



# AUTOMATIC AND AIR ATOMIZING NOZZLES

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# PRECISE CONTROL & EFFICIENT SPRAY APPLICATION

## INTRODUCTION

If your application requires precise control of intermittent spraying, you'll find many product options in this section. Both electrically-actuated and air-actuated nozzles are available. Models which atomize flow using liquid pressure only or using compressed air are both offered. To optimize the performance of automatic spray nozzles, consider adding an AutoJet® Spray Controller.

## THE BENEFITS OF SPRAY CONTROL

Controlling automatic nozzles with one of our AutoJet spray controllers maximizes nozzle performance and enables automation of spray system operation. Automated spray control can help improve accuracy, reduce waste and overspray, boost production time and allow workers to be deployed to other tasks.

### More specifically, with AutoJet Spray Control you can:

- Adjust flow rate for line or machine speed variations
- Precisely control liquid pressure, atomizing air pressure and fan air pressure to optimize spray performance
- Notify operators or shut down on specified faults
- Integrate control of your spray application with existing plant control

## AUTOJET SPRAY CONTROLLERS

All of our automatic spray nozzles are compatible with our spray controllers. For operations like coating, moisturizing and adding costly chemicals, spray control can dramatically improve product or process quality and help save tens of thousands of dollars annually.



### If your operation requires any of the following, the spray control should be considered.

- Consistent, uniform coverage
- Precise spray placement on the target
- Intermittent spraying
- The use of costly coatings or chemicals
- The ability to adjust spray performance based on line speed
- Monitoring and supervision to ensure proper spray performance

### Our AutoJet Spray Controllers range from basic to advanced.

- **AutoJet Model 1550+ Modular Spray System** with basic on/off spray control for up to eight automatic nozzles
- **AutoJet Model 2008+ Spray Control Panel** provides timing and sensor control for up to 16 nozzles
- **AutoJet Model 2250+ Spray Control Panel** with sophisticated real-time monitoring and closed-loop control for up to 16 nozzles



**PRECISION SPRAY CONTROL (PSC)**

PulsaJet® automatic spray nozzles paired with an AutoJet® spray controller provide Precision Spray Control (PSC) to ensure coatings are applied uniformly and with minimal waste.

**The benefits of PSC are many:**

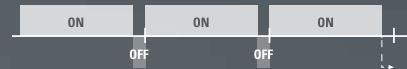
- Automatically maintains consistent coating weight even when line speed changes
- Reduces product scrap caused by over- or under-application of the sprayed solution
- Reduces the use of costly coatings by applying the proper coating volume directly on the target
- Eliminates maintenance time to clean overspray from equipment and/or floor due to over-application
- Improves worker safety by minimizing misting
- Eliminates the need for compressed air in some operations

**HOW PRECISION SPRAY CONTROL WORKS**

Electrically-actuated spray nozzles are turned on and off very quickly to control flow rate. This cycling is so fast that the flow often appears to be constant.

With traditional nozzles, flow rate adjustments require a change in pressure. Changing pressure also changes the nozzle’s spray angle/coverage and drop size. With PSC, pressure remains constant enabling flow rate changes without changes in spray performance.

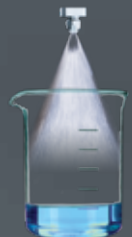
**NOZZLES SPRAYING 90% OF THE TIME**



**NOZZLES SPRAYING 50% OF THE TIME**



**NOZZLES SPRAYING 25% OF THE TIME**



**TYPICAL APPLICATIONS:**

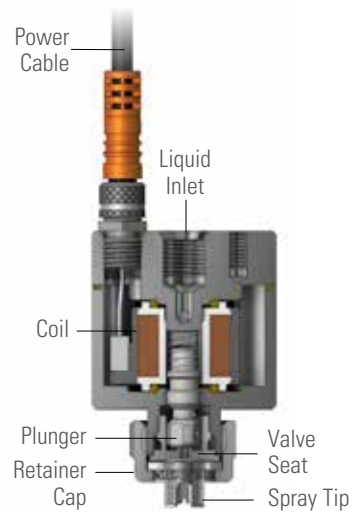
- Adhesives/glue
- De-ionized water
- Dyes and inks
- Enzymes
- Fragrances/aromas
- Lotions
- Lubricants/release agents/silicone

LEARN MORE & SEE HOW PSC WORKS:  
[spray.com/psc](http://spray.com/psc)



**OVERVIEW: ELECTRICALLY-ACTUATED PULSAJET HYDRAULIC NOZZLES**

- Hydraulic atomizing nozzles use only liquid pressure as the force for atomization
- Electrically-actuated nozzles provide the fastest cycling of any automatic nozzles – up to 25,000 cycles per minute
- When using a PulsaJet® series nozzle and an AutoJet® spray controller, Precision Spray Control (PSC) can provide:
  - Consistent application rates at varying line speeds
  - Low flow rates comparable to air atomizing nozzles eliminating the use of compressed air in some operations
- Dozens of UniJet® spray tips are available for PulsaJet nozzles in a wide variety of flow rates. Auto-alignment of spray tips is offered on some models



**PulsaJet 10000 Series Nozzle**

The compact design and simple mounting options for PulsaJet nozzles enable them to be easily integrated into most production areas. Wear parts for all PulsaJet nozzles are easily accessible to minimize routine maintenance time.

**ELECTRICALLY-ACTUATED HYDRAULIC PULSAJET NOZZLE OPTIONS**

**AA10000AUH-03**

- Typical flow range: 0.0017 - 0.47 gpm (0.006 - 1.8 lpm)
- Construction: stainless steel, Viton® or EPDM seals, PPS and PEEK



**AA10000AUH-10**

- Typical flow range: 0.02 - 1.6 gpm (0.075 - 6.1 lpm)
- Highest capacity PulsaJet nozzle
- Construction: stainless steel, Viton® or EPDM seals, PPS and PEEK



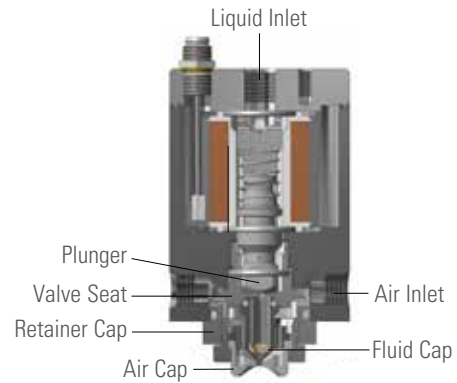
**QUICK REFERENCE GUIDE**

Model/Type	Connection Size/Type in.	Max Liquid Pressure psi (bar)	Power Vdc (Amp)	Max Flow gpm (lpm)	Max Liquid Temp °F (°C)	Max Speed cpm	Spray Tips/ Set-ups
<b>AA10000AUH-03 Hydraulic</b>	1/8	100 (7)* 250 (17) w/ AutoJet® 2008+ spray controller	24 (0.36)	0.47 (1.8)	200 (93)	10,000 (15,000 with AutoJet 2008+ controller)	TPU
<b>AA10000AUH-10 Hydraulic</b>	1/8 F	100 (7)	24 (1.05)	1.6 (6.1)	150 (66)	5,000	TPU

\*Higher pressure possible with AutoJet 2008+ spray controller

**OVERVIEW: ELECTRICALLY-ACTUATED PULSAJET AIR ATOMIZING NOZZLES**

- Electrically-actuated nozzles provide the fastest cycling of any automatic nozzles – up to 10,000 cycles per minute
- Compressed air is used as the force for atomization, producing the smallest drop sizes and lowest possible flow rates
- Hundreds of air atomizing set-ups are available for a wide variety of spray patterns and flow rates
- Precision Spray Control using an AutoJet® Spray Controller ensures consistent flow rates at varying line speeds
- Many options are available for convenient mounting, clean-out needles, food grade materials of construction and more



**AA10000JAU Nozzle**

The compact design and simple mounting options for PulsaJet nozzles enable them to be easily integrated into most production areas. Wear parts for all PulsaJet nozzles are easily accessible to minimize routine maintenance time.

**ELECTRICALLY-ACTUATED AIR ATOMIZING PULSAJET NOZZLE OPTIONS**

**AA10000JJAU**

- Rear liquid inlet; side air inlet
- Flow rates up to 0.16 gpm (0.61 lpm)
- Stainless steel, PPS and PEEK construction with Viton® or EPDM seals
- All wear parts accessible from the front of the nozzle without disturbing mounting and air/liquid/electrical connections
- For use with standard 1/8JJ air caps and 1/8JJ fluid caps (maximum size 2850)



**AA10000JAU-10**

- Rear liquid inlet; side air inlet
- Flow rates up to 0.75 gpm (2.84 lpm)
- Stainless steel, PPS and PEEK construction with Viton or EPDM seals
- All wear parts accessible from the front of the nozzle without disturbing mounting and air/liquid/electrical connections
- For use with standard 1/4J air caps and threadless 1/4J fluid caps (maximum size 80100)



**QUICK REFERENCE GUIDE**

Model/Type	Connection Size/Type in.	Max Liquid Pressure psi (bar)	Max Air Pressure psi (bar)	Power Vdc (Amp)	Max Flow gpm (lpm)	Max Liquid Temp °F (°C)	Max Speed cpm	Spray Tips/ Set-ups
<b>AA10000JJAU Air Atomizing</b>	1/8 (air and liquid)	100 (7)* 250 (17) w/AutoJet 2008+ spray controller	100 (7)	24 (0.36)	0.16 (0.61)	200 (93)	10,000	JJ set-ups
<b>AA10000JAU-10 Air Atomizing</b>	1/8 (air and liquid)	100 (7)	100 (7)	24 (1.05)	0.75 (2.84)	200 (93)	5,000	Threadless 1/4J set-ups

\*Higher pressure possible with AutoJet 2008+ spray controller

FOR DETAILED NOZZLE PERFORMANCE DATA,  
SEE AIR ATOMIZING & AUTOMATIC  
SPRAY NOZZLES, CAT 76

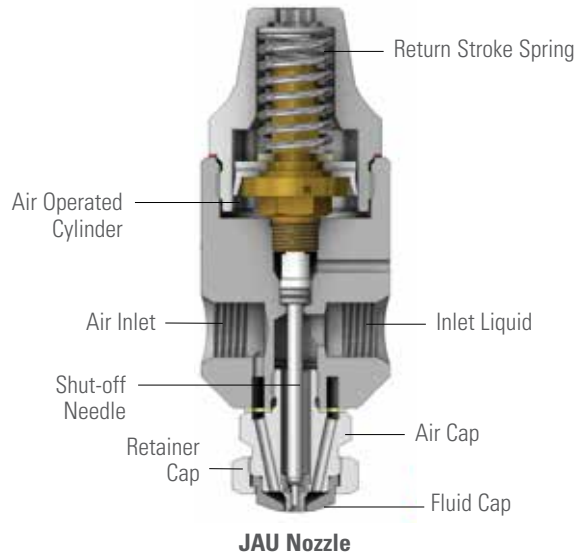


**OVERVIEW: AIR-ACTUATED  
AIR ATOMIZING NOZZLES**

**Ideal for: coating, moisturizing and marking**

- Compressed air is used to control air cylinder operation for accurate intermittent spraying (up to 180 cycles per minute) and also for liquid atomization
- Wide variety of nozzle bodies is available for convenient mounting and positioning
- Models available with clean-out needles, shut-off needles, swivels and strainers to optimize performance
- Liquid lines can be pressure-fed, siphon-fed or gravity-fed
- Spray set-ups, consisting of an air cap and a fluid cap can mix the fluids either internally or externally to produce a fine spray pattern
- Dozens of Drip Free™ air atomizing spray set-ups available for a wide range of flow capacity and spray patterns

**For a wide range of options, such as clean-out needles, body styles and spray tips, see Automatic and Air Atomizing Spray Nozzles, Cat. 76.**



JAU air atomizing nozzles mix compressed air and liquid to form a finely atomized spray. An air-actuated internal cylinder with return stroke spring cycles the nozzle up to 180 times per minute.

**AIR-ACTUATED AIR ATOMIZING NOZZLE OPTIONS**

**1/4JAU**

- Flow rates up to 1.2 gpm (4.5 lpm)
- Drip Free™ set-ups provide complete shut-off
- Nickel-plated brass or stainless steel construction



**1/8JJAU**

- Compact design ideal where space is limited
- Flow rates up to 0.55 gpm (2.1 lpm)
- Drip Free™ set-ups provide complete shut-off
- Nickel-plated brass or stainless steel construction



**FOR DETAILED NOZZLE PERFORMANCE DATA,  
SEE AIR ATOMIZING & AUTOMATIC  
SPRAY NOZZLES, CAT 76**

AIR-ACTUATED AIR ATOMIZING NOZZLE OPTIONS

**VAU/VMAU Variable Spray**

- Flow rates up to 1.22 gpm (4.62 lpm)
- Stainless steel construction
- Independent control of liquid, fan air and atomizing air provides maximum control of spray coverage
- Dual liquid inlets allow recirculating of sprayed fluid
- VMAU offers modular construction for reduced maintenance time



**10535-1/4J**

- Flow rates up to 1.2 gpm (4.5 lpm)
- Self-contained air cylinder provides controlled intermittent spraying
- Drip Free™ set-ups provide complete shut-off
- Nickel-plated brass or stainless steel construction
- Also available in ½" and 1" sizes



QUICK REFERENCE GUIDE

Model	Connection Size in.	Max Liquid Pressure psi (bar)	Max Air Cylinder Pressure psi (bar)	Max Flow gpm (lpm)	Max Liquid Temp °F (°C)	Max Speed cpm	Spray Set-ups
<b>1/4JAU</b>	1/4 (air and liquid)	125 (8.6)	30 (2.1)	1.2 (4.5)	400 (204)	180	1/4J
<b>1/8JJAU</b>	1/4 (air and liquid)	125 (8.6)	30 (2.1)	0.55 (2.1)	400 (204)	180	1/8JJ
<b>1/8VAU Air Atomizing</b>	Variable Spray	90 (6.2)	35 (2.4)	0.83 (3.15)	200 (93)	180	SUV
<b>1/4VMAU Air Atomizing</b>	1/4, or sanitary flange (atom. air, fan air and liquid)	90 (6.2)	35 (2.4)	1.22 (4.62)	200 (93)	180	SUVM
<b>10535-1/4J Air Atomizing</b>	1/4 (air and liquid)	125 (8.6)	30 (2.1)	1.2 (4.5)	400 (204) liquid 150 (66) air	180	1/4J

FOR DETAILED NOZZLE PERFORMANCE DATA, SEE AIR ATOMIZING & AUTOMATIC SPRAY NOZZLES, CAT 76

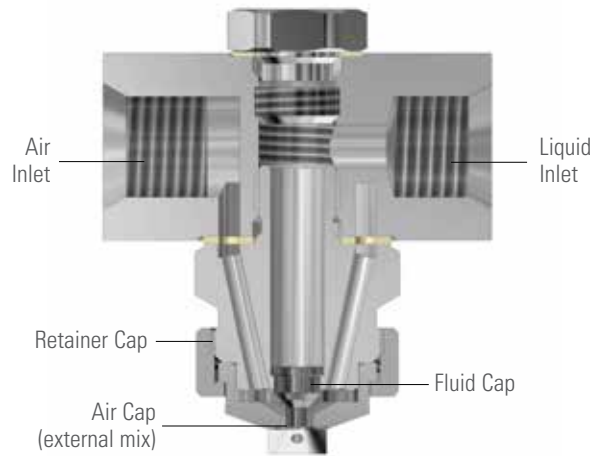


**OVERVIEW: J AND JJ SERIES AIR ATOMIZING NOZZLES**

**Ideal for: coating, moisturizing and marking**

- Liquid and compressed air enter the nozzle body and are mixed by the spray set-up to produce a finely atomized spray pattern
- Spray set-ups, consisting of an air cap and a fluid cap, can mix the fluids either internally or externally
- Hundreds of spray set-ups are available to produce cone and flat spray patterns
- A wide variety of nozzle bodies are available for convenient mounting and positioning
- JJ compact nozzle bodies are available for applications where space is limited
- Models available with clean-out needles, shut-off needles swivels and strainers to optimize performance

**For a wide range of options, such as clean-out needles, body styles and spray tips, see Automatic and Air Atomizing Spray Nozzles, Cat. 76.**



**1/4J Nozzle**

Air and liquid enter the air atomizing nozzle body and are combined by the spray set-up to generate finely atomized droplets.

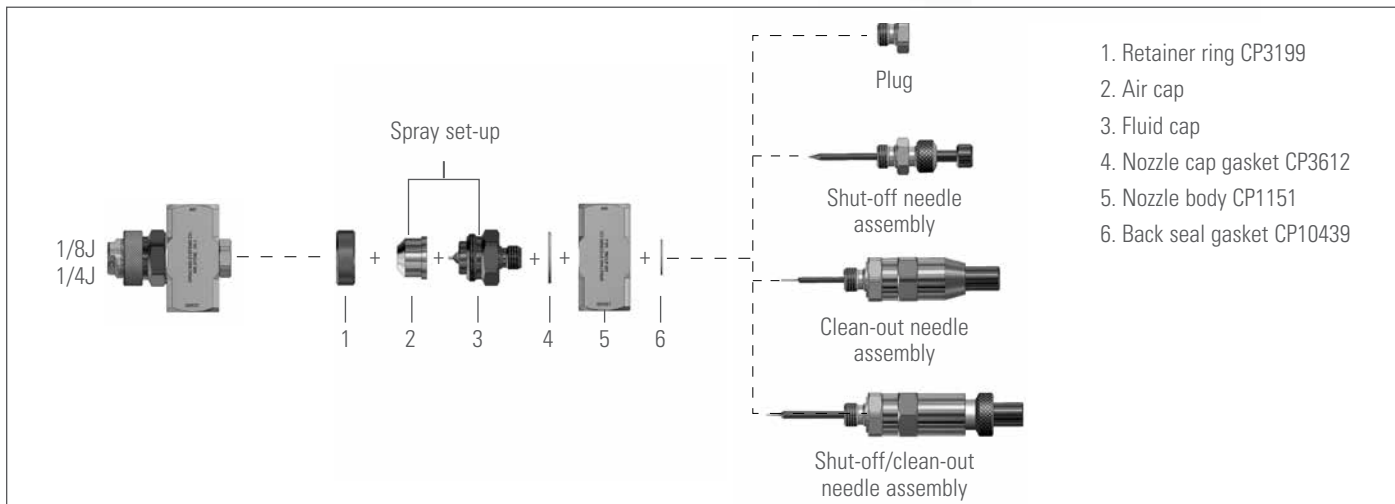
**1/8J AND 1/4J SERIES NOZZLES**

- J Series nozzles consist of a nozzle body and a spray set-up
- A wide variety of spray set-ups are available with flow rates up to 72 gph (273 lph) in various spray patterns.
- Basic 1/8J and 1/4J bodies have liquid and air inlets on opposing sides of the nozzle bodies. Nozzle bodies include a removable plug so needle assemblies can be added in the future
- Nickel-plated brass or stainless steel construction



**1/8J and 1/4J Nozzles**

**1/8J AND 1/4J NOZZLE OPTIONS**





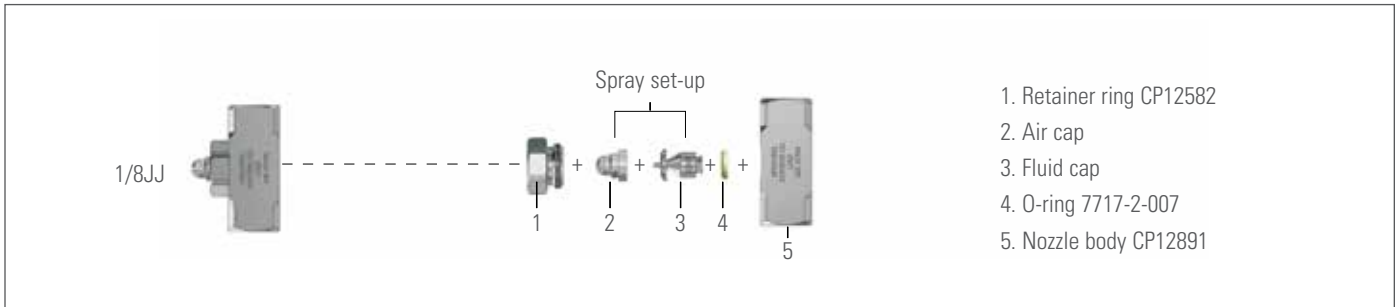
**1/8JJ SERIES NOZZLES**

- Compact JJ Series nozzles consist of a nozzle body and a spray set-up
- A wide variety of spray set-ups are available with flow rates up to 33 gph (126 lph) in various spray patterns
- 1/8JJ bodies have liquid and air inlets on opposing sides of the nozzle bodies. Nozzle bodies include a removable plug so needle assemblies can be added in the future
- Nickel-plated brass or stainless steel construction



**1/8JJ  
Nozzle**

**JJ SERIES SPRAY NOZZLE OPTIONS**



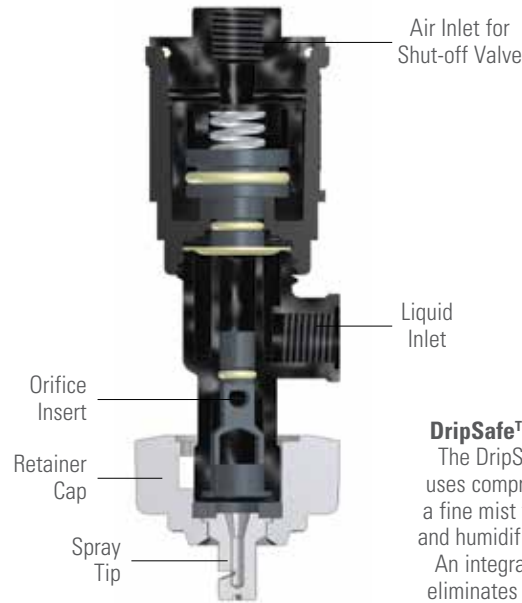
**QUICK REFERENCE GUIDE**

Model	Connection Size in.	Max Flow gph (lph)	Max Liquid Temp °F (°C)	Spray Set-ups
<b>1/8J and 1/4J</b>	1/8 to 1/4	72 (273)	400 (204)	1/8J and 1/4J
<b>1/8JJ</b>	1/8	33.2 (126)	400 (204)	1/8JJ

FOR DETAILED NOZZLE PERFORMANCE DATA,  
SEE AIR ATOMIZING & AUTOMATIC  
SPRAY NOZZLES, CAT 76

**OVERVIEW: FOGGING & HUMIDIFICATION**

- Liquid and compressed air are mixed to produce a finely atomized spray for rapid evaporation and efficient humidification
- Drop size may be controlled by adjusting air and water pressure to create a wet or a dry fog, depending on application requirements
- Several configurations are available to produce flow rates up to 72 gph (272 lph)
- Nozzles are available that operate using normal municipal water pressure – without the use of high-pressure pumps
- A variety of nozzle bodies are available for convenient mounting and positioning



**DripSafe™ AirJet® Fogger**  
The DripSafe AirJet Fogger uses compressed air to create a fine mist for fogging, cooling and humidification applications. An integrated shut-off valve eliminates unwanted dripping from the nozzle.

**DRIPSAFE™ AIRJET® FOGGER NOZZLES**

- High quality, cost-efficient dry fog with average drop size of fifteen microns or less
- Drop size can be adjusted by changing the ratio of compressed air to water
- High-volume/high-efficiency air atomization is ideal for large/open structures and areas with high air exchange rates
- DripSafe air-actuated shut-off valve prevents liquid flow until air pressure at the nozzle is sufficient for fine atomization
- Flat spray tip has a large orifice that reduces clogging
- Spray set-up and built-in strainer are quickly removed by hand if cleaning is required
- Can use PVC pipe and low-pressure air tubing
- Operates using normal pressures found in municipal water systems, eliminates the need for expensive, high-pressure hydraulic pumps
- Spray tip is brass; valve and body are polymer
- Minimum air pressure range of 25 to 35 psi (1.7 to 2.5 bar)



**45265 AirJet Fogger –**  
Threaded 1/4" NPT or BSPT connection

**45269 AirJet Fogger –**  
Split-eyelet design provides fast installation of the nozzle onto the liquid supply pipe. No additional pipe fittings are required. Pipe cutting, threading and brazing are eliminated.

**YMF MINIFOGGER® III**

- High quality, cost-efficient dry fog with drop sizes seven to ten microns
- Compact design of 4.5" (115 mm) tall ideal for humidification applications with limited space
- Can be easily installed on a header, wall or ceiling
- Available with up to four stainless steel spray nozzle set-ups, each with automatic spray pattern alignment
- Choice of spray set-ups provide flow rates ranging from 0.24 to 1.22 gph (0.9 to 4.6 l/hr)
- 0.46 lbs. (210 g) for single spray set-up type; 0.55 lbs. (250 g) for multiple four set-up types
- Body, retainer cap and tank constructed of corrosion-resistant polypropylene with stainless steel air and water inlet connections
- Materials compatible with deionized water
- Easy to maintain – no tools required



**QUICK REFERENCE GUIDE**

Product Number	Connection Type	Max Flow
<b>45265 DripSafe™ AirJet® Fogger</b>	.290" (7.4 mm) hose shank for 1/4" air hose or tubing (atomizing air) 1/4" (shut-off valve air) 1/4" (liquid)	4.5 gph (17.0 lph)
<b>45269 DripSafe AirJet Fogger</b>	.290" (7.4 mm) hose shank for 1/4" air hose or tubing (atomizing air) 1/4" (shut-off valve air) Split-eyelet connection for 1/2", 3/4" or 1" liquid supply pipe	4.5 gph (17.0 lph)
<b>YMF MiniFogger III</b>	1/4" (air) 1/8" (liquid)	1.22 gpm (4.6 lpm)
<b>1/4JH</b>	1/4" (air and liquid)	72 gph (272 lph)
<b>1/4JT</b>	1/4" (air and liquid)	11.6 gph (43.9 lph)

FOR DETAILED NOZZLE PERFORMANCE DATA,  
SEE AIR ATOMIZING & AUTOMATIC  
SPRAY NOZZLES, CAT 76



**OTHER FOGGING AND HUMIDIFICATION OPTIONS**

**1/4JH Nozzle**

- Provides automatic, efficient humidity control with low installation and operating costs
- Produces a fine atomized spray for rapid evaporation and efficient humidification
- Nozzles operate either with compressed air drawing water from the float box, by siphon action, or with water delivered to the nozzle under pressure



**1/4JT Nozzle**

- Provides automatic, efficient humidity control with low installation and operating costs
- Produces a fine atomized spray for rapid evaporation and efficient humidification
- Suitable for use in systems where water is under pressure
- Built-in strainer for air and water plus a ball check valve in the water line



**45400 Humidification Unit**

- A self-contained humidifier suitable for use with deionized water
- Easy to install on a wall or for use in non-ducted applications
- Air regulator and gauge, 24VDC air control solenoid and air line filter are included
- Wall-mounting bracket is also provided
- For each spray set-up, water capacity ranges from 2.7 lbs/hr at 10 psi (0.7 bar) air to 6.5 lbs/hr at 60 psi (4 bar) air
- 9.7 lbs. (4.4 kg)



**55089 Humidistat**

- Quick relative humidity LCD readouts from 1% to 99% with repeatability of +/-5%
- Operating temperature range 32°F to 160°F (0°C to 71°C)
- 24V (DC or AC)



FOR DETAILED PERFORMANCE DATA,  
SEE AUTOMATIC AND AIR ATOMIZING  
SPRAY NOZZLES, CAT. 76