

FertiGator® Backflow Protection Features

> *DESIGNED WITH BACKFLOW PROTECTION SAFETY IN MIND*

Specially designed valves. The fertilizer source is isolated from the water system by a special 3-way solenoid valve so that there is no way the fertilizer will siphon out of the container into the water system in the event of a backflow event and backflow preventer failure.

Does not create backpressure. The FertiGator's design of the internal piston makes it impossible to increase downstream pressure. The only way for that piston to move up is if water is allowed into the bottom chamber below the big end of the piston. As the water is let into the chamber, the piston rises forcing the 1 ml of fertilizer into the water stream. 16 ml of water must be removed to allow 1 ml to go in. This all happens simultaneously. Physics will not allow any other possibility.

Cannot pulse if there is no water pressure. No fertilizer can be injected once the pressure drops below 25 psi even if the system is attempting to operate.

Does not increase water pressure. For every 1 ml the FertiGator injects, 16 ml of water are discharged from the system. Even if there is pressure in a stagnant situation so that the FertiGator will pulse, the FertiGator will actually reduce the pressure in the line preventing a backflow across a PVB backflow preventer.

Fertilizer container is not pressurized. If our valve seat should get fouled or stuck slightly open, water will rush out through the fertilizer tube (and into the fertilizer container). Fertilizer will not get into the irrigation system because the fertilizer container is not pressurized.

Micro-feeding is the safest way to fertilize. Fertilizer is injected at only one milliliter per pulse. The small amount of fertilizer in the line at any given time should not pose a significant health hazard to anyone.

There is no flow due to a stuck zone valve.

If a zone valve is supposed to be open and the valve for some reason does not open (perhaps due to a burnt coil or cut wire), there is no possibility for an increase in downstream pressure from the FertiGator.

If there was an electric pump pumping fertilizer into a line with this condition the pressure in the line would begin to climb. The check valves in the PVB would close but this might allow some leakage and the vacuum breaker would not open because there is still pressure in the pipe. An electric pump would require a RP backflow preventer because of the downstream pressure increase.

But for every 1 ml the FertiGator injects, 16 ml of water are discharged from the system. So, there is a net 15 ml loss every time the injector injects. Each time the injector injects 15 ml of water actually flows through the PVB in the *forward* direction thereby maintaining *maximum* protection!