

# HIGH PRESSURE FOGGING

AGRICULTURAL

## PRODUCT HIGHLIGHTS

### FEATURES:

- High quality
- Easy installation
- Low maintenance
- Customized systems

### APPLICATIONS:

- Controlling temperature in livestock & poultry facilities, greenhouses, industrial buildings, outdoor spaces, factories, sporting venues, train platforms, cogeneration plants
- Controlling humidity in livestock & poultry facilities, greenhouses, cold storage rooms, cotton storage, paper storage, factories, textile mills, wine production, static electricity suppression
- Chemical applications in food processing plants, sanitizing programs, horticulture, odor control, waste storage facilities, sewage treatment plants
- Suppression of air-borne contaminants like dust, ammonia, exhaust, pollutants



Our engineers have been involved with the design of high pressure fogging systems for over 30 years. During this time we have developed the highest quality, most durable, easiest installation and lowest maintenance fogging system in the world. We can design a system for cooling, humidification or chemical application for sanitizing and suppression of air-borne contaminants in livestock, poultry and swine farms, greenhouse, factories, processing plants and warehouses.

VES uses customized psychometric software for your specific location. This means that for each project we review where you are located in the world and we research local airports and/or cities to determine your weather history including temperatures and humidity levels. The data collected is then used to determine the best possible environmental system for your application. A high pressure fogging system can be a critical component of a complete system or a stand-alone product to enhance your cooling system, or to assist with sanitation.

When creating cooling in a farm or building we use air velocity created by our innovative fans, and we use ambient temperature drop with our high pressure fogging system. In high humidity areas we focus more on air velocity and less on temperature drop. In low humidity areas we focus more on ambient temperature drop. In areas where extreme cooling is required,

like dairy farms to eliminate heat stress, we use both. Changing the air too quickly means you need to increase the amount of cooling. If you are using cool cell pads for your cooling you are usually limited to a minimum velocity based on the available wall space. Our fogging systems don't have that limitation.

When you are installing the hybrid ventilation system from VES with the high pressure fogging we have unlimited options to increase the velocity with the exhaust and re-circulating fans by not restricting the inlet opening. Cool cell pads put added pressure on fans and in-turn they must work harder at a higher electricity cost under the heavier static pressure. With an open side wall using our patented drive curtain system, fans run under low static pressure, and therefore run far more efficiently. VES delivers an environmental system that will keep your people and animals out of harmful heat stress conditions. In a dairy this means greater milk production, pregnancy rates, animal and employee health. Our VES system on average gives our customers a return on investment in under 2 years. After that this amount is added directly onto your annual profit.



**Environmental  
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# HIGH PRESSURE FOGGING

## High Pressure Fog Nozzle

The unique Fog Nozzle is machined from stainless steel and includes the anti-drip nozzle check valve which prevents dripping and weeping from the nozzle during pressurization and de-pressurization of the system. The fog nozzle has an internal atomization pin, which is lubricated by the water. Atomization of the water is done inside the nozzle with the orifice providing a consistent fog pattern for years of service.



## Nozzle Specifications

- All Stainless Steel
- Anti-drip check valve included
- Flow rates: 0.036 GPM @ 1000 PSI
- 5-year warranty against orifice enlargement

## Anti-Drip Check Valve

Exclusive to the High Pressure Fog Nozzle is the Anti-Drip Check Valve. The anti-drip check valve prevents weeping from the nozzle during pressurization and de-pressurization of the system. The anti-drip valve allows for nozzle installation in any orientation. The micron-sized droplets of water (produced by our fog nozzle) flash evaporate, cooling the air, without wetting any surfaces. With a working pressure of 1000 PSI, the VES system produces a 10-17 micron fog droplet, much smaller than conventional mist systems, which have drops of 250 to 450 microns.



**VES System is designed as a complete integrated system, that installs quickly - with little or no structural modifications!**



All atomization nozzle line used in the VES High Pressure System is made from 316 grade stainless steel. Connection of the lines is done with instrument grade compression fittings, available in either brass or stainless steel.

The VES High Pressure Pump Sequence Panel is used to regulate the pump to protect it in case of incoming water supply failure and coordinate signals for pump start-up and shut-down. A Fogging Controller can signal the Pump Sequence Panel in relationship to temperature and humidity sensor inputs.

## High Pressure Pump System

The High Pressure Pump System is a fully integrated pump package complete with:

- Positive displacement pumps, with flows from 0.5 gpm to 36 gpm
- Pump manifolds are available in forged brass, stainless steel or nickel coated
- Pump manifolds have an exclusive 5-year warranty
- Pumps are easy to maintain and service
- Operating pressure of 1000 PSI
- Filtration assembly purifying the incoming water supply down to 5 microns.
- Single or three phase totally enclosed fan-cooled premium efficient motors.
- Direct or belt driven pumps

