

Ion Exchange Water Softening Systems

Ion exchange softening is used to remove hardness from water to prevent scaling. Dissolved iron up to 6 mg/l can be removed with softening. Colortronic water softeners have been designed for excellent reliability. Each tank is industrial-quality steel for strength and durability, protected inside and out against corrosion.

The monolithic polyethylene tank lining is tightly bonded to the tank under a high heat fusion process. All closures set on O-ring seals that rest on a plastic inner liner so that water or regenerates never touch metal. The tank exterior has a triple coat epoxy finish.

Standard Features

- Hydraulic 5-cycle multi-port valve with built-in eductors
- Modular design for fast, easy maintenance
- Regeneration is accomplished with NaCl (salt) brine
- Brine tank
- Internal plumbing
- Valves
- Quartz gravel support beds
- 14-day time clock controls
- 120V / 60Hz / 2 amps
- 35° F to 125° F operating temperature (2° C to 52° C)



Ion Exchange System

Optional Features

- Ion exchanger TK-5 total hardness test kit (PN A0509927), 22 lbs. (10 kg) shipping weight

Specifications

Feed Water Requirements:

Turbidity: 5.0 NTU max.

Chlorine: 1.0 mg/l max.

Iron-Ferrous: 15.0 mg/l max.

Note: Ferrous iron greater than 0.1 mg/l may require special regeneration.

Model	Tank depth, in. (cm)	Tank height, in. (cm)	Pipe dia., in. (mm)	Continuous flow, gpm (lpm)	Peak flow ^① , gpm (lpm)	Continuous pressure, psi (kPa/bars)	Peak pressure, psi (kPa/bars)	Max. drain flow, gpm (lpm)	Cap. K grains ^②	Media vol., cu. ft. (l)
120D	18 (46)	66 (168)	2 (51)	32 (121)	48 (182)	5 (34 / 0.34)	8 (55 / 0.55)	16 (68)	120	4 (15)
240D	24 (61)	66 (168)	2 (51)	55 (208)	85 (322)	7 (48 / 0.48)	13 (89 / 0.89)	18 (68)	210	7 (26)
420D	30 (76)	66 (168)	2 (51)	95 (359)	140 (530)	10 (69 / 0.69)	18 (124 / 1.24)	24 (91)	450	15 (56)

① Peak flow rates are not recommended for extended periods of time.

② Capacity is based on 10 gpg total hardness at CaCO₃, free of color, oil and turbidity

Note: Use 80% capacity for tap feed Continuous Deionizing (CDI) and salt setting of 15 lb per cu. ft. (240 Kg/cu.m.)

Culligan® Water Treatment Maintenance Service

The Culligan® water treatment maintenance program provides on-site professional water treatment service for open and closed systems. This program is designed to eliminate chemical product inventory and handling by the customer. Routine service is scheduled and performed by trained water treatment personnel.

Culligan service is applicable to the following cooling tower sizes and models:

Cooling Tower Capacity	Maximum Flow Rate		
	Tons	Kcal/hr.	Gpm
50	151,200	150	568
100	302,400	300	1,136
150	453,600	450	1,703
200	604,800	600	2,271
250	756,000	750	2,839
300	907,000	900	3,407
350	1,058,400	1,050	3,974
400	1,209,600	1,200	4,542
450	1,360,800	1,350	5,110
500	1,512,000	1,500	5,678
550	1,663,200	1,650	6,245
600	1,816,400	1,800	6,813
650	1,965,600	1,950	7,381
700	2,116,800	2,100	7,949
750	2,268,000	2,250	8,516
800	2,419,200	2,400	9,084
850	2,570,400	2,550	9,652
900	2,721,600	2,700	10,220
950	2,872,800	2,850	10,787
1,000	3,024,000	3,000	11,355

Service

- Placement, management, and dosing of Colortronic water treatment products
- Routine test and evaluation of tower and makeup water
- On-site monthly service visit
- Maintenance and service, including parts and labor of tower water management systems

Monitoring

- Corrosion monitoring with the use of corrosion coupons and corrators
- Remote monitoring (DTM-2000 systems only)

Reporting

- Quarterly review with customer
- Report issued after each visit
- Inspection results during scheduled outages

All costs are based on a minimum 24-month contract. Consult factory for costs outside the United States. Startup includes initial setup, corrosion coupons and/or corrator tips and plugs, calibration of control/chemical feed equipment, travel and living costs.

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