

NCS-F

Nelsen Commercial Softeners - Fleck

Nelsen Commercial Water Softeners

At Nelsen Corporation, our systems are designed with your needs in mind. We tailor your system to provide you with the convenience you want while giving you the performance and durability you need for all of your individual application requirements.

IDEAL FOR

- RO/DI Pre-Treatment
- Apartment Buildings
- Office Buildings
- Hotels/Motels
- Manufacturing Facilities
- Hospitals & Nursing Homes
- Condominiums
- Boiler Water Treatment
- Schools
- And many more!

*ASME code tanks can be specified when required and can be custom designed to meet your specific application requirements.

Nelsen Commercial Water Softeners - Whether your project is a low or high-rise building, shopping mall, hospital, hotel, college lab, restaurant, manufacturing...the Nelsen team can assist you with job specifications, submittals, sales, and sizing of the equipment. Nelsen Fleck Commercial Water Softeners are designed for commercial applications ranging from 168,000 to 1,950,000 grains of hardness removal capacity at flow rates up to 280 gpm. We manufacture pre-engineered single and multiple tank systems with full documentation and O&M manuals.

Treatment

Many water supplies, municipal and groundwater, contain hardness minerals (calcium and magnesium) iron, rust and sediment. Hardness forms scale on pipes, boilers, heat exchangers and cooling towers reducing the heat transfer capabilities of a system as well as increasing the cost of operating the system. Nelsen Commercial water conditioners are designed to eliminate unwanted contaminants and to increase process efficiency, saving money now and in the years ahead.

Standard Features Include:

Softening Media – a high quality strong acid softening (cation) resin with superior chemical resistance.

Regeneration Controller – features the Fleck NXT2 electronic controller, combining simplicity with flexibility that is easy to setup for single and multiple tank applications.

Control Valve – Made of high quality, lead free brass for a long, reliable life. Hydraulically-balanced pistons glide effortlessly along noncorrosive spacers and seals to precise positions. As Pentair improves these valves, the valve bodies may be manufactured with stainless steel or other materials.



Nelsen Water Solutions 2" and 3" water softeners feature the Fleck NXT2 timer to control from one to four control valves. The NXT2 network timer uses on-board communication capabilities to link multiple valves via standard off the shelf telephone cables.

3900 Duplex
PVC Piping



Product Features

- Networks of up to 4 valves
- Simple on-site programming
- Easy installation w/plug-in wiring harnesses

Features and Options

- Up to 4 units in a network
- Field configurable for any system type using a simple programming sequence, a default for all valves, pistons and cams types are stored
- Field configurable for any flow meter
- Programmable auxiliary relay - fused
- Remote start and remote lockout
- Variable reserve

Three Programming Levels

- Time of Day Adjustment: Simply push the up or down buttons.
- Quick Programming: Adjust Hardness, Regeneration Time and Day Override.
- Master Programming: Configure Valve Type, Regeneration Type, Remote Start/Lock, US or European time/volume display, system capacity safety factor, hardness, cycle step times, flow meter size, Auxiliary Relay operation.

FLECK 2900 - SIZING SPECIFICATION CHART

Model Number	Tank Size		Capacity		Resin Cu Ft	Support Bed		Flow Rates*		BKW	Salt Req'd	
	Resin	Brine	Min ¹	Max ²		½ x ¼	¼ x ⅛	Min	Max		9#	15#
NCS29-210	21 x 62	24 x 50	168k	210k	7	50	100	55	77	12	70	105
NCS29-300	24 x 72	30 x 48	240k	300k	10	100	150	60	95	15	100	150
NCS29-450	30 x 72	39 x 48	360k	450k	15	100	250	75	140	25	150	225
NCS29-600	36 x 72	50 x 60	480k	600k	20	150	350	100	140	35	200	300

FLECK 3900 - SIZING SPECIFICATION CHART

Model Number	Tank Size		Capacity		Resin Cu Ft	Support Bed		Flow Rates*		BKW	Salt Req'd	
	Resin	Brine	Min ¹	Max ²		½ x ¼	¼ x ⅛	Min	Max		9#	15#
NCS39-300	24 x 72	39 x 48	240k	300k	10	150	100	120	170	15	90	150
NCS39-450	30 x 72	39 x 48	360k	450k	15	250	100	155	210	25	135	225
NCS39-600	36 x 72	42 x 60	480k	600k	20	350	150	185	250	35	180	300
NCS39-900	42 x 72	50 x 60	720k	900k	30	450	250	200	270	50	270	450
NCS39-1200	48 x 72	50 x 60	960k	1200k	40	600	300	205	280	60	360	600
NCS39-1950	60 x 72	60 x 66	1560k	1950k	65	1000	400	213	275	100	585	975

Fiberglass Tank sizes indicated.

¹ At 9 Pounds per Cubic Foot = 24,000 Gr. C.F.

² At 15 Pounds per Cubic Foot = 30,000 Gr. C.F.

*Capacities are based on resin manufacturer's data and are dependent upon influent water TDS, temperature, bed depth, and flow rates. All units set at minimum salt settings. When sizing units, use minimum capacity. All flow rates are in Gallons per Minute. All sizes and space required are in inches.

2" Meter Range - Standard 21,250 gal
Extended 106,250 gal

3" Meter Range - Standard 63,750 gal
Extended 318,750 gal

Nelsen Water Solutions 2" and 3" water softeners feature the Fleck 2900 2" or 3900 3" control valve and can be configured in top or side mount applications.

Fleck Control Valve Product Features

- Fully Adjustable 5-Cycle Control Delivers Controlled Up-Flow Backwash, Down-flow Brining, Slow Rinse, Rapid Rinse and Down-Flow Service
- Incorporates 2 Time-Tested Hydraulically Balanced Pistons to Independently Pilot Service Flow and Regeneration
- Available with 7 or 12-Day Timer or Meter to Control Regeneration
- Lead-free Brass Valve Body For Superior Strength and Durability
- No Hard Water Bypass Piston
- Designed for Single Tank or Multi-Tank Systems, Alternating or Interlocking
- Protective Nema 3R Enclosure is Water Resistant, Rain Tight, Corrosion Resistant and UV Stable
- Operational No Hard Water Bypass During Regeneration (for multi-tank systems)
- Choice of 7 or 12 Day Clock or Meter Initiated Regeneration

Control Valve Available Options Include

- Backwash Filter
- Up-flow Regeneration
- Electronic Timer
- Service Valve Operator
- Auxiliary Switches



*2900 Triplex
Copper Piping*

SYSTEM MEASUREMENTS CHART

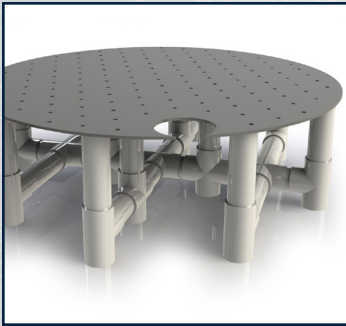
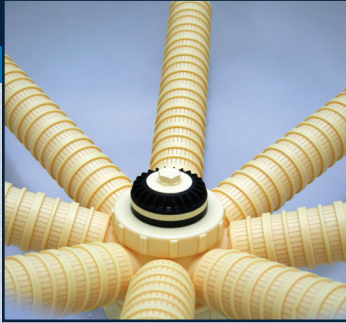
kg SIZE	SYSTEM	TANK	L	W	H	WT**
210	Simplex	21x62	51	30	80	740
210	Duplex	21x62	78	30	80	1480
210	Triplex	21x62	105	30	80	2220
210	Quad	21x62	132	30	80	2960
300	Simplex	24x72	54	30	86	1125
300	Duplex	24x72	84	30	86	2250
300	Triplex	24x72	114	30	86	3375
300	Quad	24x72	144	30	86	4500
450	Simplex	30x72	60	32	98	1580
450	Duplex	30x72	102	32	98	3160
450	Triplex	30x72	138	32	98	4740
450	Quad	30x72	174	32	98	6320
600	Simplex	36x72	82	40	100	2115
600	Duplex	36x72	124	40	100	4230
600	Triplex	36x72	166	40	100	6345
600	Quad	36x72	208	40	100	8460

SYSTEM MEASUREMENTS CHART

kg SIZE	SYSTEM	TANK	L	W	H	WT**
900	Simplex	42X72	104	60	110	3405
900	Duplex	42X72	158	60	110	6810
900	Triplex	42X72	212	60	110	10215
900	Quad	42X72	266	60	110	13620
1200	Simplex	48X72	110	60	108	4300
1200	Duplex	48X72	170	60	108	8600
1200	Triplex	48X72	230	60	108	12900
1200	Quad	48X72	290	60	108	17200
1500	Simplex	54X60 S	120	78	106	
1500	Duplex	54X60 S	190	78	106	
1500	Triplex	54X60 S	260	78	106	
1500	Quad	54X60 S	330	78	106	
1950	Simplex	60x60 S	148	84	110	
1950	Duplex	60x60 S	224	84	110	
1950	Triplex	60x60 S	300	84	110	
1950	Quad	60x60 S	376	84	110	

**Approximate system weight in pounds

SYSTEM FEATURES



Standard Features

- Composite Fiberglass Tanks
- High Quality Ion-Exchange Resin
- NXT2 Controller
- High Flow Distributors
- Simplex, Duplex Parallel, Twin Alternating, Triplex & Quad (Progressive)
- Standard Pipe Size: 2" and 3" Inlet/Outlet

Customization Options

- Remote Meter
- Skid Mounted with Inter-Connecting Piping and Tank Isolating Valves and Bypass
- ASME Coded Tanks
- Commercial Grade Brine Grid

Nelsen Commercial Softeners are built for consistent production and durability to provide years of trouble free service, even in the most demanding applications.

PIPING

Side mount configured systems have standard schedule 80 PVC face piping. Optional Pro-Press® crimped copper piping is also available.

HIGH FLOW DISTRIBUTORS

Both top mount and side mount systems feature high flow distribution systems. Top mount systems utilize polypropylene hub & laterals and side mounted systems feature heavy duty PVC.

BRINE (Salt) SYSTEMS

Corrosion-proof brine tanks, 50" and under, are blow molded or rotation molded polyethylene. Larger tanks, 60" and up, are manufactured of reinforced fiberglass. All systems feature a high-flow brine control to measure the correct amount of brine and feature a built-in safety shutoff. Optional salt decks are available for brine tanks 50" and under.

RESIN TANKS

The resin tank is a composite fiberglass construction for outstanding performance and durability in harsh chemical environments. A unique feature of its construction is a leak-proof pressure vessel liner. The liner is made from FDA-approved, highly stress and crack-resistant, UV-inhibited polyethylene.

Steel tanks can be specified when required and can be custom designed to meet your specific application requirements. Our standard steel tanks, through 60" diameters, come standard with Bar-Rust™ 233H interior lining and Tnemec® exterior color is "safety blue".



*Skid Mounted
2900 Duplex Softener
Pro-Press Copper Piping*

REPRESENTED BY: