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Sanifrost Freeze Proof Valve System

In the past frost free drinking fountains have drained out a weep hole, located underground, to prevent the fountain from freezing. Many states have determined that bacteria can migrate from the soil, in through the weep hole and contaminate the potable water system. They have also determined that as the water table varies, it can enter when the fountain is activated for drinking. In an effort to protect the public and the potable water supply, these states have banned the use of weep hole style drinking fountains and yard hydrants.

Drinking fountain manufacturers have been looking for a way to satisfy the new state requirements. One solution was to allow the water in the bubbler line to drain back into a reservoir underground, to prevent freezing. The problem is that when the drinking fountain was operated again, the water in the reservoir would be pumped back into the bubbler for consumption. If the drinking fountain was not used for some time, the water stored in the canister may not be suitable for drinking. For liability reasons, many drinking fountain manufacturers and states are concerned with storing water, below ground and then sucking the water out of the canister, into the bubbler, for drinking.

Introducing the patented Saniflow sanitary drinking fountain that eliminates all of the previous concerns. This drinking fountain has a piston and cylinder arrangement that is operated by the pressure of the water supply. For example: if the water supply pressure is 40 psi and the drinking fountain button is released, which turns off the bubbler, 40 psi of water pressure will force the piston to draw in all the water from the bubbler and store it below ground to prevent freezing. When the drinking fountain button is pushed in to turn the bubbler, the supply pressure will drop to 10 psi. A spring at the bottom of the piston will force the piston to expel the stored water up and out the drain, thus preventing any stored water from entering the drinking water supply.

Each time the fountain button is pushed on, new, fresh, potable water is delivered directly to the bubbler. No matter how many months or years the fountain has not been activated, the water that is stored, to prevent freezing, is never permitted to come in contact with the drinking water.

Also, since the water in the spring loaded piston never comes in contact with the potable water that is delivered to the bubbler, the height of the stream from the bubbler is never affected. In other words, the drinking water stream does not fluctuate during the filling or emptying of the cylinder. Another feature of this system is that draining of the water lines, to prevent freezing, occurs when the unit is shut off. Therefore, the time required to ensure the unit is frost proof is minimal. Cycle time required to ensure the drinking fountain is frost free is three seconds.

Water waste is also very minimal. Since no jet pump or venturi is used, only the water that has drained from the fountain and stored in the cylinder is wasted out the drain. The amount of water wasted to the drain for each cycle is 7 ounces, less than one cup. As you can see, the system is very simplistic; therefore, it can be adapted to any existing frost free drinking fountain.

Highlights of the Sanifrost drinking fountain:

- * Frost free to 10 feet overall length
- * Sanitary, will not permit stored or contaminated water to re-enter the drinking water or bubbler
- * Prevents cross contamination of water supply with ground water
- * Minimal water wasted, 7 ounces, less than one cup
- * Easily adapts to existing drinking fountains

WILLIAMS DIMENSIONAL INFORMATION**SaniFrost**

MODEL SNW-PBFP (single valve)

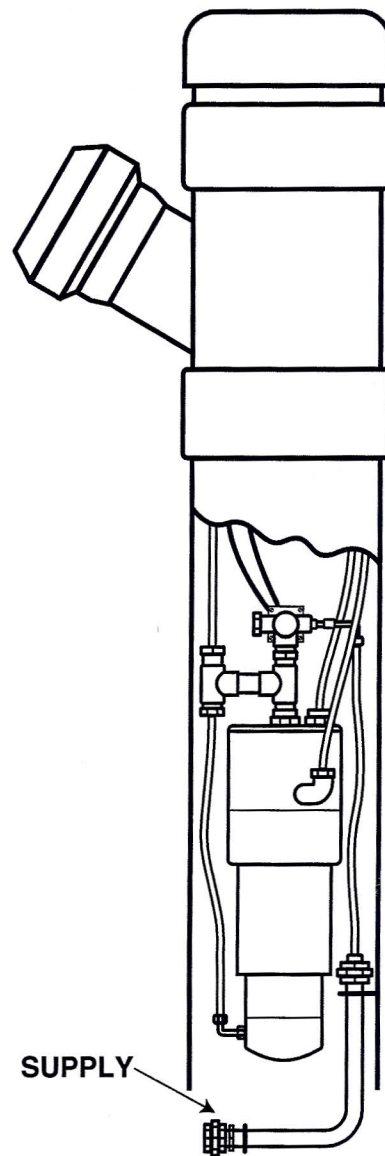
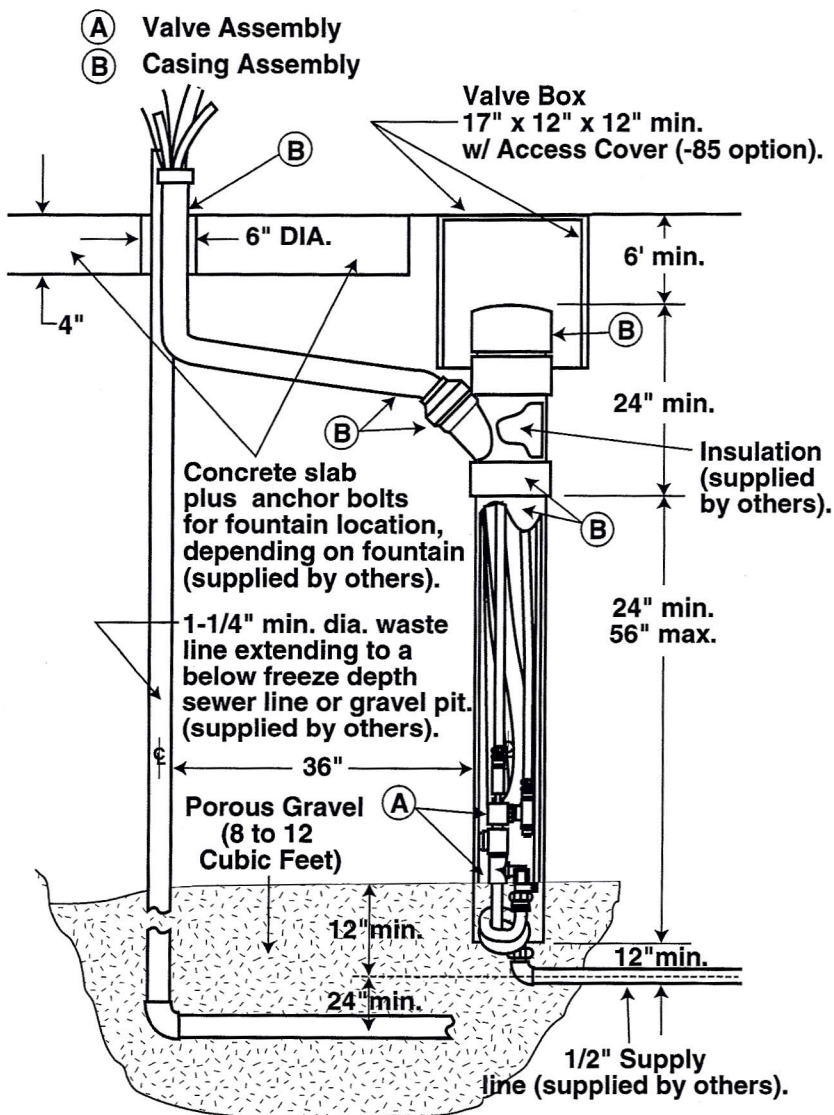
MODEL DNW-PBFP (dual valve)

MODEL TNW-PBFP (triple valve)

* MODEL SNW-PBFP

* MODEL DNW-PBFP

* MODEL TNW-PBFP



*PATENT PENDING

 NOTE: THESE ROUGH-IN DIMENSIONS
 MAY VARY 1/2" (13 mm) PLUS OR MINUS

It is recommended that a dual check valve backflow prevention be installed in the water line going to any FP Fountain.