



Deluxe Triplex Configuration

VANTAGE® PTC SOFTENERS

Vantage® PTC softeners for commercial applications offer a flexible, reliable and feature-rich solution to reduce the level of hardness in feed water by filtering the water through a cation resin bed. Softeners are necessary to remove hardness or calcium that can clog or minimize the effectiveness of other sensitive downstream devices, such as RO membranes.

Softener vessel diameters range from 10" (25cm) to 48" (122cm). Each softener contains high capacity cation resin for this ion exchange process.

Vantage PTC softeners are available in three models: Economy, Plus, and Deluxe.

- Economy - Controlled by a digital controller and composite valve
- Plus - Controlled by mechanical time clock and a lead free brass valve
- Deluxe - Controlled by a feature-rich digital controller and a lead free brass valve

The Deluxe models are available in four vessel configurations: Simplex, Duplex, Triplex and Quadplex.

Deluxe models are also available with a side mount valve configuration on the 36", 42" and 48" diameter vessels.

- Minimizes climbing up a ladder to service the valve, enhancing safety
- Provides for more even flow through the Media Bed on larger diameter vessels

Deluxe models are available in four operational flow configurations depending on the number of vessels.

- Simplex Operation - single vessel operation
- Duplex Alternating - one vessel on, one vessel in standby (only option for the Twin Configuration)

- Parallel - all vessels working together
- Demand Flow - (X + N) two, three or four vessels working together as flow increases and then vessels are placed in stand-by as flow decreases.

The Economy and Plus model will only operate in the following flows:

- Simplex Operation - single vessel operation. Multiple simplex units may be purchased to work together, however they will not function as one system as with the Deluxe model. A system lockout is available.

VANTAGE PTC SYSTEM FEATURES

- Range of optional flow meters
- 24vac systems with UL® and cUL® Listed transformers
- Feature-rich digital controller for networked systems
- Tanks and valves are NSF/WQA* approved
- Corrosion-resistant fiberglass vessels

VANTAGE PTC SYSTEM BENEFITS

- Maximize duration between regeneration and minimize water usage
- Complies with regulatory and safety requirements
- Offers maximum operational flow and configuration flexibility to the customer
- Requires stringent testing for leaching of contaminants, providing a safe system
- Prevents rust and increases longevity of the vessel

* NSF = National Science Foundation
WQA = Water Quality Association

NOMINAL DESIGN PARAMETERS

Configurations	Simplex, Duplex, Triplex and Quadplex
Inlet Pressure	30 psig minimum
Inlet Temperature	65° F
Sizing	3 - 6 gpm/ft ³
Bed Depth*	30 to 38 inches of Evoqua Water Technologies. C-211 strong acid cation resin.
Freeboard*	25 to 38% of tank volume
Capacities	30 Kgrains/ft ³
Free Chlorine	0.5 ppm
Regeneration	15 lb. NaCl/ft ³



Flow Meter Options

SPECIFICATIONS *

Recommended flow
for RO Applications
(hardness dependant)

Softener	Vessel Diameter	Media Volume (cuft)	Minimum Flow 2 GPM	Nominal Flow @ 3 GPM/ Cuft	Nominal Flow @ 6 GPM/ Cuft	Service Flow @ 15 psi	Maximum Temporary Service Flow @ 25 psi	Capacity (Kgrains) **	Economy Valve Size	Plus & Deluxe Valve Size
PTCSS_xx10X54	10"	1.5	1	5	9	22	30	45	1"	1"
PTCSS_xx12X52	12"	2	2	6	12	22	30	60	1"	1"
PTCSS_xx14X65	14"	3	2	9	18	22	30	90	1"	1" / 1/5"
PTCSS_xx16X65	16"	4	3	12	24	22	30	120	1.5"	1" / 1/5"
PTCSS_xx18X65	18"	5	4	15	30	60	82	150	1.5"	1.5" / 2"
PTCSS_xx21X62	21"	7	5	21	42	60	82	210	N/A	1.5" / 2"
PTCSS_xx24X72	24"	10	6	30	60	60	82	300	N/A	1.5" / 2"
PTCSS_xx30X72	30"	15	10	45	90	90	124	450	N/A	2" / 3"
PTCSS_xx36X72	36"	20	14	60	120	92	126	600	N/A	2" / 3"
PTCSS_xx42X72	42"	28	19	84	168	185	250	840	N/A	3"
PTCSS_xx48X72	48"	37	25	111	222	185	250	1110	N/A	3"

These calculations are based on a Simplex system. Use the appropriate multiplier for Duplex, Triplex and Quadplex systems based on Operational Flow. To calculate metrics: 1 inch equals 2.54 centimeter, 1 gallon per minute equals 3.79 liters per minute.

_ defines the trim package selected (E-Economy, P-Plus, D-Deluxe).

xx defines the System Type or Operational Flow

* Flow rates can vary based on Valve Size and Trim Package selected

** Based on 30 Kgrains/cuft of resin regenerated @ 15 lbs NaCl / cuft and service flow at 3 gpm / cuft

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210 Sixth Avenue, Suite 3300, Pittsburgh, PA 15222

Technical Support +1 (800) 875-7873 ext. 5000

24/7 Customer Service +1 (800) 466-7873

www.evoqua.com

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