



Triplex Softener

VANTAGE® PRE-TREATMENT - INDUSTRIAL (PTI) SERIES SOFTENERS

LOW/MEDIUM FLOW SYSTEMS

The Vantage® Pre-Treatment – Industrial (PTI) series softeners by Evoqua Water Technologies offer a flexible, reliable and feature-rich way to reduce hardness in your feed water. PTI systems are available in Simplex, Duplex or Triplex configurations that are all skid mounted, and these preengineered, pre-assembled and factory-tested units minimize installation and startup time. Each configuration shares a common control platform and is available in either PVC or 316L Stainless Steel face piping. Vessel diameters range from 24” (60.96 cm) to 60” (152.4 cm) for low and medium flow systems. Each softener contains cation resin shipped in the sodium form.

Vantage PTI Softeners come in four models:

- **Economy (E)** - Controlled by a stager, PVC face piping, Simplex and Duplex, non code vessel
- **Plus (P)** - Controlled by Evoqua PLC and user friendly touch screen HMI, PVC face piping and internals
- **Deluxe (D)** - Controlled by Evoqua PLC and user friendly touch screen HMI, 316L SS face piping and PVC internals
- **Select (S)** - Controlled by Evoqua PLC and user friendly touch screen HMI, 316L SS face piping and internals; hardness monitor comes standard with this model.

The Plus, Deluxe and Select models are available in all three vessel configurations – Simplex, Duplex, Triplex – and can be ordered in non-code or ASME code vessels.

The Plus, Deluxe and Select models are available in five operational flow configurations depending on the number of vessels:

- **Simplex Operation** – single vessel operation
- **Duplex Alternating** – one vessel on, one vessel in standby
- **Parallel** – all vessels working together
- **2 + 1** – two vessels working and one vessel in stand by for back wash support
- **Pro Flow** – two vessels working and the third vessel in stand by, for when demand requires additional water from the third vessel

The Economy model will only operate in the following flows:

- **Simplex Operation** – single vessel operation
- **Duplex Alternating** – one vessel on, one vessel in standby

Features

- Reversible feed connections
- Separate source backwash manifold option
- Adjustable drain line flow control
- 2006 IBC Seismic rating for anchorage
- Hardness monitors option on Plus & Deluxe models
- Thermal pressure relief valve
- Carbon Steel – epoxy lined and coated vessels
- Common control available in either Evoqua or Allen-Bradley® PLCs

Benefits

- Condensed footprint to save space
- Automated vent for easy start up
- Sight glass on drain line to minimize water usage and resin loss
- Fast delivery to meet demanding schedules

SPECIFICATIONS LOW/MEDIUM FLOW SYSTEMS

	Softener - Plus, Deluxe and Select			Softener - Economy	
	Simplex W x D x H	Duplex W x D x H	Triplex W x D x H	Simplex W x D x H	Duplex W x D x H
PTISxxx24x48	41 x 49 x 91 in (104 x 120 x 231 cm)	70 x 49 x 95 in (178 x 124 x 241 cm)	98 x 49 x 95 in (249 x 124 x 241 cm)	47 x 46 x 75 in (119 x 117 x 191 cm)	103 x 46 x 75 in (262 x 117 x 191 cm)
Operating Weight	1658 lbs / 754 kg	4723 lbs / 2147 kg	5611 lbs / 2551 kg	1507 lbs / 685 kg	2830 lbs / 1286 kg
PTISxxx30x60	46 x 59 x 108 in (117 x 150 x 274 cm)	89 x 59 x 112 in (226 x 150 x 284 cm)	129 x 61 x 112 in (328 x 155 x 284 cm)	48 x 52 x 91 in (122 x 132 x 231 cm)	190 x 56 x 91 in (483 x 142 x 231 cm)
Operating Weight	2841 lbs / 1292 kg	5503 lbs / 2502 kg	7928 lbs / 3604 kg	2604 lbs / 1184 kg	5049 lbs / 2295 kg
PTISxxx36x60	50 x 61 x 110 in (127 x 155 x 279 cm)	92 x 65 x 115 in (234 x 165 x 292 cm)	132 x 67 x 115 in (335 x 170 x 292 cm)	57 x 59 x 94 in (145 x 150 x 239 cm)	128 x 61 x 94 in (325 x 155 x 239 cm)
Operating Weight	3793 lbs / 1724 kg	7449 lbs / 3386 kg	11162 lbs / 5073 kg	3626 lbs / 1648 kg	7080 lbs / 3218 kg
PTISxxx42x60	60 x 76 x 117 in (152 x 193 x 297 cm)	114 x 76 x 121 in (290 x 193 x 307 cm)	166 x 76 x 121 in (422 x 193 x 307 cm)	57 x 59 x 101 in (145 x 150 x 257 cm)	133 x 61 x 101 in (338 x 155 x 257 cm)
Operating Weight	5089 lbs / 2314 kg	10075 lbs / 4580 kg	15120 lbs / 6873 kg	4739 lbs / 2155 kg	9358 lbs / 4254 kg
PTISxxx48x72	65 x 82 x 121 in (1654 x 208 x 307 cm)	117 x 82 x 125 in (297 x 208 x 318 cm)	169 x 83 x 125 in (429 x 211 x 318 cm)	65 x 66 x 116 in (165 x 168 x 295 cm)	135 x 69 x 116 in (348 x 175 x 295 cm)
Operating Weight	7441 lbs / 3382 kg	14700 lbs / 6682 kg	22015 lbs / 10007 kg	7123 lbs / 3237 kg	14098 lbs / 6408 kg
PTISxxx54x72	70 x 88 x 137 in (178 x 224 x 348 cm)	137 x 90 x 143 in (348 x 229 x 363 cm)	202 x 92 x 143 in (513 x 234 x 363 cm)	70 x 74 x 120 in (178 x 188 x 305 cm)	138 x 75 x 120 in (351 x 191 x 305 cm)
Operating Weight	9114 lbs / 4144 kg	18151 lbs / 8251 kg	27219 lbs / 12373 kg	8778 lbs / 3991 kg	17515 lbs / 7962 kg
PTISxxx60x72	69 x 99 x 140 in (175 x 251 x 356 cm)	140 x 99 x 146 in (356 x 251 x 371 cm)	207 x 100 x 146 in (526 x 254 x 371 cm)	70 x 80 x 124 in (178 x 203 x 315 cm)	141 x 81 x 124 in (358 x 206 x 315 cm)
Operating Weight	11346 lbs / 5158 kg	22633 lbs / 10288 kg	33986 lbs / 15448 kg	10840 lbs / 4928 kg	21641 lbs / 9837 kg

VANTAGE® PRE-TREATMENT - INDUSTRIAL (PTI) SERIES SOFTENERS

Plus, Deluxe and Select - Low/Medium Flow Systems*

	Pipe Size PVC	Pipe Size SS	Min. Flow Rate @ 2 gpm/sqft	Recommended Max Flow Rate @ 20 gpm/sqft	Flow Rate @ 3 gpm/cuft	Flow Rate @ 5 gpm/cuft	Flow Rate @ 7 gpm/cuft	Tank Diameter (in)	Tank Shell Height (ft)	Area (sqft)	% Media Free-board	Active Media (cuft)	Actual Media per Vessel (cuft)	Backwash Flow @ 20.7 gpm/sqft @ 85°F
PTISxxx24x48	1.5	1.5	6	63	21	35	49	24	4	3.1	55%	27	7	24
PTISxxx30x60	2	2	10	98	42	70	98	30	5	4.9	55%	34	14	37
PTISxxx36x60	3	2	14	141	60	100	140	36	5	7.1	57%	34	20	53
PTISxxx42x60	3	3	19	192	81	135	189	42	5	9.6	60%	34	27	72
PTISxxx48x72	4	3	25	251	105	175	245	48	5	12.6	95%	33	35	94
PTISxxx54x72	4	3	32	318	135	225	315	54	6	15.9	90%	34	45	119
PTISxxx60x72	4	4	39	393	168	280	392	60	6	20	88%	34	56	147

Economy - Low/Medium Flow Systems

	Pipe Size PVC	Pipe Size SS	Min. Flow Rate @ 2 gpm/sqft	Recommended Max Flow Rate @ 20 gpm/sqft	Flow Rate @ 3 gpm/cuft	Flow Rate @ 5 gpm/cuft	Flow Rate @ 7 gpm/cuft	Tank Diameter (in)	Tank Shell Height (ft)	Area (sqft)	% Media Free-board	Active Media (cuft)	Actual Media per Vessel (cuft)	Backwash Flow @ 20.7 gpm/sqft @ 85°F
PTISExx24x48	1.5	n/a	6	63	20	33	47	24	4	3.1	55%	28	7	17
PTISExx30x60	2.5	n/a	10	98	45	75	105	30	5	4.9	54%	35	15	27
PTISExx36x60	2.5	n/a	14	141	60	100	140	36	5	7.1	57%	35	20	39
PTISExx42x60	3	n/a	19	192	105	175	245	42	5	9.6	58%	37	30	53
PTISExx48x72	4	n/a	25	251	120	200	280	48	5	12.6	92%	38	40	69
PTISExx54x72	4	n/a	32	318	150	250	350	54	6	15.9	87%	38	50	87
PTISExx60x72	4	n/a	39	393	180	300	420**	60	6	20	87%	38	60	108

* For Duplex systems double flows / quantities; for Triplex systems triple flows / quantities

** Not recommended due to high pipe velocities



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