

**MEASURE RITE®  
Sight Tube  
Assembly**

**1/2" NPT  
(3/4" Pipe Sight Tube)**

**Installation &  
Operation Manual**



## SCOPE OF THIS MANUAL

This manual contains information concerning the installation and operation of the Badger® *MEASURE RITE*® sight tube assembly. To ensure proper performance, the instructions given in this manual should be thoroughly understood. Retain the manual in a readily accessible location for future reference.

Installation of this unit is fairly simple and straight forward. This manual is designed so as to provide you with a step by step guide.

If any questions or concerns arise, please contact Badger Meter Concrete Group - Tulsa, OK: 918-836-8411.

## GENERAL

The *MEASURE RITE* Sight Tube tank level indicator is used in admix dispenser systems that are mounted on the side of Badger stainless steel ASME certified tanks. However, the unit may be utilized in additional level indicating applications if the material is compatible and within the pressure rating.

## SPECIFICATIONS

### PRESSURE

Since the pressure rating of the SST ASME tanks and associated system is 100 psig, this assembly is also rated for 100 psig at 75°F. However, in other applications, this unit may be suitable for higher pressures. Consult the factory for more information.

### TEMPERATURE RANGE

Optimum Temperature Range: +40°F to 120°F  
With care of the sight tube, and as long as the fluid does not freeze, the unit can be used down to +30°F.

## INSTALLATION INSTRUCTIONS

Installation of Tank Fittings:

- Thread the 1/2" NPT of the upper fitting onto the tank fitting, leaving the opening for the sight tube at approximately the 5:00 position. This will allow the tube to be inserted, then the fitting is rotated to the 6:00 position for insertion into the lower fitting. (See NOTES at bottom.)
- Pipe plugs should be installed in unused openings.
- Install the lower fitting, aligning the tube opening parallel with the tank (pointed toward the upper fitting)
- Remove the stop plug "A". The stop plug should be connected to the upper fitting using the provided ball chain and 5-40 screws.
- Measure the distance "X" between the fittings.
- ADD 1 3/8" to the "X" Dimension.  
Length Tolerance: +0.00/ -0.032"
- Measure and cut the Clear Schedule 80 PVC Pipe, keeping the cut square relative to the pipe sides.

- Using a file or small knife, deburr the inside of the pipe ends and slightly chamfer (angle) the ends of the pipe so they will slip past the o-rings without damaging them.
- Lubricate the O-Rings with Silicone grease (See NOTE 3 at bottom) and insert them into each fitting groove, as shown.
- Carefully insert the tube up through the o-ring of the upper fitting, until it stops.
- Rotate the upper fitting from the 5:00 position to the 6:00 position, aligning the opening with the opening in the lower fitting.
- Slide the tube down into the lower fitting until it stops. The fit should be snug.
- Once the tube is seated, install the stop plug. The plug prevents the tube from slipping upward during use or during handling.
- Thread-sealing compound or TFE tape should be used on all pipe fittings.
- Normally, NPT fittings require no more than 2-3 turns past hand right.
- Replace any plastic pipe plugs before pressurizing, with either a by-pass valve or metal pipe plug.

**NOTE 1:** Depending on the tube length, and since the fittings allow for some misalignment, the tube may be installed or removed with both fittings facing each other.

**NOTE 2:** Bottom fitting is available with "side" or "bottom" drain fitting. Specify which when ordering. Drawing depicts both for viewing only.

**NOTE 3:** Silicone lubricants may be ordered from Badger Meter or obtained locally. Two suitable silicone lubricants are available in Badger stock:  
P/N 258238-0001 - High viscosity silicone oil  
P/N 500458-0021 - Silicone grease

### **⚠ CAUTION**

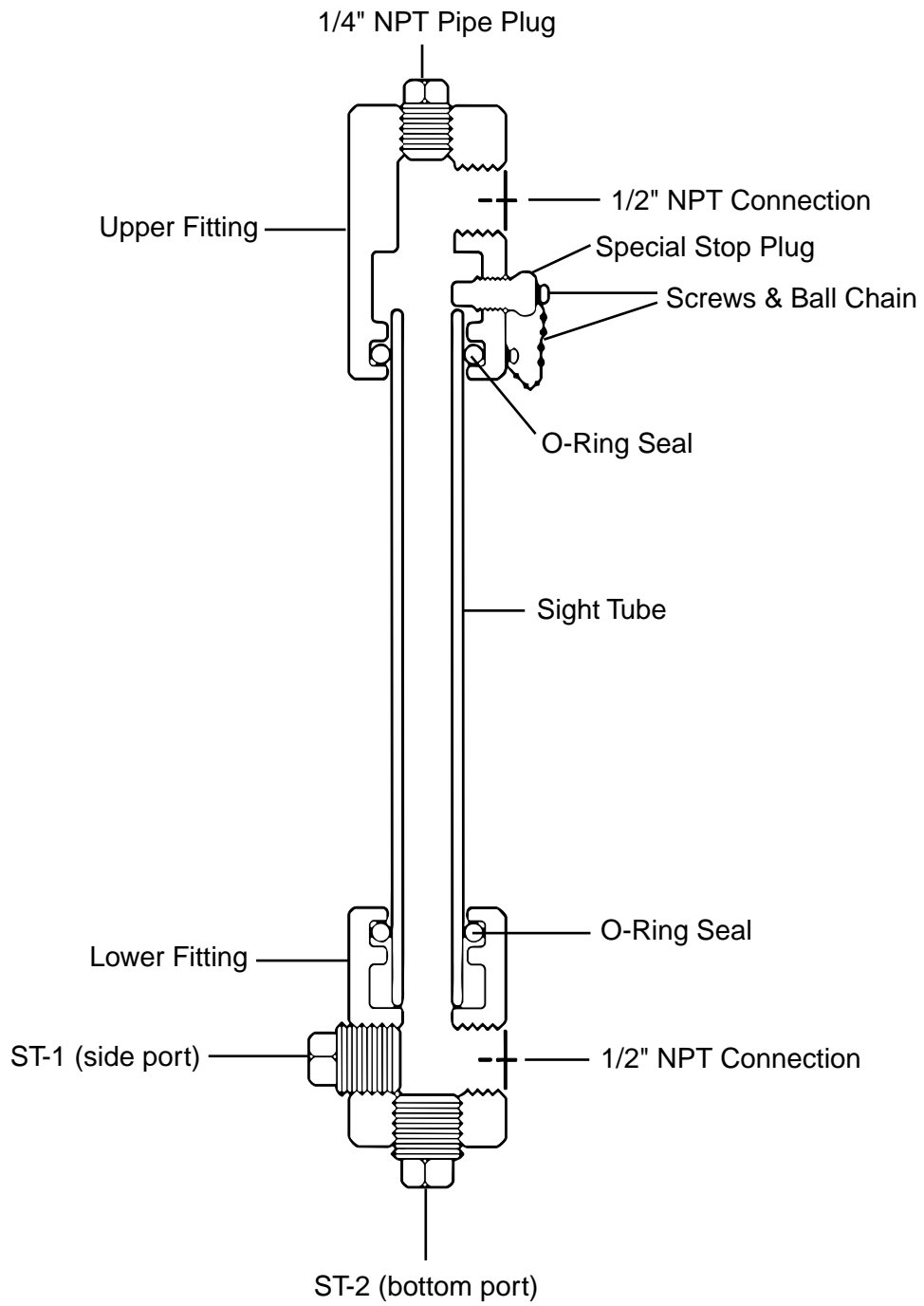
Do not use a metal screwdriver to remove old o-rings, as this may damage the o-ring sealing surface. Use plastic or wood.

### **⚠ CAUTION**

The upper and lower fitting must be rigidly fixed, to prevent separation, by making sure the connecting piping will not allow movement. **Do not connect to plastic fitting!**

### **⚠ CAUTION**

PVC pipe is not recommended for storage or transportation of compressed gases. Limit the duration of purge-gas pressure to no more than 5 minutes. Never leave gas pressure on tank/sight tube assembly for extended periods. Never remove, block or adjust safety relief valves to pressures higher than factory settings.



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