



The micron-sized droplets of water (produced by our fog nozzle) flash evaporate, cooling the air, without contacting the ground. With working pressures of 1000psi and higher, the PolAIR system produces a 10 - 17 micron fog droplet – much smaller than conventional mist systems, which have drops of 250 to 450 microns.

## PolAIR® High Pressure Pumping System



The PolAIR High Pressure Pump System is a fully integrated pump package complete with high pressure pump and motor.

### Pump System Specifications

- Positive displacement pumps, with flows from 1/2 gpm to 25 gpm, available in forged brass, stainless steel or nickel coated
- Pumps are easy to maintain and service
- Operating pressures from 1000 psi to 1500 psi
- Pump Systems are pre-wired and plumbed, ready for water and electrical hook ups
- Direct or belt driven motors, single and three phase
- Totally enclosed fan cooled or open drip proof motors
- Optional wash down motors available



Contact your local VAL-CO Representative or Distributor for more information on this and our other fine quality products!

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E-mail: sales@val-co.com

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Performance You Can Count On

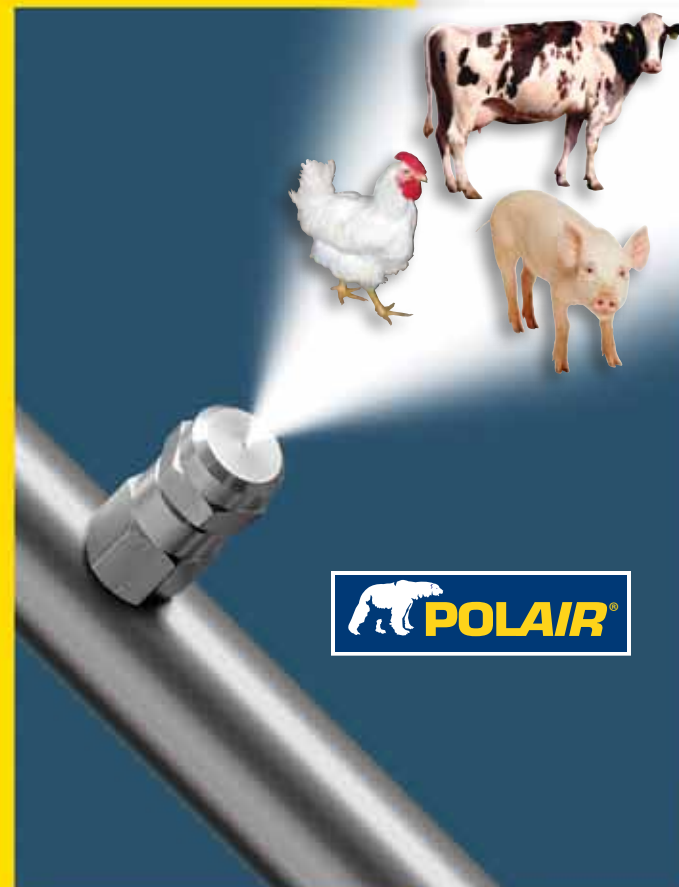
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PolAIR®



# PolAIR® – The Solution To Fine Tuning Your Environment.

The theory is simple, produce a tiny drop of water and introduce enough of them into the air they will evaporate altering the ambient conditions. Mother nature automatically does this every second of every day but in demanding environments outside of Mother Nature's control, assistance is required to fine-tune the climate.

The PolAIR high pressure fog system gives you the power to control and fine tune your environment whether you're trying to make the temperature in your facility more comfortable for your livestock or sanitizing your building to make it cleaner and safer for further occupancy.

The PolAIR High Pressure Fog System can be designed for the following applications and more:

- Controlling temperature in livestock & poultry facilities, greenhouses, industrial buildings, outdoor spaces, factories, sporting venues, train platforms, co-generation 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



The PolAIR HP Fog System is ideal for layer and floor birds!



Performance You Can Count On



Odor Control



Cooling Big Areas



Dairy Barns



Dust Control



Outside Installation



The application engineers at VAL-CO® with over 40 years of combined experience in high pressure fog systems, system designs and using custom psychometric software can provide the correct design for your particular applications.

VAL-CO offers worldwide design and technical support with offices in Europe, South America, India, China, and throughout the United States.

## PolAIR® Atomization Nozzle

Unique to the industry and the heart of the system performance is the PolAIR high-pressure fog nozzle. Based on the designed operating pressures, the PolAIR fog nozzle atomizes water into sub-micron particles that enter into the environment to reduce temperature, increase relative humidity, suppress airborne contaminants and effectively apply chemicals treatments.

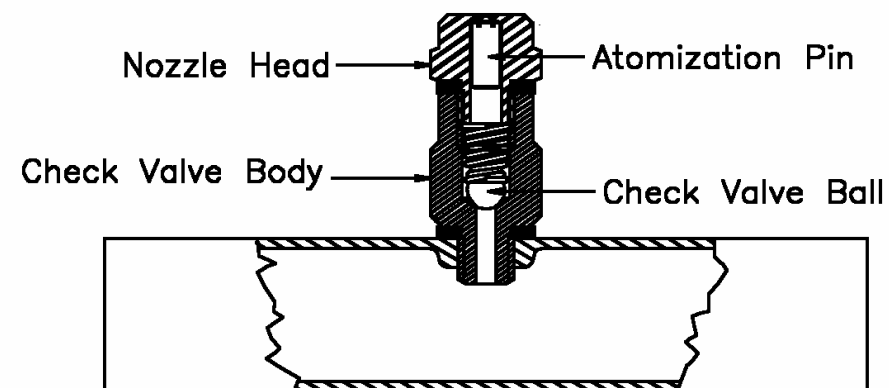
### PolAIR Nozzle

The unique PolAIR 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 PolAIR 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
- Pre-installed in the atomization line at the factory
- Flow rates:
  - .0276 GPM @ 1000 psi
  - .033 GPM @ 1500 psi
- 5-year warranty against orifice enlargement
- Metal to metal nozzle seal



### Anti-Drip Check Valve

Exclusive to the PolAIR High Pressure Fog Nozzle is the anti-drip check valve. The anti-drip check valve prevents weeping for the nozzle during pressurization and de-pressurization of the system. The anti-drip valve allows for nozzle installation in any orientation.

**VAL-CO's PolAIR System is designed as a complete integrated system, that installs quickly - with little or no structural modifications!**



All mainline and atomization line used the PolAIR System is made from 316 grade stainless steel. Connection of the lines is done with instrument grade compression fittings. Depending upon water quality and chemicals used in the system, compression fittings are available in either brass or stainless steel.

## Available System Controls



### PolAIR 400HC

The PolAIR 400HC is designed to control and regulate the PolAIR High Pressure Fog System by temperature and humidity. The 400HC can be configured for single or two stage / zone operation. Specifically designed for the PolAIR System, the 400HC includes the motor starter, motor thermal overloads, inputs for 2 temperature and 2 humidity sensors, single or two stage / zone cooling and humidification capabilities.

### PolAIR Sequence Panel

The PolAIR Sequence Panel includes automatic relay contacts for interfacing control devices like the PolAIR 400TC Time Controller and other activation devices such as computerized control systems or in house plant DCS networks. The Sequence Panel includes:

- Real-time monitoring and alarming of the motor thermal overloads, sequencing of the inlet water supply and pump drain solenoid
- Pump run time is maintained in the sequence panel for up to 32,000 hours and an on board system maintenance meter is provided
- Built in delays for the inlet water supply to assure that the pump starts with a full head of water
- Alarm output for tripped motor overloads, Low inlet water supply pressure
- Burst or broken line shut down with alarm output, Requires optional high / low pressure safety switch

