



DOSATRON®

WATER POWERED DOSING TECHNOLOGY

SIPHONING

► Potential Siphoning situation affecting the Injection Rate of the Dosatron proportional injector

BACKGROUND

The design of the Dosatron injector does not allow for the injection rate to exceed the ratio it is set at, if it is installed in the proper fashion (for example, it can inject less if the seals are worn, or if the product injected is very viscous)

However, if the injector is placed in a line where a Siphon occurs, then this Siphon can force the chemical up through the Dosatron, and up or down the line, depending where the vacuum is created

In these situations, the accuracy of the injector is no longer warranted, and high concentration of chemicals can be found before or after the unit

3 Examples of Siphoning that can occur in a line

(There may be a need to accommodate for all 3 situations in some installations)

SIPHONING SITUATION

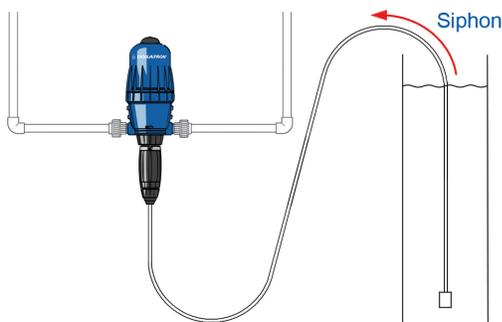
SOLUTION

EXAMPLE 1

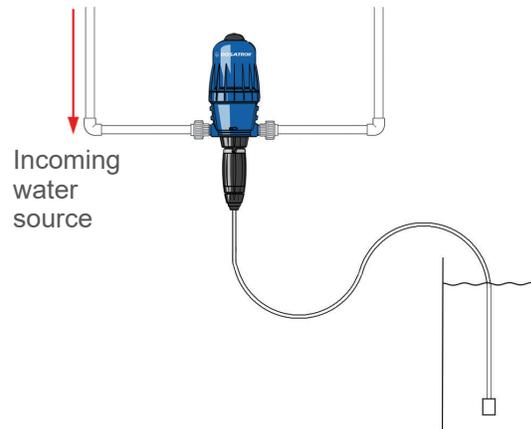
The top level of the stock solution is higher than the level of the inlet and outlet of the unit (similar to siphoning gas out of the tank of a car)

Lower the top level of the stock tank so it is below the inlet and outlet of the injector

Note: If the chemical tank is too large to realize this configuration, you may need to install a secondary holding tank equipped with a simple float valve system



Chemical level too high compared to Injector - SIPHON IS CREATED



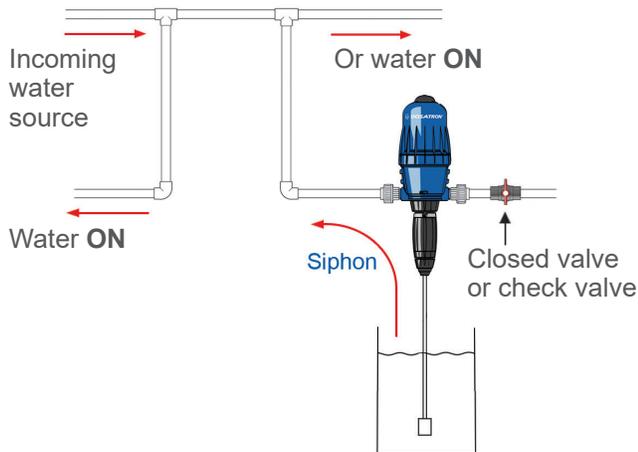


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EXAMPLE 2

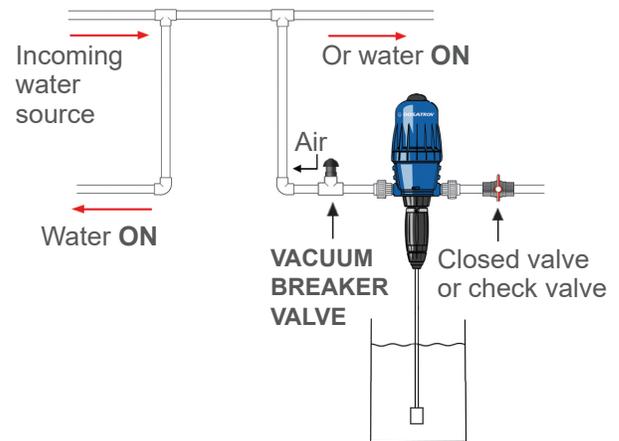
Water is being used on the same line feeding the Dosatron, and the line downstream from the Dosatron is shut OFF by a valve or check valve



Note: This is true even if there is a shut solenoid valve placed before the inlet of the injector as most solenoids do not prevent liquids from flowing back through them

Install a vacuum breaker device or an air relief valve prior to the unit, to allow air to enter the water line breaking the Siphon caused from water passing through a tee upstream from the unit

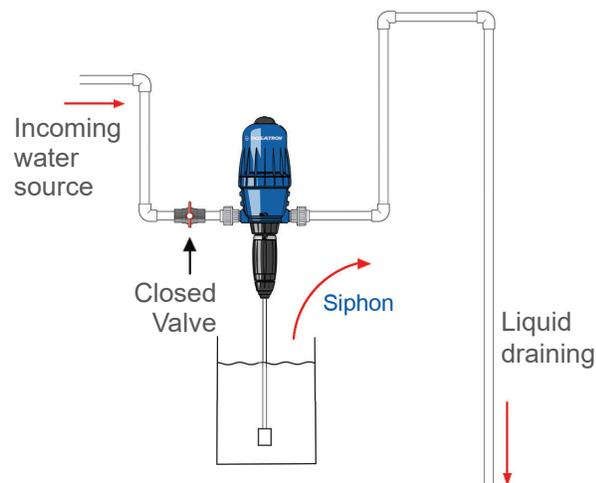
This stops the pulling of water / solution backwards toward the tee in the same upstream



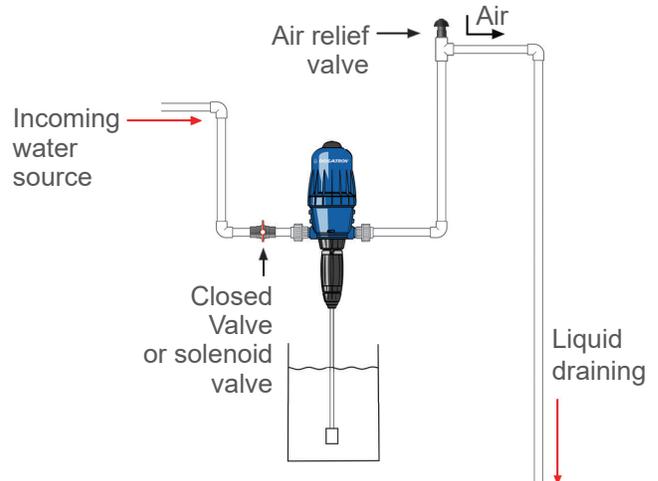
Atmospheric pressure will stop the vacuum effect and therefore stop the Siphon

EXAMPLE 3

The water is shut off prior to the Dosatron (with a valve or solenoid valve), and liquid is draining downstream from the unit



Install a vacuum breaker device or an air relief valve after the unit, to allow air in the line if a Siphon is created by the draining of the downstream line



Atmospheric pressure will stop the vacuum effect and therefore stop the Siphon

When connecting a Dosatron unit, either to the public water supply or to its own water source, you must respect the regulations in force concerning protection of the water source