

Buffer Tank Dosing System

Heron's buffer tank dosing system is designed for applications requiring a high degree of accuracy when dosing fertilizer and acid.

Our buffer tank system is unique because dosing is not effected by changes in irrigation flow rates. This feature is particularly important for accurate pH control.

Heron's buffer tank dosing system has many design features to ensure that acid is dosed safely.

The Heron buffer tank system is suitable for hydroponic or bag growing mediums. Three sizes are available catering for maximum irrigation flow rates of 12, 24 or 36 cubic metres per hour.



Heron's Buffer Tank dosing system can be stand alone or connected to a Heron irrigation controller. If connected to a Heron irrigation controller, dosing recipes can be changed automatically as different irrigation programmes are run. Additionally the dosing rig can be controlled or monitored via Heron's "Ground Control" PC software.

- Venturis are used for fertilizer and acid injection as they provide a rugged design with minimum moving parts.
- The system can have up to 8 fertilizer injectors and one acid injector.
- Acid only and fertilizer only systems are also available.

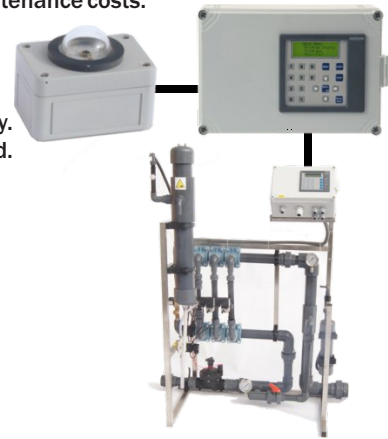
Features

Acid Injection

- Concentrated Acid (70%) can be used as the system automatically pre-dilutes the acid.
- No moving parts or seals are in contact with the concentrated acid.
- Changing acid barrels could not be simpler or safer. Just drop the acid line into the new barrel.
- Only one pH probe is required with the buffer tank system, saving you time and maintenance costs.

Fertilizer Injection

- Fertilizer dosing can be controlled by Electrical Conductivity (EC) or proportionally.
- The irrigation controller permits EC levels to be adjusted on accumulated light energy.
- An optional second EC sensor allows the background EC of the water to be measured.



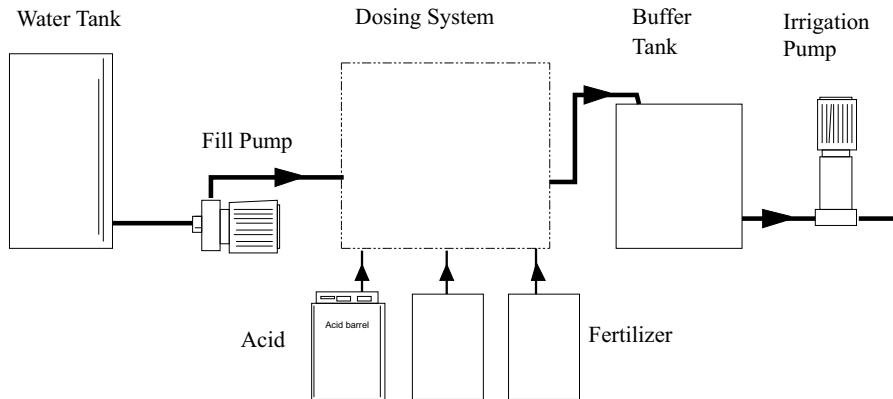
Recipes

Up to 16 recipes can be set. For each dosing recipe you can specify :-

- Which fertilizer injectors to use
- Whether the fertilizer injector is to be controlled by EC or proportion
- The percentage (0 to 100%) that each injector will contribute to the recipe
- Whether acid injection is required and the required pH level.

System Configuration

A fill pump is required to pump water through the dosing system. The buffer tank system is intrinsically safe. Water passes through the rig once, and is dosed once to the correct level.



The fill pump must be capable of delivering the full irrigation flow rate.

For the smaller size system, the fill pump can be optionally fitted as part of the dosing rig.

Specifications

pH Range	Measuring : pH 8.9 to 2.5 Controlling 7.5 to 4.5
EC Range	Measuring 0.00 mS to 9.99. mS: Controlling 0.2 to 5.0mS
Irrigation Flow Rate	Zero flow to maximum flow rate of the dosing system
Injector Flow Rate	Standard fertilizer injector 3 LPM High flow fertilizer injector 5.5 LPM
Outputs	1 x Alarm output (24VAC) activated by 18 alarm conditions 1 x Fill Pump Start output (24VAC) 1 x Digital connection to Irrigation Controller
Inputs	2 x inputs for Solid State Level sensors. 1 x Flow Meter input.

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