

# Specification Language: 95MTS 90-1.25D800 Softener

### **Control Valve**

- 1. Each mineral tank will have one (1) 32 mm (1.25"), Canature WaterGroup 95 series, top mounted, plastic PPO (Noryl) body, motor driven control valve and will be of the piston/seal/spacer type.
- 2. All the valves will have an electronic slave controller and be interlinked with each other to the separate main controller.
  - a. The interlinking cables will also deliver power to each valve.
- 3. The control valve will perform backwash, brine draw, slow rinse, rapid rinse and brine tank refill as required.
- 4. Each control valve will have an integrated turbine meter.
- 5. Each control valve will indicate the unit address via an LCD display.
- 6. The control valve has two (2) programmable auxiliary output relays.
- 7. Each valve comes with one (1) 32 mm (1.25") electronic ball valve to be connected on the outlet side of the valve.
- 8. All valves will regenerate co-currently.
- 9. All valves will be NSF/ANSI 44 certified for materials and structural integrity requirements.
- 10. The control valve will be designed to work at a pressure from 137 862 kPa gauge (20 125 psig) and from temperatures of 1 °C (34 °F) to 43 °C (110 °F).
- 11. The control valve and electronics will have a warranty of five (5) years.

#### Media

- 1. The Ion exchange resin has a total capacity of 1.9 eq/L in the sodium form.
- 2. Each mineral tank will have 85 L (3 ft<sup>3</sup>) of ion exchange media.
- 3. The ion exchange resin will be WQA certified to NSF/ANSI 44 standards for material requirements only and be compliant with US FDA Code of Federal Regulations, Section,



#### Paragraph 173.25

4. The ion exchange resin will be Aquafine AQ100-Na.

#### Mineral Tank

- 1. All mineral tanks will be 356 mm (14") in diameter and 1651 mm (65") in height.
- 2. All mineral tanks will be NSF/ANSI 44 certified for Materials and Structural Integrity.
- 3. The liner material will be made of polyethylene and the outer winding will be made of a high-performance fibreglass and epoxy resin.
- 4. The maximum operating pressure will be 1034kPa gauge (150 psig) with an operating temperature range of 1  $^{\circ}$ C 49  $^{\circ}$ C (34  $^{\circ}$ F 120  $^{\circ}$ F) with a maximum vacuum of 127 mm Hg (2.46 psi).
- 5. The system will contain two (2) mineral tanks.
- 6. The mineral tank will have a warranty of five (5) years.

### **Brine Tank**

- 1. Each softener unit will have one (1) brine tank, for a total of two (2) brine tanks with a diameter of 610 mm (24") and a height of 940 mm (37") each.
- 2. Each brine tank includes a salt plate, removable salt lid, brine well, safety float and brine well cap.
- 3. The brine well will extend above the shoulders of the tank and through the lid enabling salt to be heaped past the shoulders of the tank.
- 4. The thickness of the brine tank walls will be 6.4 mm (0.25").
- 5. The brine tank and brine tank accessories will have a warranty of one (1) year

# **Controller Programming**

- 1. The master controller will be a separate controller **not** attached to any valve.
- 2. The master controller will have a color, graphical user interface with a 73 mm (2.875") screen.
- 3. The main page display will show:



- a. The total number of units.
- b. The time of day.
- c. Total system flow rate.
- d. Remaining system volume.
- e. Softener unit address.
- f. The status of each softener (ON-LINE, Standby or Backwash).
- g. The percent capacity available in each softener.
- h. The flow rate through each softener (if applicable).
- i. Time left in the backwash/regeneration cycle (if applicable).

# System Set Up and Operation

- 1. The system is set up as a demand recall system and will have its regeneration initiated via a totalized hardness calculation.
- 2. The maximum recommended operating pressure will be 139-689 kPa gauge (20-100 psig)
- 3. Only the main controller will be connected to an electrical outlet able to supply 120V at 60Hz.
- 4. Each softener will have a continuous flow rate pressure drop of 103 kPa (15 psi) at a flow rate of 1.58 lps (25 USGPM) and 172 kPa (25 psi) drop at peak flow rates of 2.21 lps (35 USGPM)

## System Part Number

The water softener will be a **95MTS 90-1.25D800** as manufactured by Canature WaterGroup.