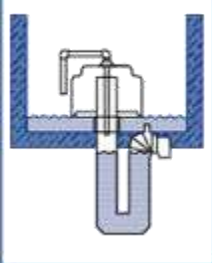


## HOW SIPHONS WORK

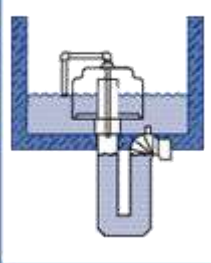
### OPERATION OF SINGLE AUTOMATIC SIPHONS

1. As liquid fills the dosing tank, the level of liquid in the tank and inside the siphon bell rise at the same rate. (The siphon bell is open at the bottom). The siphon is vented to the atmosphere through the vent piping. This rising action continues until the level of the liquid reaches the open end of the outside vent pipe.

**Figure 2A**

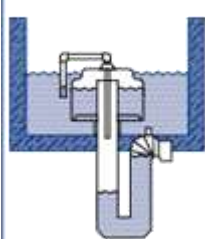


**Figure 2B**

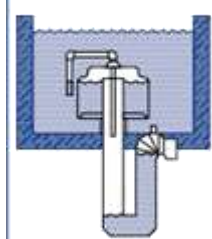


2. Once the liquid reaches the outside vent pipe, it creates an air seal. As the level of liquid continues to rise in the tank, the liquid level in the bell continues to rise, but at a much slower rate. At the same time, the head of water in the tank exerts pressure on the air trapped in the top of the bell and the long leg of the trap. The air in the long leg of the trap is forced towards the invert of the trap.

**Figure 2C**



**Figure 2D**



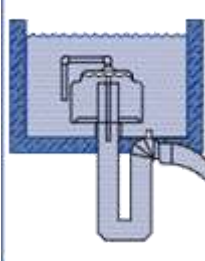
3. As the liquid in the tank approaches the high-water line, the liquid in the bell will have risen to a level just short of the top of the trap, and the air in the long leg of the trap will have descended to the invert of the trap.

**Figure 2D**



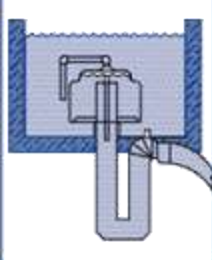
4. As the liquid in the tank reaches the high water line, a volume of air is forced around the invert of the trap and out through the discharge leg of the siphon. The escaping air relieves the back pressure within the siphon and the liquid inside of the bell will rush up and fill the siphon trap thereby starting the siphon action.

**Figure 2E**

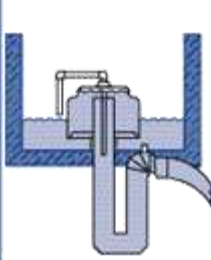


5. The liquid is drawn out of the tank until the liquid in the tank reaches the bottom of the bell. Then the siphon draws air and the siphon action is stopped.

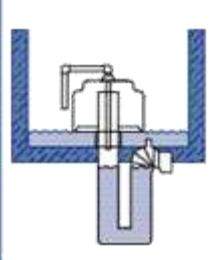
**Figure 2E**



**Figure 2F**



**Figure 2G**



The above operation information provided by Fluid Dynamic Siphons.