

DCS1 Series Commercial Softeners



Applications

Car Washes
Farms
Office Buildings
Restaurants
Boiler Feed Water
R.O. Pretreatment
Factories
Laundries
Motels / Hotels
Apts / Condos
Dairies
Hospitals
Schools
Nursing Homes

Pictured above is Model DCS1-ET-300

- ◆ *Packaged water softeners with top mounted control valves*
- ◆ *Flow rates between 26 to 63 gpm continuous*
- ◆ *Capacities per tank of 75,000 to 600,000 grains*

System Standard Features

Valve & Controls



Lightweight, corrosive-resistant Noryl® construction allows for easy installation and long service life.

Full size porting on all main flow paths permits high service flow and backwash rates for both softening and filtering.

Modular cartridge design means everything you need to change, clean or service is right up front.

Reliable face seal design eliminates piston scoring.

No hard water by-pass option can be factory ordered or added in the field.

Universal adapters fit virtually any commercial application around the world.



Mechanical or electronic options make DCS1 one of the most versatile commercial and industrial valves available today. It's fully adjustable for customizing programming. Standard 12-volt operation makes installation easy. Program variables are maintained in non-volatile memory. Battery back-up is available as an option.



Camshaft driven pilot flapper valves control the diaphragm cartridges. All pilot lines are in the injection molded valve body, so there is no pilot tubing to connect or leak.

A pilot filter screen keeps the pilot ports and lines clean and free of debris.



Superior flow rate and pressure drop performance are provided by DCS1's unique face seal diaphragm valve cartridge assemblies, manifold design and full flow path characteristics.



Cartridge style brine refill flow control and eductor assemblies make servicing, changing out or cleaning a breeze.

An optional pressure regulator maintains regeneration pressure for systems subject to major pressure fluctuations.

Total System

- ◆ The DCS1 series water softener is pre-engineered and packaged to meet most commercial and light industrial applications.
- ◆ Mineral tanks have a polyethylene inner shell that is externally wound with continuous fiberglass filament for seamless, corrosion proof construction. These tanks are 1/3 the weight of a comparable size steel tank for ease of installation and handling and carry a 5 year limited warranty.
- ◆ Easy to install and service with one connection to inlet, outlet and drain.
- ◆ High capacity virgin polystyrene softening resin.
- ◆ High flow ABS plastic underdrain allows minimum pressure loss and even distribution of service and regeneration water.
- ◆ Mineral and brine tanks carry a 5 year limited warranty. Valve and controls carry a 1 year limited warranty.
- ◆ Available as twin systems.

Brine System

- ◆ Brine tanks are constructed from FDA approved high density polyethylene which are corrosion resistant, easy to handle and include a dust tight cover.
- ◆ Brine tank refill is controlled by time and pressure compensating flow control that is easily adjustable at the main control. This eliminates the need for hard to set floats in the brine tank and allows the addition of salt at anytime without overflow.
- ◆ Large salt storage capacity allows for a minimum of 4 regenerations between salt refills.
- ◆ Quick brine makeup without the use of salt platforms.

DCS1 Series Specifications

MODEL NUMBER	GRAINS CAPACITY AND SALT DOSAGE GRAINS / POUNDS		PIPE SIZE IN.	SERVICE FLOW RATE GPM		RESIN CU. FT.	BACKWASH FLOW RATE	TANK SIZES		SALT STORAGE (LBS.)	DRAIN SIZE IN.
	MAXIMUM	MINIMUM		(1) CONT.	(2) PEAK			SOFTENER IN.	BRINE IN.		

SINGLE TANK / TIME CLOCK MODELS

DCS1-TC-75	75,000 / 38	50,000 / 15	1-1/2	26	35	2.5	4.0	13 x 54	18 x 40	300	1-1/2
DCS1-TC-90	90,000 / 45	60,000 / 18	1-1/2	33	45	3	5.0	14 x 65	24 x 50	500	1-1/2
DCS1-TC-120	120,000 / 60	80,000 / 24	1-1/2	42	59	4	7.0	16 x 65	24 x 50	500	1-1/2
DCS1-TC-150	150,000 / 75	100,000 / 30	1-1/2	48	66	5	12.0	18 x 65	24 x 50	500	1-1/2
DCS1-TC-210	210,000 / 105	140,000 / 42	1-1/2	55	73	7	12.0	21 x 62	24 x 50	500	1-1/2
DCS1-TC-240	240,000 / 120	160,000 / 48	1-1/2	57	74	8	15.0	24 x 71	24 x 50	500	1-1/2
DCS1-TC-300	300,000 / 150	200,000 / 60	1-1/2	56	72	10	15.0	24 x 71	30 x 50	700	1-1/2
DCS1-TC-450	450,000 / 225	300,000 / 90	1-1/2	62	83	15	25.0	30 x 72	39 x 48	1000	1-1/2
DCS1-TC-600	600,000 / 300	400,000 / 120	1-1/2	63	85	20	30.0	36 x 72	39 x 48	1000	1-1/2

SINGLE TANK / ELECTRONIC METER MODELS

DCS1-ET-75	75,000 / 38	50,000 / 15	1-1/2	26	35	2.5	4.0	13 x 54	18 x 40	300	1-1/2
DCS1-ET-90	90,000 / 45	60,000 / 18	1-1/2	33	45	3	5.0	14 x 65	24 x 50	500	1-1/2
DCS1-ET-120	120,000 / 60	80,000 / 24	1-1/2	42	59	4	7.0	16 x 65	24 x 50	500	1-1/2
DCS1-ET-150	150,000 / 75	100,000 / 30	1-1/2	48	66	5	12.0	18 x 65	24 x 50	500	1-1/2
DCS1-ET-210	210,000 / 105	140,000 / 42	1-1/2	55	73	7	12.0	21 x 62	24 x 50	500	1-1/2
DCS1-ET-240	240,000 / 120	160,000 / 48	1-1/2	57	74	8	15.0	24 x 71	24 x 50	500	1-1/2
DCS1-ET-300	300,000 / 150	200,000 / 60	1-1/2	56	72	10	15.0	24 x 71	30 x 50	700	1-1/2
DCS1-ET-450	450,000 / 225	300,000 / 90	1-1/2	62	83	15	25.0	30 x 72	39 x 48	1000	1-1/2
DCS1-ET-600	600,000 / 300	400,000 / 120	1-1/2	63	85	20	30.0	36 x 72	39 x 48	1000	1-1/2

ALTERNATING TWIN / TOP MOUNT ELECTRONIC METER MODELS

DCS1-TA-75	75,000 / 38	50,000 / 15	1-1/2	26"	35"	2.5"	4.0	13 x 54	18 x 40	300	1-1/2
DCS1-TA-90	90,000 / 45	60,000 / 18	1-1/2	32"	45"	3"	5.0	14 x 65	24 x 50	500	1-1/2
DCS1-TA-120	120,000 / 60	80,000 / 24	1-1/2	39"	56"	4"	7.0	16 x 65	24 x 50	500	1-1/2
DCS1-TA-150	150,000 / 75	100,000 / 30	1-1/2	43"	59"	5"	12.0	18 x 65	24 x 50	500	1-1/2
DCS1-TA-210	210,000 / 105	140,000 / 42	1-1/2	51"	67"	7"	12.0	21 x 62	24 x 50	500	1-1/2
DCS1-TA-240	240,000 / 120	160,000 / 48	1-1/2	53"	70"	8"	15.0	24 x 71	24 x 50	500	1-1/2
DCS1-TA-300	300,000 / 150	200,000 / 60	1-1/2	52"	68"	10"	15.0	24 x 71	30 x 50	700	1-1/2
DCS1-TA-450	450,000 / 225	300,000 / 90	1-1/2	59"	78"	15"	25.0	30 x 72	39 x 48	1000	1-1/2
DCS1-TA-600	600,000 / 300	400,000 / 120	1-1/2	58"	78"	20"	30.0	36 x 72	39 x 48	1000	1-1/2

(1) At 15 psi Pressure Drop

(2) At 25 psi Pressure Drop

*Twin System Resin Capacity and Service Flow refer to "Per Tank" since an alternating system has only one (1) tank on line at any time.

Available Options

Electrical - 12V/50Hz, 12 & 24V/60Hz, 110V/50Hz, 220V/50Hz, 220V/60Hz

480 Q.C. (quick connect) remote mount electronic controller for single / twin and triplex systems.

Systemax 2000 remote mount multivalve electronic controller.

No Hard Water Bypass - eliminates hard water bypass during regeneration.

Auxiliary Cam & Switch - dry contact for signal to or control of auxiliary equipment.

2" rear mounted inlet / outlet valve body.

1 1/2" and 2" pre-plumbed pressure tested manifolds for quick and trouble free installation.

Standard Operating Specifications

Electrical Requirements - 120V, 60Hz, 10 watts

Temperature Range - 40° to 120° F

DCS1 General Specifications

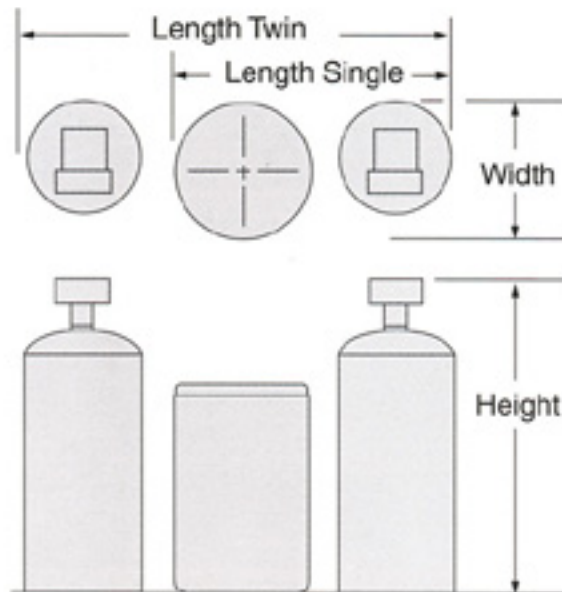
Valve configurations

Overall Dimensions 11 1/2" x 15" x 23"
(H x W x L)
Weight 23.3 lbs

Connections

Inlet and Outlet 1-1/2"
Adapter kit 2"
Tank 4"
Drain 1-1/2"
Brine 3/4" NPT
Pilot and Aux. Drains 1/4"
Distributor 1-1/2"

Floor Space Requirements



MODEL NUMBER	LENGTH IN.		WIDTH IN.	HEIGHT IN.	SHIPPING WEIGHT LBS.	
	SINGLE	TWIN			SINGLE	TWIN
DCS1-75	37	56	20	60	216	361
DCS1-90	44	64	26	76	403	679
DCS1-120	46	68	26	76	475	824
DCS1-150	48	72	26	78	571	1014
DCS1-210	51	78	26	74	709	1289
DCS1-240	54	84	26	84	848	1570
DCS1-300	60	90	32	84	1014	1855
DCS1-450	75	111	41	92	1748	3001
DCS1-600	81	123	41	93	2158	3821

Manufactured By:

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