

# Humidity Solutions Ltd

.....the solution is clear

## FogSystem - Water Atomiser Systems

### Cold Stores Nozzle Systems

Humidity Solutions low maintenance nozzle systems solve numerous hygrometry issues at minimum installation costs. For ducts or open spaces, Humidity Solutions provides two nozzling systems : the BV and the BUS systems.

Made of stainless steel, fitted with a self-cleaning needle device and without any mixing chamber thanks to its design, the BV nozzle offers a fairly low maintenance cost while the BUS nozzle is simply maintenance free.

The BV and BUS nozzles can be operated with a wide range of water qualities.

The nozzles are controlled by a cabinet which switches the system on and off automatically in response to humidistat to provide the accurate humidity requested. It also purges the system to avoid contamination and actuates the adjustable automatic cleaning cycle. In addition, a UV sterilizer is factory installed on the system to prevent legionella.

FogSystem may also be used as an air cooler for room applications. The water atomiser systems are also used in many industries like food storage, high technologies, printing, textile, tobacco, warehouses, wood and wood pulp.

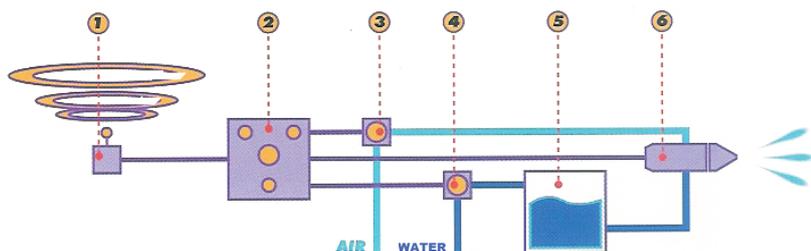
#### The Venturi Nozzle (BV)

The Venturi nozzles combine compressed air and water in precision engineered nozzles to produce fine sprays of moisture (10 to 15  $\mu\text{m}$ ) directly into the air.

Water is atomized and evaporated within short distances. As the compressed air is ejected through the Venturi nozzle, a vacuum is created which constantly draws water up from a reservoir located below the nozzle level. The actions of the venturi means that with no water pressure applied to the nozzle, the BV is essentially dripless.

Fail safe design : no compressed air = no water.

The operation process is below



1. Humidistat 2. Control Cabinet 3 & 4. Main Valves 5. Constant Water Level 6. Nozzles

#### Easy Installation:

Humidity Solutions BV nozzles are available with full range of accessories to make a quick and reliable package installation.

For high humidity demand, BV nozzles could be pre assembled on a bar which is called Quick Pack BV.



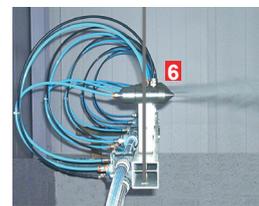
1. Humidistat



2. Control Cabinet



3 & 4. Main Valves - 5. Constant Water Level



6. Nozzles

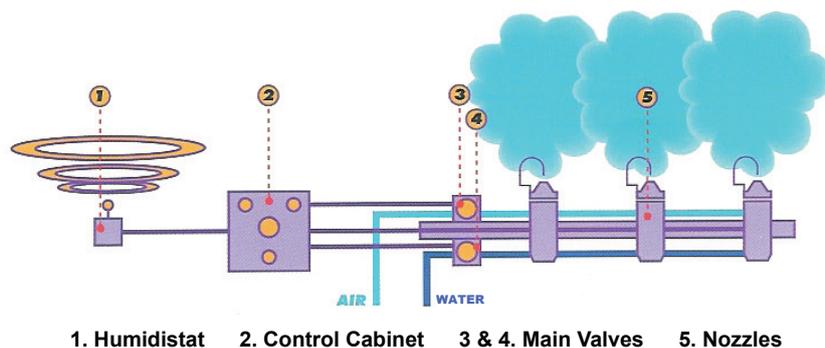
## The Ultrasonic Nozzle (BUS)

The Ultrasonic nozzle uses compressed air to atomize water by directing a high velocity stream of water particles at a target. The force of impact causes the target to resonate at ultrasonic speed. This results in very fine sprays (1 to 1.5 µm) which are rapidly absorbed by the air.

An integral fail safe valve shuts off the water nozzle if the compressed air should fail.

This nozzle is best suited for AHU, duct or cold storage rooms.

The operation process is below:

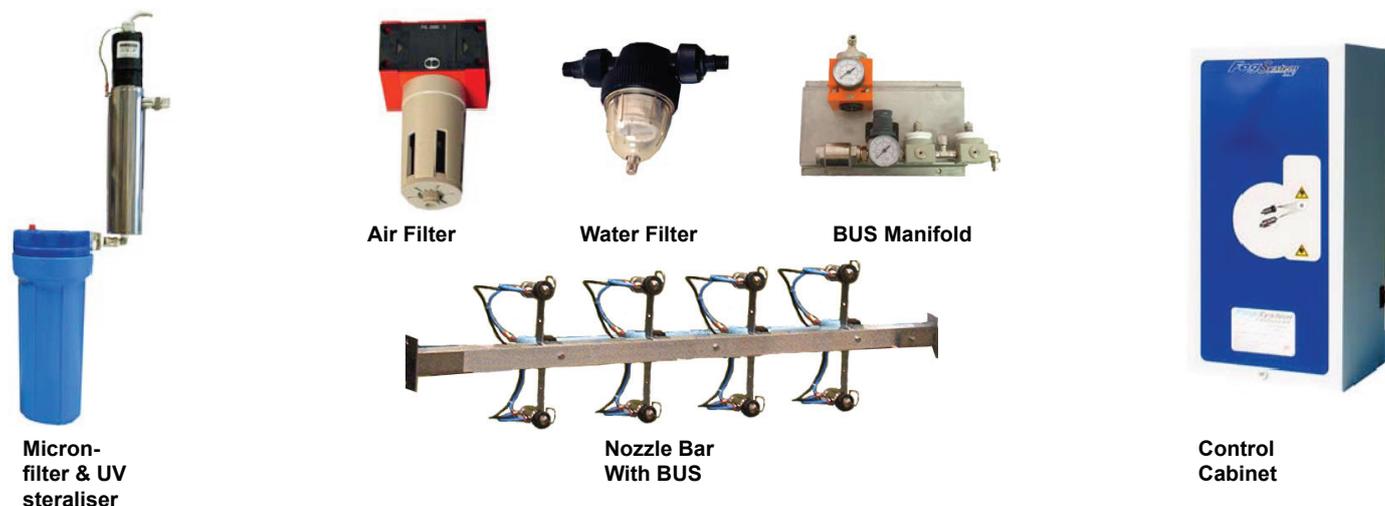


1. Humidistat 2. Control Cabinet 3 & 4. Main Valves 5. Nozzles



### Easy Installation:

The Bus nozzles are also available on a pre assembled aluminium bar with stainless steel brackets, plastic tubing and controlled by an on/off or proportional microprocessor to make installation quick and easy.



Micron-filter & UV steraliser

Air Filter

Water Filter

BUS Manifold

Nozzle Bar With BUS

Control Cabinet

### Technical Data

<b>Water Pressure</b>	1 - 6 Bar Recommended: 3 Bar
<b>Air Pressure</b>	1 - 6 Bar Recommended: 4 Bar
<b>Pressure difference between Air &amp; Water</b>	1 Bar
<b>Maximum number of BUS nozzles per valve pack</b>	12
<b>Maximum number of BV nozzles per water level</b>	25
<b>Maximum flow per nozzle</b>	6 L/H
<b>RH accuracy</b>	+/-2%
<b>Noise level for BUS</b>	65 dB at 3 Meters
<b>Noise level for BV</b>	55 dB at 3 Meters