



## NELSEN COMMERCIAL SOFTENERS

Whether your project is a low or high-rise office building, shopping mall, hospital, hotel, college lab, casino... **Nelsen Engineered Systems** can assist you with job specifications, submittals, sales and engineering drawings, and sizing of the equipment. **NELSEN COMMERCIAL** water softeners are designed for commercial applications ranging from 96,000 to 1,200,000 grains of hardness removal capacity at flow rates up to 280 gpm. We can manufacture to unique specifications, single or a variety of multiple tank systems, or use our inhouse engineering and CAD capabilities to develop a design that meets your specific requirements. With our dedication, you can be assured that Nelsen Engineered Systems will provide you with the support you deserve.

### 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 these unwanted contaminants and increase process efficiency, saving money now and in the years ahead.

**Pressure Vessel** – Non-corrosive with composite fiberglass construction for outstanding performance and durability in harsh chemical environments.

**Brine System** – Our brine tanks are made of tough, high density polyethylene with an optional grid plate for maximum saturation of brine.

### IDEAL FOR

- RO/DI Pre-Treatment
- Apartment Buildings
- Office Buildings
- Hotels/Motels
- Restaurants
- Laundries
- Vehicle Wash
- Casinos/Resorts
- Manufacturing
- Hospitals & Nursing Homes
- Laboratories & Clinics
- Plus many more!

### NELSEN LIGHT COMMERCIAL

At Nelsen Corporation, our systems are designed with your needs in mind. We can custom 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.

### STANDARD FEATURES INCLUDE:

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

**Regeneration Controller** – features the Fleck 3200NT electronic controller, combining simplicity with flexibility that is easy to setup single or multiple tank applications.

**Control Valve** – Made of high quality, lead free brass for a long reliable life. Hydraulically balanced pistons glide effortlessly along non-corrosive spacers and seals to precise positions.





**NELSEN COMMERCIAL** 2" and 3" water softeners are controlled by the Fleck 3200NT timer to control from one to four control valves. The 3200NT Network timer uses on board communications capabilities to link multiple valves via standard off the shelf telephone cables.

**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. Defaults 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 <sup>1</sup>	Max <sup>2</sup>		1/2 x 1/4	1/4 x 1/8	Min	Max		9#	15#
NCS29-120	16 x 65	24 x 50	96k	120k	4	-	75	40	57	7	40	60
NCS29-150	18 x 65	24 x 50	120k	150k	5	-	100	50	62	9	50	75
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

**2900 TOP MOUNT Simplex units**

Model Number	Space Req'd L x W x H	Shipping Weight
NCS29-120	44 x 24 x 78	435 lbs
NCS29-150	46 x 24 x 79	575 lbs
NCS29-210	49 x 24 x 79	740 lbs
NCS29-300	58 x 30 x 86	1125 lbs
NCS29-450	73 x 39 x 93	1580 lbs
NCS29-600	82 x 42 x 95	2115 lbs

**System 5 and 6 units**

Model Number	Space Req'd L x W x H	Shipping Weight
NCS29-120	88 x 24 x 78	870 lbs
NCS29-150	92 x 24 x 79	1150 lbs
NCS29-210	98 x 24 x 79	1480 lbs
NCS29-300	116 x 30 x 86	2250 lbs
NCS29-450	146 x 39 x 93	3160 lbs
NCS29-600	164 x 42 x 95	4230 lbs

**System 7 units**

Model Number	Space Req'd L x W x H	Shipping Weight
NCS29-120	64 x 24 x 78	830 lbs
NCS29-150	68 x 24 x 79	1110 lbs
NCS29-210	74 x 24 x 79	1440 lbs
NCS29-300	86 x 30 x 86	2190 lbs
NCS29-450	107 x 39 x 93	3085 lbs
NCS29-600	122 x 42 x 95	4130 lbs

<sup>1</sup> At 15 Pounds per Cubic Foot = 30,000 Gr. C.F.

<sup>2</sup> At 9 Pounds per Cubic Foot = 24,000 Gr. C.F.

\*Capacities are based on resin manufacture'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 std 21,250 gal ext 106,250 gal

3" meter range std 63,750 gal ext 318,750 gal

**2900 SIDE MOUNT Simplex units**

Model Number	Space Req'd L x W x H	Shipping Weight
NCS29-120	44 x 28 x 78	435 lbs
NCS29-150	46 x 30 x 79	575 lbs
NCS29-210	49 x 33 x 79	740 lbs
NCS29-300	58 x 36 x 86	1125 lbs
NCS29-450	73 x 42 x 93	1580 lbs
NCS29-600	82 x 48 x 95	2115 lbs

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# NELSEN COMMERCIAL SOFTENERS



**NELSEN COMMERCIAL 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

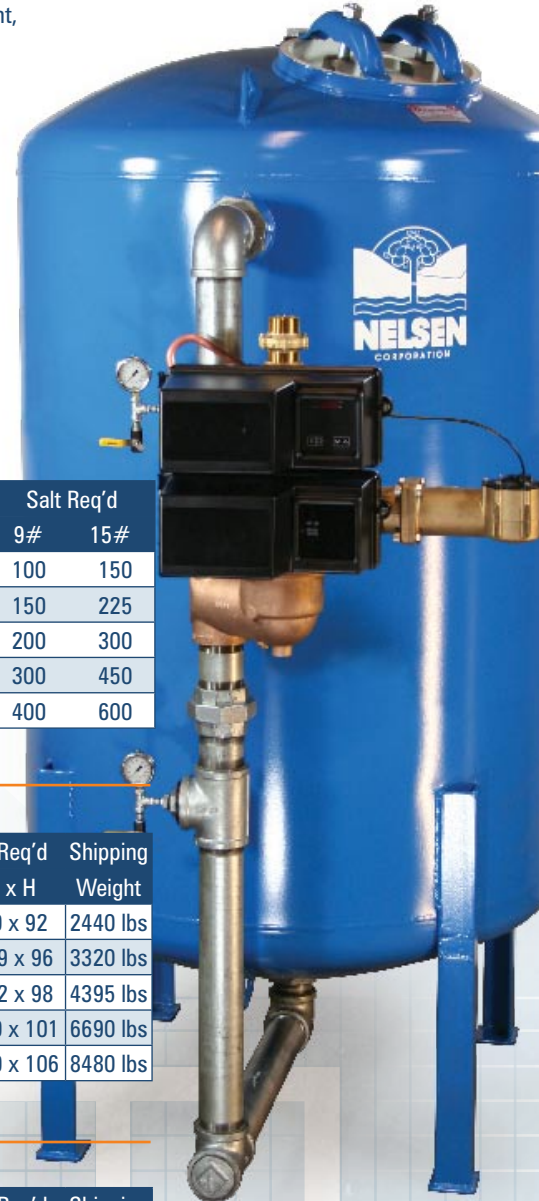
- Fully Adjustable 5-Cycle Control Delivers Controlled Upflow Backwash, Downflow Brining, Slow Rinse, Rapid Rinse and Downflow Service
- Incorporates 2 Time-Tested Hydraulically Balanced Pistons to Independently Pilot Service Flow and Regeneration
- Available with 7 or 12 Day Timer or Meter to Control 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
- Choice of 7 or 12 Day Clock or Meter Initiated Regeneration

## Control Valve Available Options Include

- Backwash Filter
- Upflow Regeneration
- Electronic Timer,
- Service Valve Operator
- Auxiliary Switches

## FLECK 3900 - SIZING SPECIFICATION CHART

Model Number	Tank Size		Capacity		Resin Cu Ft	Support Bed		Flow Rates*		BKW	Salt Req'd	
	Resin	Brine	Min <sup>1</sup>	Max <sup>2</sup>		1/2 x 1/4	1/4 x 1/8	Min	Max		9#	15#
NCS39-300	24 x 72	30 x 48	240k	300k	10	150	100	120	170	15	100	150
NCS39-450	30 x 72	39 x 48	360k	450k	15	250	100	155	210	25	150	225
NCS39-600	36 x 72	42 x 60	480k	600k	20	350	150	185	250	35	200	300
NCS39-900	42 x 72	50 x 60	720k	900k	30	450	250	200	270	50	300	450
NCS39-1200	48 x 72	50 x 60	960k	1200k	40	600	300	205	280	60	400	600



## 3900 TOP MOUNT

### Simplex units

Model Number	Space Req'd L x W x H	Shipping Weight
NCS39-300	58 x 30 x 92	1250 lbs
NCS39-450	73 x 39 x 96	1700 lbs
NCS39-600	82 x 42 x 98	2250 lbs
NCS39-900	96 x 50 x 101	3405 lbs
NCS39-1200	102 x 50 x 106	4300 lbs

### System 5 and 6 units

Model Number	Space Req'd L x W x H	Shipping Weight
NCS39-300	120 x 30 x 92	2500 lbs
NCS39-450	150 x 39 x 96	3400 lbs
NCS39-600	168 x 42 x 98	4500 lbs
NCS39-900	196 x 50 x 101	6810 lbs
NCS39-1200	208 x 50 x 106	8600 lbs

### System 7 units

Model Number	Space Req'd L x W x H	Shipping Weight
NCS39-300	86 x 30 x 92	2440 lbs
NCS39-450	107 x 39 x 96	3320 lbs
NCS39-600	122 x 42 x 98	4395 lbs
NCS39-900	142 x 50 x 101	6690 lbs
NCS39-1200	154 x 50 x 106	8480 lbs

## 3900 SIDE MOUNT

### Simplex units

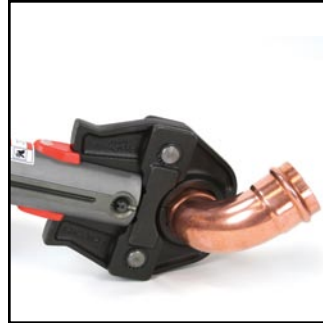
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## STANDARD FEATURES

- Composite Fiberglass Tanks
- High Quality Ion-Exchange Resin
- Side mount Pre-piped manifold
- 3200NT Controller
- High Flow Distributors
- Pre-piped and wired
- Simplex, duplex parallel, twin alternating, triplex (progressive)
- Standard pipe size: 2" and 3" inlet/outlet

## CUSTOMIZATION OPTIONS

- Remote Meter
- Brine Recovery/Reclamation System
- Skid Mounted with Inter-connecting Piping and Tank Isolating Valves and Bypass
- ASME Coded Tanks

**NELSEN COMMERCIAL SOFTENERS** are always custom designed and built for each and every client to provide years of trouble free service, even in the most demanding applications.

### PIPING

Standard galvanized face piping on side mount configured systems. Optional PVC or 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 and use of 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.

Steel Tanks come standard with Tnemec® interior lining. Exterior color is a red oxide primer with optional finish colors available.



REPRESENTED BY:

