	1/2" NPT	98%	22"x32"x12"	50
R12-0250-3	3	250	15%-75%	2-1/2"x21"	1	1/2" NPT	98%	22"x32"x12"	50
R12-0600-1	1	600	15%-75%	2-1/2"x40"	1	1/2" NPT	98%	22"x52"x12"	60
R12-0600-2	2	600	15%-75%	2-1/2"x40"	1	1/2" NPT	98%	22"x52"x12"	60
R12-0600-3	3	600	15%-75%	2-1/2"x40"	1	1/2" NPT	98%	22"x52"x12"	60
R12-1200-1	1	1200	25%-75%	2-1/2"x40"	2	1/2" NPT	98%	22"x52"x12"	70
R12-1200-2	2	1200	25%-75%	2-1/2"x40"	2	1/2" NPT	98%	22"x52"x12"	70
R12-1200-3	3	1200	25%-75%	2-1/2"x40"	2	1/2" NPT	98%	22"x52"x12"	70

Notes: Performance specifications are based on 77°F feed water, 3 SDI or less, TDS below 1000 and pH of 8. Please see water temperature conversion charts to determine actual production rate for each installation. Chlorine reduction and other pretreatment may be required. Membrane rejection rates are based on membrane manufacturer's specifications. Pre filter is Flow Pro® FPMB5 978 melt blown cartridge. Systems are designed for use with municipal and well water.

R14 Series Wall-Mounted RO Systems

Compact, wall-mounted systems

Three models for flow rates to 5400 GPD, available with brass and stainless steel fittings. Fully assembled and ready for installation.



R14-03-BWM System

Standard features

- Stainless steel frame
- Stainless steel pressure vessels
- Pre-filter housing and cartridge, 10" Full-Flow
- Webtrol® multi-stage centrifugal pump
- Automatic inlet valve
- Low-pressure shut-off with automatic restart
- Tank level input
- Pretreatment interlock input
- Adjustable recycle line
- Pre-filter pressure gauges
- Pump discharge pressure gauge (liquid filled)
- Flow meter for product water
- Flow meter for reject water
- Check valve for product water
- Sample valve for product water
- On / off switch

Specifications

Feed water connection	1" FNPT
Product water connection (1800 & 3600 GPD)	1/2" tube
Product water connection (5400 GPD)	5/8" tube
Reject water connection (all R14 models)	1/2" tube
Feed water pressure requirement (minimum)	10 PSIG
Drain requirement (maximum)	10 GPM
Electrical requirement	230v/60hz
Amps (1800 & 3600 GPD)	6
Amps (5400 GPD)	9

Options

Part Number	Description
R2353-SD	Product water float switch
R2288	Whole house option*

*Includes 300 gallon tank, product water float switch and repressurization pump with built-in controls.

Models

Model Number	Fittings & Valves	GPD	Pump (H.P.)	Recovery (Adjustable)	Membrane Size	Membranes	Feed Water Required* (GPM)	Typical Rejection	Dimensions	Ship Wt. (Lbs.)
R14-01-1WM	SS	1800	1	15%-75%	4" x 40"	1	2.5	98%	41"x51"x18"	200
R14-01-BWM	Brass	1800	1	15%-75%	4" x 40"	1	2.5	98%	41"x51"x18"	200
R14-02-1WM	SS	3600	1	25%-75%	4" x 40"	2	5	98%	41"x51"x18"	250
R14-02-BWM	Brass	3600	1	25%-75%	4" x 40"	2	5	98%	41"x51"x18"	250
R14-03-1WM	SS	5400	1.5	35%-75%	4" x 40"	3	7.5	98%	41"x51"x18"	300
R14-03-BWM	Brass	5400	1.5	35%-75%	4" x 40"	3	7.5	98%	41"x51"x18"	300

*At 50% recovery.

Notes: Performance specifications are based on 77°F feed water, 3 SDI or less, TDS below 1000 and pH of 8. Please see water temperature conversion charts to determine actual production rate for each installation. Chlorine reduction and other pretreatment may be required. Membrane rejection rates are based on membrane manufacturer's specifications. Pre filter is Flow Pro® FPMB BB5 10 melt blown cartridge. Systems are designed for use with municipal and well water.

R14 Series Floor Model RO Systems

**Top quality, attractively priced,
fully assembled RO systems**

Five models for flow rates to 10,800 GPD. Select the features you want to meet your requirements!



R14-06-1131100 System

Standard features (package #1)

- Powder coated steel frame
- Stainless steel pressure vessels
- Pre-filter housing and cartridge (20" Full-Flow)
- Webtrol® heavy-duty multi-stage centrifugal pump
- Automatic inlet valve
- Low-pressure shut-off with automatic restart
- Tank level input
- Pretreatment interlock input
- Adjustable recycle line
- Pre-filter pressure gauges
- Pump discharge pressure gauge (liquid filled)
- Flow meter for product water
- Flow meter for reject water
- Flow meter for recycle water
- Check valve for product water
- On / off switch

Additional features included with package #2

- CI-1000 electronic controller with product water conductivity meter and alarm output
- Programmable concentrate auto flush

Specifications

Feed water connection	1" FNPT
Product water connection	3/4" FNPT
Reject water connection	3/4" FNPT
Feed water pressure requirement (min.)	10 PSIG
Drain requirement (maximum)	15 GPM
Electrical requirement	230VAC/60hz
Phase	3
Amps	15

Models

Model Number	PACK-AGE	GPD	Pump (H.P.)	Recovery (Adj.)	Membrane Size	Membranes	Feed Water Required* (GPM)	Typical Rejection	Dimensions	Ship Wt. (Lbs.)
R14-02-1111000	1	3600	5	25%-75%	4" x 40"	2	5	98%	60"x18"x56"	400
R14-02-1131100	2	3600	5	25%-75%	4" x 40"	2	5	98%	60"x18"x56"	400
R14-03-1111000	1	5400	5	36%-75%	4" x 40"	3	7.50	98%	60"x18"x56"	500
R14-03-1131100	2	5400	5	36%-75%	4" x 40"	3	7.5	98%	60"x18"x56"	500
R14-04-1111000	1	7200	5	42%-75%	4" x 40"	4	10	98%	60"x18"x56"	600
R14-04-1131100	2	7200	5	42%-75%	4" x 40"	4	10	98%	60"x18"x56"	600
R14-05-1111000	1	9000	5	46%-75%	4" x 40"	5	12.5	98%	60"x18"x56"	700
R14-05-1131100	2	9000	5	46%-75%	4" x 40"	5	12.5	98%	60"x18"x56"	700
R14-06-1111000	1	10800	5	50%-75%	4" x 40"	6	15	98%	60"x18"x56"	800
R14-06-1131100	2	10800	5	50%-75%	4" x 40"	6	15	98%	60"x18"x56"	800

*At 50% recovery.

Notes: Performance specifications are based on 77°F feed water, 3 SDI or less, TDS below 1000 and pH of 8. Please see water temperature conversion charts to determine actual production rate for each installation. Chlorine reduction and other pretreatment may be required. Membrane rejection rates are based on membrane manufacturer's specifications. Pre filter is Flow Pro® FPMB BB5 20 melt blown cartridge. Systems are designed for use with municipal and well water.

R24 Series Commercial RO Systems

Three models and two design options for flow rates up to 15 GPM.



Standard features (package #1)

- Powder coated steel frame
- FRP multi-port pressure vessels
- Pre-filter housing and cartridge (20" B-B)
- Webtrol® multi-stage centrifugal pump
- Automatic inlet valve
- Low-pressure shut-off with auto restart
- Tank level input
- Pretreatment interlock input
- Adjustable recycle line
- Pre-filter pressure gauges
- Pump discharge pressure gauge
- Flow meter for product water
- Flow meter for reject water
- Flow meter for recycle water
- Check valve for product water
- Sample valves for product water
- On / off switch

Specifications

Feed water connection	1" FNPT
Product water connection	1" FNPT
Reject water connection	3/4" FNPT
Feed water pressure requirement (min.)	10 PSIG
Drain requirement (maximum)	17, 21, 25 GPM
Electrical requirement	230VAC/60hz
Phase	3
Amps	20

Additional features included with package #2

- CI-1000 electronic controller with product water conductivity meter and alarm output.
- Programmable concentrate auto flush.

Models

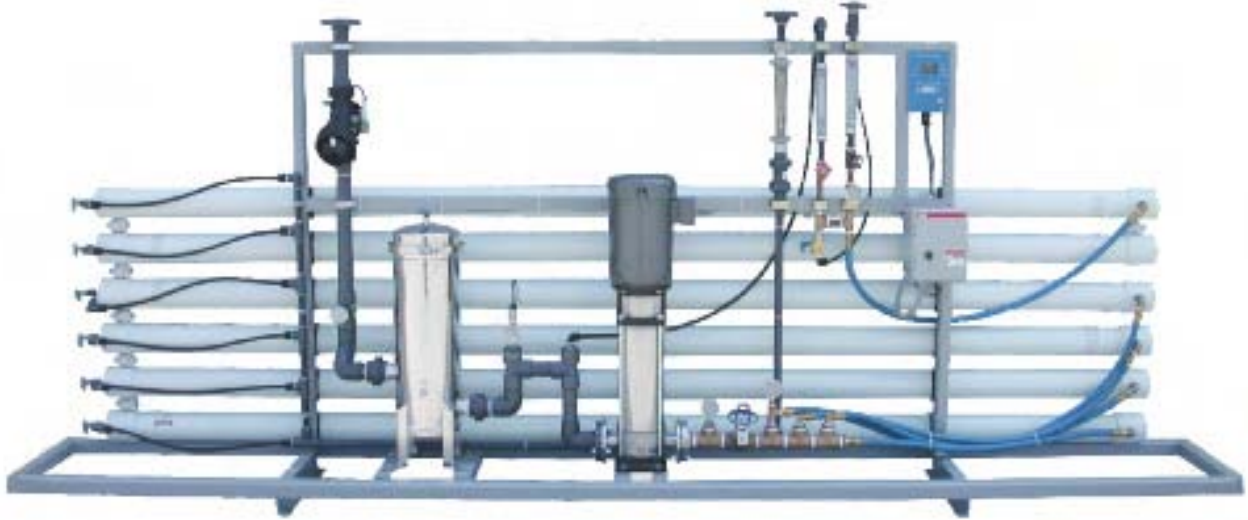
Model Number	PACK-AGE	Gallons Per Minute	Pump (H.P.)	Recovery (Adj.)	Membrane Size	Membrane Array	Feed Water Required* (GPM)	Typical Rejection	Dimensions	Ship Wt. (Lbs.)
R24-08-1111000	1	10	7.5/TEFC	60%-75%	4" x 40"	2:1:1	17	98%	96"x24"x72"	800
R24-08-1131100	2	10	7.5/TEFC	60%-75%	4" x 40"	2:1:1	17	98%	96"x24"x72"	800
R24-10-1111000	1	12.5	7.5/TEFC	60%-75%	4" x 40"	2:2:1	21	98%	96"x24"x72"	900
R24-10-1131100	2	12.5	7.5/TEFC	60%-75%	4" x 40"	2:2:1	21	98%	96"x24"x72"	900
R24-12-1111000	1	15	7.5/TEFC	60%-75%	4" x 40"	3:2:1	25	98%	96"x24"x72"	1000
R24-12-1131100	2	15	7.5/TEFC	60%-75%	4" x 40"	3:2:1	25	98%	96"x24"x72"	1000

*At 65% recovery.

Notes: Performance specifications are based on 77°F feed water, 3 SDI or less, TDS below 1000 and pH of 8. Please see water temperature conversion charts to determine actual production rate for each installation. Chlorine reduction and other pretreatment may be required. Membrane rejection rates are based on membrane manufacturer's specifications. Pre filter is 20" Full Flow plastic housing and Flow Pro® FPMB BB5 20 melt blown filter cartridge. Systems are designed for use with municipal and well water

R44 Series Commercial RO Systems

Three models and two design options for flow rates up to 30 GPM.



Standard features (package #1)

- Powder coated steel frame
- FRP multi-port pressure vessels
- Stainless steel pre-filter and cartridges
- Webtrol® multi-stage centrifugal pump
- Automatic inlet valve
- Low-pressure shut-off with auto restart
- Tank level input
- Pretreatment interlock input
- Adjustable recycle line
- Pre-filter pressure gauges
- Pump discharge pressure gauge
- Flow meter for product water
- Flow meter for reject water
- Flow meter for recycle water
- Check valve for product water
- Sample valves for product water
- On / off switch

Specifications

Feed water connection	2" Flange
Product water connection	1.5" Flange
Reject water connection	1" Flange
Feed water pressure requirement (min.)	10 PSIG
Drain requirement (maximum)	31, 39, 46 GPM
Electrical requirement	230VAC/60hz
Phase	3
Amps	30

Additional features included with package #2

- CI-1000 electronic controller with product water conductivity meter and alarm output
- Programmable concentrate auto flush

Models

Model Number	PACK-AGE	Gallons Per Minute	Pump (H.P.)	Recovery (Adj.)	Membrane Size	Membrane Array	Feed Water Required* (GPM)	Typical Rejection	Dimensions	Ship Wt. (Lbs.)
R44-16-1111000	1	20	10/TEFC	65%-75%	4" x 40"	2:2	31	98%	192"x26"x72"	1400
R44-16-1131100	2	20	10/TEFC	65%-75%	4" x 40"	2:2	31	98%	192"x26"x72"	1400
R44-20-1111000	1	25	10/TEFC	65%-75%	4" x 40"	3:2	39	98%	192"x26"x72"	1600
R44-20-1131100	2	25	10/TEFC	65%-75%	4" x 40"	3:2	39	98%	192"x26"x72"	1600
R44-24-1111000	1	30	10/TEFC	65%-75%	4" x 40"	4:2	46	98%	192"x26"x72"	1800
R44-24-1131100	2	30	10/TEFC	65%-75%	4" x 40"	4:2	46	98%	192"x26"x72"	1800

*At 65% recovery.

Notes: Performance specifications are based on 77°F feed water, 3 SDI or less, TDS below 1000 and pH of 8. Please see water temperature conversion charts to determine actual production rate for each installation. Chlorine reduction and other pretreatment may be required. Membrane rejection rates are based on membrane manufacturer's specifications. Pre filter is Flow Max® FM4X3 filter housing, constructed using 316 stainless steel and 2" MNPT pipe fittings and Flow Pro® FPMB5 30 melt blown filter cartridges. Systems are designed for use with municipal and well water.

R48 Series Commercial RO Systems

Four models for flow rates up to 100 GPM.



Standard features

- Powder coated steel frame
- FRP multi-port pressure vessels
- Stainless steel pre-filter and cartridges
- Webtrol® multi-stage centrifugal pump
- Automatic inlet valve
- Low-pressure shut-off with auto restart
- Tank level input
- Pretreatment interlock input
- Adjustable recycle line
- Pre-filter pressure gauges
- Pump discharge pressure gauge
- Flow meter for product water
- Flow meter for reject water
- Flow meter for recycle water
- Check valve for product water
- Sample valves for product water
- On / off switch

Specifications

Feed water connection	See below
Product water connection (40 & 60 GPM)	2" Flange
Product water connection (80 & 100 GPM)	2.5" Flange
Reject water connection	1.5" Flange
Feed water pressure requirement (min.)	20 PSIG
Drain requirement (maximum)	See below
Electrical requirement	460VAC/60hz
Phase	3
Amps (based on model)	25,30,35,40

Additional features included R48 systems

- CI-2000 electronic controller with feed and product water conductivity meter with percent rejection
- Programmable concentrate auto flush

Models

Model Number	Gallons Per Minute	Feed Water Connection	Pump (H.P.)	Recovery (Adj.)	Membrane Size	Membrane Array	Feed / Drain Required* (GPM)	Typical Rejection	Dimensions	Ship Wt. (Lbs.)
R48-08-3131100	40	2" Flange	15/TEFC	65%-75%	8" x 40"	1:1	62	98%	198"x42"x72"	2500
R48-12-3131100	60	2.5" Flange	20/TEFC	65%-75%	8" x 40"	2:1	93	98%	198"x42"x72"	2800
R48 20 3131100	80	3" Flange	25/TEFC	65%-75%	8" x 40"	2:2	123	98%	198"x42"x72"	3200
R48-20-1311100	100	3" Flange	30/TEFC	65%-75%	8" x 40"	3:2	154	98%	198"x42"x72"	3500

Notes: Performance specifications are based on 77°F feed water, 3 SDI or less, TDS below 1000 and pH of 8. Please see water temperature conversion charts to determine actual production rate for each installation. Chlorine reduction and other pretreatment may be required. Membrane rejection rates are based on membrane manufacturer's specifications. Pre filter is Flow Max® FM7x4 filter housing, constructed using 316 stainless steel and 2" MNPT pipe fittings and Flow Pro® FPMB5 40 melt blown filter cartridges. Systems are designed for use with municipal and well water.

Introduction

Watts Reverse Osmosis (R/O) Systems are designed to provide the commercial and industrial user with the most trouble free, cost effective and reliable form of water treatment available, by providing every option necessary for a successful installation.

Principles of Reverse Osmosis

Watts R/O systems employ thin film composite spiral wound membrane elements for superior performance. To simply describe the process, pump pressure is used to supply source water to reverse osmosis membranes. These special membranes allow only high quality water to permeate them. In turn, they reject metals, salts, ionic and organic impurities that are processed to waste.

Suspended solids are removed by pre-filters, which are standard components on all Watts RO systems.

Water temperature

Product water quality and production of any RO system is dependent on pressure and temperature. Watts™ RO systems are rated at standard conditions of 77°F (25°C), 60 psi (4.2 bar) inlet pressure and 1,000 TDS feed water quality. Higher temperatures will result in more water passing through the membranes and increased water production. As a rule, at given pressures and TDS levels, for each one-degree change in water temperature the change in water production is approximately 2%.

Water temperature		Production Factor* (Using thin film membranes)
°F	°C	
40	4	0.48
50	10	0.60
60	16	0.73
70	21	0.88
77	25	1.00
80	27	1.06
90	32	1.26

*Percent of rated production.

Water pressure

Watts® commercial RO systems require a minimum of 10 psi feed pressure to function properly. The maximum pressure is 90 psi, and a pressure regulator must be utilized over 90 psi to reduce feed water pressure.

Feed / source water inlet requirements

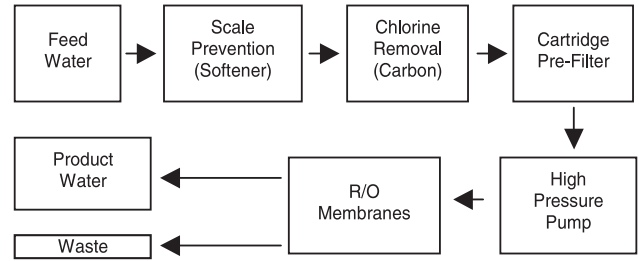
The source water requirements shown below are essential for proper operation:

Inlet feed water requirements	
Factor	Requirement
Hardness	<1 grain per gallon
Free chlorine	0 ppm
T.D.S.	<1,000 ppm
S.D.I.	<5
pH	3-11
Iron	<0.01 ppm
Silica	<25 ppm
Manganese	<0.05 ppm
Turbidity	<1 NTU
Temperature	40°F - 95°F (4°C - 32°C)
Pressure	10 - 90 psi (2.8 - 5.6 bar)

Note: Pretreatment may be required if the above parameters are not met. Failure to meet feed water requirements may foul membranes, void the warranty and possibly make it necessary to down-rate performance.

All specifications listed are based on an average of 1,000 TDS feed water, 77°F (25°C) temperature and 60 psi (4.2 bar) pressure. Typically, higher-pressure differentials and higher temperatures increase water production and water quality. Maximum pressure and temperature limits must be observed.

General RO Process Diagram



1. System location

The RO system should be located on a level surface in an area sheltered from sun, wind and rain. The temperature in this area should be maintained, and should not fall below 35°F, nor greater than 95°F. If these limits are exceeded, damage to components may result and the warranty may be considered void. It is important to allow sufficient space around the unit so maintenance can easily be performed.

2. Plumbing

The high-pressure pumps used require a continuous flow of water to the system. Minimum feed pressure is 10 psi. Please see table, below for minimum flow rates.

3. Feed water

Piping for feed water to the RO system should be either copper or plastic. Iron and carbon steel pipe will increase the iron content of the raw feed water and adversely affect the RO system's performance. Temperature of the feed water must not exceed 95°F.

4. Product water (permeate) line connection

Connect the product water (permeate) line to the manifold on the back side of the system. This line should not have valves and should run as directly as possible to the storage tank.

5. Concentrate (waste) line connection

Connect the waste line (concentrate) to the manifold on the back side of the system. The waste from the system should not have valves and should have an air break between it and the building drain system. The tubing or piping used for discharge of the concentrate should be run to an open drain in a free and unrestricted manner.

6. Electrical

The customer must provide a properly sized electrical service.

Level controls

In most installations it is necessary to use the level switch connector wire to install a level control or an electrical switch to turn the RO system on and off based on the water level in the storage tank.

Pumps

Never let pumps run dry. Operating pumps without sufficient feed water will cause damage. Feed pumps with filtered water only.

Pre-filtration

All Watts® RO systems come with particulate pre-filters to remove suspended particles down to five (5) micron in size. Change pre-filter cartridges at least every month or when there pressure differential of 10% or more that start-up pressure differential with clean cartridges.

Limited warranty

Watts® Commercial Reverse Osmosis systems are warranted to the original purchaser to be free of defects in material and workmanship for a period of one year from date of shipment. Should defects occur, Watts will repair or replace parts, which are defective. Shipping and labor costs are excluded for this limited warranty, and these costs are the customer's responsibility. Normal wear, accident, abuse, misuse, unauthorized alteration or repairs are also excluded. Watts will not be responsible for any incidental or consequential damages, losses or expenses arising from the installation or use of a Watts system. For warranty issues please call your dealer or Watts Water Quality & Conditioning Products at 800-659-8400.

Commercial RO Membranes

Top quality membranes for commercial reverse osmosis systems.



Watts® commercial membranes

Part Number	Application	O.D.	Length	Capacity (GPD)	No. Per Case
W-2521-TW	Tap water	2-1/2"	21"	300	1
W-2540-TW	Tap water	2-1/2"	40"	800	1
W-4021-TW	Tap water	4"	21"	1,050	1
W-4040-TW	Tap water	4"	40"	2,200	1
W-4040-BW	Brackish water	4"	40"	2,200	1

Note: Watts commercial membranes are packaged in preservatives. Keep in cool environment if stored for prolonged periods of time.

Watts membrane specifications

Data	W-2521-TW	W-2540-TW	W-4021-TW	W-4040-TW	W-4040-BW
Membrane type	TFC	TFC	TFC	TFC	TFC
Material	Polyamide	Polyamide	Polyamide	Polyamide	Polyamide
Charge	Negative	Negative	Negative	Negative	Negative
Configuration	Spiral-wound	Spiral-wound	Spiral-wound	Spiral-wound	Spiral-wound
Salt rejection	99.5%	99.5%	99.5%	99.5%	99.5%
Max. operating temp.	113°F / 45°C	113°F / 45°C	113°F / 45°C	113°F / 45°C	113°F / 45°C
Max. operating pressure	400 psi	400 psi	400 psi	400 psi	600 psi
Maximum turbidity (NTU)	<1	<1	<1	<1	<1
Max. SDI	<5	<5	<5	<5	<5
pH range (cleaning)	2-11	2-11	2-11	2-11	2-11
Flux (GPD)	300	800	1,050	2,200	2,200

Note: Tap water membrane specifications are based on 225 psi pressure and 77°F temperature.

Filmtec® by Dow® commercial membranes for tap water

Part Number	Application	O.D.	Length	Capacity (GPD)	No. Per Case
TW30-2514	Tap water	2-1/2"	14"	170	1
TW30-2521	Tap water	2-1/2"	21"	300	1
TW30-2540	Tap water	2-1/2"	40"	660	1
TW30-4014	Tap water	4"	14"	480	1
TW30-4021	Tap water	4"	21"	900	1
TW30-4040	Tap water	4"	40"	2,200	1

Note: Specifications are based on 225 psi pressure and 77°F temperature.

Commercial membranes for brackish water

Part Number	Application	O.D.	Length	Capacity (GPD)	No. Per Case
BW30-2540	Brackish water	2-1/2"	40"	660	1
BW30-4040	Brackish water	4"	40"	2,200	1
BW30-400	Brackish water	8"	40"	10,500	1

Note: Brackish water membrane specifications are based on 225 psi pressure and 77°F temperature.

Filmtec® by Dow® commercial membranes for sea water

Part Number	Application	O.D.	Length	Capacity (GPD)	No. Per Case
SW30-2514	Sea water	2-1/2"	14"	100	1
SW30-2521	Sea water	2-1/2"	21"	200	1
SW30-2540	Sea water	2-1/2"	40"	540	1
SW30-4021	Sea water	4"	21"	600	1
SW30-4040	Sea water	4"	40"	1,500	1
SW30-8040	Sea water	8"	40"	6,000	1

Section 18

Industrial Filtration Systems

Flow-Max[®] Commercial Quality Filter housings

Check out these many features and benefits:

- 100% stainless steel for durability.
- 304 and 316 stainless steel available.
- Convenient band clamp lid closure is standard for easy cartridge replacement.
- Pipe fittings are readily accessible for easy installation.
- Adjustable top plate accepts variable length cartridges for more options.
- Two drains provided for clean and dirty fluids.
- Legs and mounting tabs are available.



- Knife edge seals are provided at both ends of all DOE cartridges for superior performance.
- Rated for temperatures to 250° F. (No plastic holding rods.)
- Pressure rating to 150 psi.
- Housings for pressures to 300 psi are available.
- Optional sanitary connections.
- Models to accept DOE, 222 and cartridges with 226 end caps.
- Protective poly-coat over stainless steel standard finish.
- Electro-polishing is available.
- Standard, Premium Series and Jumbo models are in stock for immediate shipment.

Specifications

Material:	304 and 316 stainless steel are available.
Pressure rating:	Housings are rated for pressures to 150 psi (10 bar).
Temperature:	Filters are rated for temperatures to 250° F (121° C). Please consider cartridges to be used.
Gaskets & seals:	Buna-N is standard. Viton, EDPM and Teflon are available.
Finish:	Protective poly-coat over stainless is standard finish. Electro-polishing available.
Pressure drop:	Initial pressure drop is <1 psi at designed flow rates for housings only.
Cartridge types:	Housings are designed to accept DOE cartridges. Adapters for 222 & 226 cartridges available.

Models



Flow-Max® Jumbo Cartridge Filter Housings

Single cartridge models for the most “user friendly” filtration possible!

Best Selling Product. Try it today!



Model "90"

Model "170"

Model "40"

Flow-Max® commercial quality jumbo cartridge filter housings in 316SS

Model Number	Material	Max. Flow (GPM)	Cartridge Style	Number Of Cartridges	Pipe Size	Lid Closure
FMJCH40	316SS	50	"40"	1	2" NPT	V-Band
FMJCH90	316SS	100	"90"	1	2" NPT	V-Band
FMJCH170	316SS	150	"170"	1	2" NPT	V-Band

Note: Commercial quality jumbo cartridge housings are rated for pressures to 150 PSI (10 bar) and temperatures to 140°F with standard jumbo cartridges and 250°F using high temp cartridges. Pressure gauges included and installed on inlets and outlet.



User friendly Flow-Max jumbo cartridges are easy to install, easy to service and easy to replace!



Adjustable compression cap provides superior sealing for both ends of the jumbo cartridge.



Model FMJCH170

Flow-Max[®] Commercial Filters

Stainless steel filter housings with easy, safe and secure band-clamp lid closure.



4 & 5 Round Models



12 Round



22 Round



Premium Series

Flow-Max[®] commercial quality multi-cartridge stainless steel filter housings (316SS and 304SS)

Model Number (316SS)	Model Number (304SS)	Round	Max. Flow Rate (GPM) Pleated	Max. Flow Rate (GPM) Depth	Pipe Size	Drain Size (NPT)	No. Of Standard Cartridges	Cartridge Options (Lengths)
N/A	FM4X1-1-304	4	25	25	1" NPT	1/2"	4	9-3/4" - 10"
FM5X1	FM5X1-304	5	30	25	2" NPT	1/2"	5	9-3/4" - 10"
FM4X2	FM4X2-304	4	60	40	2" NPT	1/2"	4	20"
FM4X3	FM4X3-304	4	90	60	2" NPT	1/2"	4	29-1/4" or 30"
FM4X4	FM4X4-304	4	120	80	2" NPT	1/2"	4	40"
FM5X4	FM5X4-304	5	150	100	2" NPT	1/2"	5	40"
FM12X3	FM12X3-304	12	250	180	3" flange	1/2"	12	29-1/4" or 30"
FM12X4	FM12X4-304	12	300	240	3" flange	1/2"	12	40"
FM22X3	FM22X3-304	22	500	330	4" flange	1/2"	22	29-1/4" or 30"
FM22X4	FM22X4-304	22	600	440	4" flange	1/2"	22	40"

Flow-Max[®] Premium Series housings with mounting legs and pressure gauges (316SS)

Model Number	Round	Max. Flow Rate (GPM) Pleated	Max. Flow Rate (GPM) Depth	Pipe Size	Drain Size (NPT)	No. Of Standard Cartridges	Cartridge Options (Lengths)
FMPS4X2	4	60	40	2" NPT	1/2"	4	20"
FMPS5X3	5	120	75	2" NPT	1/2"	5	29-1/4" or 30"
FMPS5X4	5	150	100	2" NPT	1/2"	5	40"
FMPS7X4	7	200	140	2" NPT	1/2"	7	40"

Note: Flow rates shown above are for guidelines only. Actual flow rates are based on cartridge type, micron rating, solids content and a number of other factors.

Flow-Max[®] In-Line Filters

Single cartridge, metal filter housings for in-line installations.

Applications

- High temperatures
- High pressures
- Aggressive chemicals
- Water
- Oils
- Coolants
- Plating solutions
- Solvents
- Lubricants
- Hydraulic fluids

Models

- Nickel plated brass heads with 304 stainless sumps and T-Handles for easy sump removal
- 304 stainless steel for DOE cartridges
- 316 stainless steel for 222 o-ring end caps
- Carbon steel

Specifications

- Rated for pressures to 250 PSI (17.5 bar)
- Rated for temperatures to 250°F (121°C)
- Buna-N seals are standard. Optional seals available



Models with nickel plated brass heads, 304 stainless steel sumps and T-Handles

Model Number	Cartridge Length	Pipe Size	No. Of Cartridges	Sump	Head	Shipping Weight (lbs.)
FM10-BN-304-34T	10" *	3/4"	1	304 SS	Nickel / Brass	7
FM20-BN-304-34T	20"	3/4"	1	304 SS	Nickel / Brass	10

*Accepts 10" and 9 7/8" wound or 9 3/4" cartridges with rigid end caps (pleated). Rated for pressures to 250 psi and temperatures to 250°F

Models with 304 stainless steel heads and 304 sumps

Model Number	Cartridge Length	Pipe Size	No. Of Cartridges	Sump	Head	Shipping Weight (lbs.)
FM10-304-34	10" *	3/4"	1	304 SS	304 SS	7
FM20-304-34	20"	3/4"	1	304 SS	304 SS	10

*Accepts 10" and 9 7/8" wound or 9 3/4" cartridges with rigid end caps (pleated). Rated for pressures to 250 psi and temperatures to 250°F

Models with 316 stainless steel construction for cartridges with 222 o-ring end caps

Model Number	Cartridge Length	Pipe Size	No. Of Cartridges	Sump	Head	Shipping Weight (lbs.)
FM10-316-34-222	10"*	3/4"	1	316 SS	316 SS	7
FM20-316-1-222	20"	1"	1	316 SS	316 SS	10

Note: Filter housings listed directly above are rated for pressures to 250 psi and temperatures to 250°F.

Models with carbon steel sumps and cast iron heads

Model Number	Cartridge Length	Pipe Size	No. Of Cartridges	Sump	Head	Shipping Weight (lbs.)
FM10-CS-34	10"*	3/4"	1	Carbon	Cast iron	7
FM30-CS-34	30"	3/4"	1	Carbon	Cast iron	12

*Accepts 10" and 9 7/8" wound or 9 3/4" cartridges with rigid end caps (pleated). Rated for pressures to 250 psi and temperatures to 250°F

BIG-BUBBA[®]

FILTERS

Non-Metallic Filter Housings for High Flow Rates & Low Cost

Rugged construction

Big-Bubba filter housings are made of rugged, glass-reinforced polypropylene so they will not chip, rust or dent. And because all wetted surfaces are non-metallic, they are ideal when chemical compatibility is an issue and for sea water applications.

Low cost

Big-Bubba filters are an economical replacement for stainless steel filtration equipment because of their non-metallic construction and today's high cost of stainless steel!

Applications

Big-Bubba filters are ideal for a wide range of applications, including:

- Commercial filtration
- Industrial filtration
- Pre-filtration for reverse osmosis equipment
- Community water systems
- Sea water applications due to their non-corrosive construction
- Replacement for bag filters for more filter area
- Replacement for multiple cartridge filters for greater convenience
- Water for livestock & poultry
- Whole house filtration



Proprietary cartridges

We offer a full line of replacement cartridges for Big-Bubba filters, all with double o-ring seals for superior performance. Cartridges are easy to install, easy to service and easy to replace. Some of the filter media we use in select micron ratings are cleanable and reusable to reduce filtration costs.

Double o-rings for superior sealing.

E-Z change-out

Cartridge replacement is easy as 1-2-3:

1. Remove swing bolts.
2. Remove lid.
3. Rotate cartridge 1/4 turn and pull-up.

Filter inlet.

Two outlets

Big-Bubba filters have two outlets on opposite sides to allow more flexibility with piping configurations. Filter may be installed in-line or piping may come from the same direction. A plug is provided for the outlet, not used.

Filter outlet.

P/N: BBH-150

Big-Bubba filters offer a wide range of replacement cartridges for every application!

Big -Bubba[®] filters are ideal as stand alone filters or used for filtration systems.



Parallel installation

Parallel installations are recommended to achieve high flow rates, by installing filters on a common manifold, feeding all filters installed in a row.



Series installation

Series installations are recommended for applications such as surface water filtration, where cartridges having different micron ratings are used.

THREE CARTRIDGE TYPES:



Pleated cartridge

Pleated cartridges

Ideal for more critical applications, offering greater efficiency, more surface area for greater throughput and reduced cost.

Product code	Media Type	Micron Rating	Per case
BBC-150-P1A	PP	1 Absolute	1
BBC-150-P1	PP	1	1
BBC-150-P5	PP	5	1
BBC-150-P20	PE	20	1
BBC-150-P50	PE	50	1
BBC-150-PM150	Mesh	150	1

Note: 5, 20, 50 and 150 micron cartridges are cleanable and reusable to reduce costs.

Depth cartridges

Melt blown Polypropylene cartridges are recommended when depth filtration is necessary for gelatinous substances and when chemical resistance may be a requirement.

Product code	Media Type	Micron Rating	Per case
BBC-150-D1	PP	1	1
BBC-150-D5	PP	5	1
BBC-150-D20	PP	20	1
BBC-150-D50	PP	50	1



Depth cartridge



Activated carbon cartridge

Activated carbon

Ideal for whole house filtration to reduce chlorine, taste, odors and sediment.

Product Code	Max. Flow	Capacity	Chlorine Reduction
BBC-150-AC	20 GPM	150,000 Gals.	90%

Note: We build filtration systems, or they may be installed on site. For more information please inquire!

Big-Bubba® Specifications

Big-Bubba housing (P/N: BBH-150)

Specifications	Data
Body (all wetted surfaces)	Glass reinforced PP
Cartridge end caps	Glass reinforced PP
Swing bolts	304 stainless steel
O rings (cartridges)	EPDM (Viton optional)
O ring (lid)	EPDM (Viton optional)
Pipe fittings	2" slip
Overall height	40"
Width (vessel OD)	12"

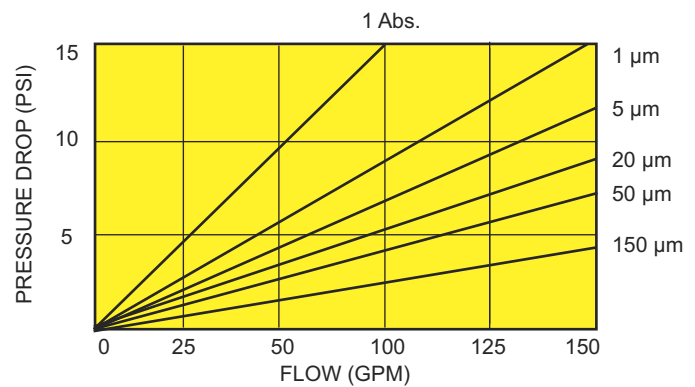
Big-Bubba cartridges

Specifications	Data
Maximum flow rate	150 GPM* (36 M ³ /hr.)
Maximum flow (carbon)	15 GPM
Maximum flow (1 Absolute)	50 GPM
Maximum temperature	175°F (80°C) @ 80 psi
Maximum working pressure	125 psi (8.75 bar)
Burst test	300 psi
Cycle test	100,000

* Highly dependent on micron rating, solids content and other factors. Please see pressure drop chart below.

Low pressure drop

Big-Bubba filter housings are designed to minimize pressure drop, by using 2" pipe fittings and large diameter center tubes for Big-Bubba filter cartridges. (See chart at right for pressure drop data using pleated cartridges.)



Big-Bubba cartridge specifications

	Pleated	Depth	Activated Carbon
Media	PP	PP	Activated carbon
End caps	PP + FG	PP + FG	PP
Center tubes	PP	PP	PP
Maximum flow rate (GPM)	150	100	15
Maximum temperature	175°F (80°C)	175°F (80°C)	140°F (60°C)
Maximum ΔP (psi)	30	40	30
Chemical resistance	Excellent	Excellent	Not a factor (for water)
Length (media)	26-1/4"	26-1/4"	26-1/4"
O-rings (dual)	EPDM	EPDM	EPDM
Shipping weight (lbs.)	5	5	7
Carton dimensions	7" x 7" x 31"	7" x 7" x 31"	7" x 7" x 31"
Micron ratings	1A, 1, 5, 20, 50, 150	1, 5, 20, 50	10

Note: Flow rates are based on each specific application, micron rating, solids content and a number of other factors. End user should consider these factors when selecting the filter housing (or number of filter housings) needed for their particular requirement.

Spare parts

Part Numbers	Description
BB LID	Lid
BB PR	Pressure release button
PG15L25	Pressure gauge
BB EYEBOLT	Eye bolt
BB POST	Post for eye bolt
BB WASHER	Washer for eye bolt
DRAINPLUGOR	Drain plug with o ring

Part Numbers	Description
BB ORING E	O ring for lid (EPDM)
BB ORING V	O ring for lid (Viton)
BC ORING E	O ring for cartridge (EPDM)
BC ORING V	O ring for cartridge (Viton)
BB COUPLER	Pipe fitting coupler (two pieces)
BB COUPLER OR	O ring for coupler
BB PLUG	Plug for second outlet

Section 19

Miscellaneous

Watts® Instant Hot Water Recirculating System

Save water, save time, save money and never wait for hot water again!



Model: F500805

How much water are you wasting?

We estimate the average house has 125 feet of 3/4" pipe, which holds 3.14 gallons of water. (Even more if 1" pipe is used.) Now, let's assume hot water is used ten times a day. This means 31 gallons of water must flow through the pipes before hot water reaches all outlets. This amounts to 11,315 gallons of wasted water, per household, per year. And if your home is larger than average, we estimate you may be wasting 15,000 gallons of water on an annual basis, simply waiting for hot water!

Pump installation

Our top quality Grundfos®, low energy 120 VAC, 60 Hz, circulating pump is installed on the discharge side of the water heater. If flex pipe is used, there is no need to cut the pipe. Otherwise this procedure will be necessary.

Pump comes with built-in timer with multiple tabs for adjustment. The pump will re-circulate internally, preventing damage in the event water flow is stopped.

Grundfos pump is UL and NSF Standard 61 certified.



Re-Circulating Pump

Patented, thermal sensor by-pass valve

Install the patented thermal sensor by-pass valve at the sink which receives hot water last. Typically, this is the bathroom, which is farthest from the water heater.

Notice flow arrows on sensor valve and proceed as follows:

1. Shut off hot and cold water supply lines.
2. Disconnect existing hot and cold water supply lines from the stop valves and connect them to the sensor valve.
3. Connect the supplied flex hosing to the stop valves and sensor valve. Notice arrows on valve to indicate direction of flow.
4. Open hot and cold water stop valves.

Maximum temp for components is 140°F (60°C).
Meets United Plumbing Code requirements.



Thermal Sensor By-Pass Valve

The sensor valve will remain open, allowing water to circulate until the water temperature reaches 98°F / (37°C) (plus or minus 5 degrees), indicating hot water has been supplied to all fixtures in the house. The valve will remain closed as long as the water temperature exceeds this limit. When water temperature drops below the limit, the valve will open, allowing water to re-circulate until hot water is provided.

Note: For larger homes Watts supplies additional sensor valves, should they be necessary for additional supply lines. (P/N: F560075.)