

# COMMERCIAL WATER SOFTENERS (SCG GROUP)



Superior Water Conditioning's most complete line of commercial softeners is the SCG Group (Standard Commercial Group). Offering countless configuration options the SCG Group provides solutions for all most any application.

#### Technical Specifications & Features

- Recommended maximum operating pressure: 100 psig (690 kPa)
- Recommended maximum operating temperature: 100°F (38°C)

#### Main Control Valve

- Single valve per tank controls all softener functions
- Electro-mechanical timer controls all valve cycles including service backwash, brine draw, second backwash, slow rinse, fast rinse and brine tank refill
- Meter initiated regeneration
- All control valves constructed of lead free-brass\*
- Main piston is also lead-free brass\* with a Teflon coating
- No hard water bypass during regeneration is standard on multi-tank systems
- Simple threaded (NPT) inlet, outlet and drain connections
- CSA certified valves (in Canada)

\* as defined under Section 1417(d) of the U.S.E.P.A. Safe Drinking Water Act.

#### Resin

- Premium quality ion exchange softening resin, selected for resistance to fouling and minimum salt usage
- FDA Grade Softener Tanks and Internals
- Seamless polyethylene liner wrapped with a continuous filament wound/epoxy resin fiberglass shell

#### Resin (continued)

- PVC hub/lateral flow distributor and riser tube with washed quartz support bed
- Tanks up to and including 24" diameter.
- Brine tanks are one piece rotationally molded polyethylene with lid, air check valve assembly, brine well and salt support grid.

#### Optional Features

- Calendar clock initiated regeneration
- 3200NXT network timer
- 3214NXT demand recall
- Brine tank safety float valve
- Side mounted valves (2850 and larger)

#### Warranty

All equipment is warranted against defects in material or workmanship for the following periods:

- Fiberglass tanks - 5 years
- Brine Tank - 1 year
- Control Valve and Electronics - 5 years
- Brine Tank Air Check - 2 years
- All other components are for a period of one year

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## Standard System Control Types

- Recommended maximum operating pressure: 100 psig (690 kPa)
- Recommended maximum operating temperature: 100°F (38°C)

## Main Control Valve

**System 4** - Single tank meter initiated. Regeneration is delayed until 2:00 a.m. (adjustable). Hard Water Bypass during regeneration is standard or No Raw Water Bypass during regeneration is optional.

**System 5** - Multi-tank meter initiated regeneration. All tanks are in service to provide parallel flow. Each tank is equipped with its own meter and brine tank. Regeneration is immediate once capacity is exhausted. Each control is interlocked to prevent more than one system from regenerating at the same time. Valves are equipped with no hard water bypass to prevent hard water passing to service while a tank is regenerating.

**System 6** - Sequential Demand system with all tanks in service and all water flow is monitored by one meter. The tanks regenerate sequentially, on demand with one tank off line at any time.

**System 7** - Duplex alternating tank meter initiated regeneration. Service / standby operation with one tank online while the second tank is regenerating or is in standby. One meter supplied for entire system. Valves are equipped with no hard water bypass to prevent hard water passing to service while a tank is regenerating or is in standby.

## Regeneration Initiation Types Available

**Calendar Clock:** Softener systems with Calendar Clock initiation are typically the least expensive. The regeneration is delayed and can be set for any time of day. Typically, twelve (12) day clocks are used so that the system can be regenerated at evenly spaced intervals of every 1, 2, 3, 4, 6 or 12 days. A 7-day clock is an option.

**Metered or Volumetric:** Although a meter initiated system is slightly more expensive than a calendar clock system, a metered system will easily pay for itself shortly in better salt and water consumption efficiencies. The meter measures the volume of water passing through the softener. The regeneration interval is based on the volume calculated to exhaust the softeners bed capacity. Meter initiated softeners also have the greatest range of systems available. Single, duplex and triplex systems can be ordered with different operational characteristics and controllers.

## Regeneration Initiation Types Available (Continued)

**External Input (OPTIONAL):** Some systems can be initiated with external inputs. This type of regeneration initiation typically requires an electronic controller. Coordination with our commercial engineering department is suggested to facilitate this special type of system.

## Controller Types Available

**Mechanical Timers:** These timers are the most cost effective type of control available for softener and filter systems. The program wheel of the timer allows adjustment of a regeneration in two minute increments by adding and removing pins which control the regeneration cycle times. Mechanical timers, however, are wired for one type of system only. They are not as flexible as an electronic control to change regeneration types or parameters and they cannot be changed to add future multiple units.

**3200NXT Network Timer:** The 3200NXT allows all valves to be identical in configuration. This allows for simple system expansion in the future without needing to replace existing controls. The control also makes initial setup simple and allows modifications to the system operation to be done in the field. The 3200NXT control also includes additional diagnostic functionality to assist with system troubleshooting. Available for FAF Series softeners, 2750, 2850, 2900, 3150 and 3900 valves; one to four valves within a system; all operational systems modes.

# SCG Group Commerical Softener Specifications

Model	Capacity (grains) @15lb-salt/cu.ft. @10lb-salt/cu.ft.	Resin Volume cu.ft. (cu.m.)	Critical Application Max. Flow Rate usgpm (lps)	2750 - 1" Valve Units		2850 - 1.5" Valve Units		2900s - 2" Valve Units		3150 - 2" Valve Units		3900 - 3" Valve Units		Salt per Regen. lbs (kg) @15lbs. salt/cu.ft. @10lbs. salt/cu.ft.	Backwash Flow Rate usgpm (lps)	Mineral Tank Dimensions inches (mm)	Brine Tank Dimensions (USA) inches (mm)	Brine Tank Dimensions (Canada) inches (mm)	Shipping Weight Single lbs (kg)
				Flow Rate at 15 psi and 25 psi Pressure Drops (Single Tank Systems)															
				@ 15psi	@ 25psi	@ 15psi	@ 25psi	@ 15psi	@ 25psi	@ 15psi	@ 25psi	@ 15psi	@ 25psi						
SCG 45	45,000 40,500	1.5 (0.04)	7.5 (0.47)	17 (1.07)	23 (1.45)								23 (10) 15 (7)	2.4 (0.15)	10 x 54 (254 x 1372)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	180 (82)	
SCG 60	60,000 54,000	2 (0.06)	10 (0.63)	22 (1.39)	29 (1.83)	36 (2.27)	49 (3.09)	50 (3.15)	75 (4.73)				30 (14) 20 (9)	5.0 (0.32)	14 x 50 (356 x 1270)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	270 (122)	
SCG 90	90,000 81,000	3 (0.08)	15 (0.95)	20 (1.26)	27 (1.70)	32 (2.02)	44 (2.78)	41 (2.59)	60 (3.79)				45 (20) 30 (14)	5.0 (0.32)	14 x 65 (356 x 1651)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	330 (150)	
SCG 120	120,000 108,000	4 (0.11)	20 (1.26)	21 (1.32)	29 (1.83)	35 (2.21)	49 (3.09)	49 (3.09)	70 (4.42)				60 (27) 40 (18)	7.0 (0.44)	16 x 65 (406 x 1651)	18 x 40 (457 x 1016)	21 x 36 (533 x 914)	390 (177)	
SCG 150	150,000 135,000	5 (0.14)	25 (1.58)	24 (1.51)	31 (1.96)	43 (2.71)	58 (3.86)	76 (4.79)	103 (6.50)				75 (34) 50 (23)	12 (0.75)	21 x 54 (533 x 1372)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	500 (227)	
SCG 180	180,000 162,000	6 (0.17)	30 (1.89)	24 (1.51)	31 (1.96)	42 (2.65)	57 (3.80)	72 (4.54)	98 (6.18)				90 (41) 60 (27)	12 (0.75)	21 x 54 (533 x 1372)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	560 (255)	
SCG 210	210,000 189,000	7 (0.20)	35 (2.21)	23 (1.45)	31 (1.96)	41 (2.59)	55 (3.47)	67 (4.23)	93 (5.87)				105 (48) 70 (32)	12 (0.75)	21 x 69 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	640 (291)	
SCG 240	240,000 216,000	8 (0.23)	40 (2.52)	23 (1.45)	30 (1.89)	40 (2.42)	54 (3.41)	63 (3.97)	89 (5.62)				120 (54) 80 (36)	12 (0.75)	21 x 69 (533 x 1753)	24 x 50 (610 x 1270)	24 x 48 (610 x 1219)	690 (314)	
SCG 270	270,000 243,000	9 (0.25)	45 (2.84)	24 (1.51)	31 (1.96)	42 (2.65)	57 (3.80)	75 (4.73)	104 (6.56)				135 (61) 90 (41)	15 (0.94)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	820 (373)	
SCG 300	300,000 270,000	10 (0.28)	50 (3.15)	23 (1.45)	31 (1.96)	42 (2.65)	57 (3.80)	73 (4.61)	102 (6.44)				150 (68) 100 (45)	15 (0.94)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	880 (399)	
SCG 330	330,000 297,000	11 (0.31)	55 (3.47)	23 (1.45)	31 (1.96)	42 (2.65)	56 (3.53)	71 (4.48)	99 (6.25)				165 (75) 110 (50)	15 (0.94)	24 x 72 (610 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	930 (423)	
SCG 360	360,000 324,000	12 (0.34)	60 (3.79)			46 (2.90)	61 (3.85)	84 (5.30)	116 (7.32)			156 215	215 (13.56)	25 (1.57)	30 x 72 (762 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	1130 (514)	
SCG 390	390,000 351,000	13 (0.37)	65 (4.10)			46 (2.90)	61 (3.85)	82 (5.17)	114 (7.19)			152 210	210 (13.25)	25 (1.57)	30 x 72 (762 x 1829)	30 x 50 (762 x 1270)	30 x 48 (762 x 1219)	1180 (536)	
SCG 450	450,000 405,000	15 (0.42)	75 (4.73)			45 (2.84)	60 (3.79)	80 (5.05)	112 (7.07)			142 200	200 (12.62)	25 (1.57)	30 x 72 (762 x 1829)	39 x 48 (991 x 1219)	36 x 48 (914 x 1219)	1340 (609)	
SCG 510	510,000 459,000	17 (0.48)	85 (5.36)			45 (2.84)	59 (3.72)	79 (4.98)	109 (6.88)			138 190	190 (11.99)	25 (1.57)	30 x 72 (762 x 1829)	39 x 48 (991 x 1219)	36 x 48 (914 x 1219)	1440 (655)	
SCG 570	570,000 513,000	19 (0.54)	95 (5.99)					86 <sup>*</sup> (5.43)	116 <sup>u</sup> (7.32)	85 (5.36)	112 (7.05)	180 247	247 (15.58)	35 (2.20)	36 x 72 (914 x 1829)	39 x 48 (991 x 1219)	36 x 48 (914 x 1219)	1580 (718)	
SCG 600	600,000 540,000	20 (0.57)	100 (6.31)					85 <sup>*</sup> (5.36)	115 <sup>u</sup> (7.26)	84 (5.30)	111 (6.98)	177 245	245 (15.46)	35 (2.20)	36 x 72 (914 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	1648 (748)	
SCG 630	630,000 567,000	21 (0.59)	105 (6.62)					84 <sup>*</sup> (5.30)	114 <sup>u</sup> (7.19)	83 (5.22)	111 (6.98)	173 242	242 (15.27)	35 (2.20)	36 x 72 (914 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	1700 (773)	
SCG 660	660,000 594,000	22 (0.62)	110 (6.94)							88 (5.55)	116 (7.32)	202 273	273 (17.22)	45 (2.83)	42 x 72 (1047 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	1850 (841)	
SCG 720	720,000 648,000	24 (0.68)	120 (7.57)							88 (5.55)	116 (7.32)	201 269	269 (16.97)	45 (2.83)	42 x 72 (1047 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	2650 (1202)	
SCG 780	780,000 702,000	26 (0.74)	130 (8.20)							87 (5.49)	115 (7.26)	197 266	266 (16.78)	45 (2.83)	42 x 72 (1047 x 1829)	42 x 60 (1067 x 1524)	42 x 60 (1067 x 1524)	2860 (1300)	
SCG 900	900,000 810,000	30 (0.85)	150 (9.46)							89 (5.56)	117 (7.37)	213 284	284 (17.92)	60 (3.77)	48 x 72 (1291 x 1829)	50 x 60 (1270 x 1524)	42 x 60 (1067 x 1524)	3330 (1510)	
SCG 1020	1,020,000 918,000	34 (0.96)	170 (10.73)							88 (5.55)	116 (7.32)	208 280	280 (17.67)	60 (3.77)	48 x 72 (1291 x 1829)	50 x 60 (1270 x 1524)	42 x 60 (1067 x 1524)	3540 (1606)	
SCG 1080	1,080,000 972,000	36 (1.02)	180 (11.36)							88 (5.55)	116 (7.32)	205 276	276 (17.41)	60 (3.77)	48 x 72 (1291 x 1829)	50 x 60 (1270 x 1524)	42 x 60 (1067 x 1524)	3640 (1655)	
SCG 1740	1,740,000 1,566,000	58 (1.64)	220 (13.88)							87 (5.48)	116 (7.32)	220 295	295 (18.61)	95 (5.99)	63 x 86 (1600 x 2185)	70 x 58 (1778 x 1474)	70 x 58 (1778 x 1474)	6740 (3064)	

## Additional Notes:

- Critical applications refer to softening prior to equipment such as: Boiler makeup water, heat exchangers and other equipment sensitive to hardness scaling.
- Depending on the valve used in each system, critical application flow rates are decreased if the pressure drop is 15psig or greater.
- Factory settings shown in italics.
- Superior Water Conditioning reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.

## Shipping Weights:

- Single units shipping weights shown are maximums for each unit size.
- Valve type, multiple unit systems and additional options may alter this figure.
- Please consult customer service or a system specification drawing for actual shipping weights.

(1) Must have 60 psimimum to regenerate units properly.