# **Specification Language: 95STS MG21-1.5SC00 Manganese Greensand Filter**

## **Control Valve**

1. The mineral tank will have one (1) 38 mm (1.5“), Canature WaterGroup 95 series, top mounted, plastic PPO (Noryl) body, motor driven control valve and will be of the piston/seal/spacer type.
2. The valve will have an electronic controller.
3. The control valve will have an integrated turbine meter.
4. The valve will be an NSF/ANSI 44 Certified for Materials and Structural Integrity Requirements.
5. 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).
6. The control valve and electronics will have a warranty of five (5) years.

## **Media**

1. The mineral tank will contain 762 mm (30”) bed depth of high quality, NSF approved Anthracite and Manganese Greensand media.
2. The mineral tank will have graded and washed quartz support bed of 76 mm (3”) gravel above the bottom of the distribution system.

## **Mineral Tank**

1. The mineral tank will be 356 mm (21”) in diameter and 1575 mm (62”) in height.
2. The mineral tank will be an 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 1034 kPa gauge (150 psig) with an operating temperature range of 1 °C – 49 °C (34 °F – 120 °F) with a maximum vacuum of 127 mm Hg (2.46 psi).
5. The system will contain one (1) mineral tank.
6. The mineral tank will have a warranty of five (5) years.

## **Controller Programming**

1. The homepage will display time & date, the meter mode, flow rate, and the remaining system volume.
2. The valve will have four (4) buttons for programming purposes. A Menu, Set/Regen, Up/+, and Down/- buttons.

## **Chemical Feed System**

1. There shall be a chemical solution feeder constructed of material suitable for handling potassium permanganate or sodium hypo-chlorite solutions.
2. There shall be a graduated polyethylene solution tank.
3. The chemical feed pump will require a 115V for its operation.
4. The chemical feed pump will operate in conjunction with the on - off operation of the raw water supply pump.

## **System Set Up and Operation**

1. The system is set up as a calendar clock system and will have its regeneration initiated via a system timer.
2. The maximum recommended operating pressure will be 139 - 689 kPa gauge (20 - 100 psig)
3. Each timer will have a transformer that will be connected to a 110V AC 50/60Hz (+/- 20%) input and will output 12V AC.
4. Filtered water can be drawn continuously from each filter unit at flows of up to 12 USGPM (0.76 l/s). depending on the manganese concentration.
5. The backwash requirement for the filter is 25 USGPM (1.58 l/s).

## **System Part Number**

The filter will be a **95STS MG21-1.5SC00** as manufactured by Canature WaterGroup.