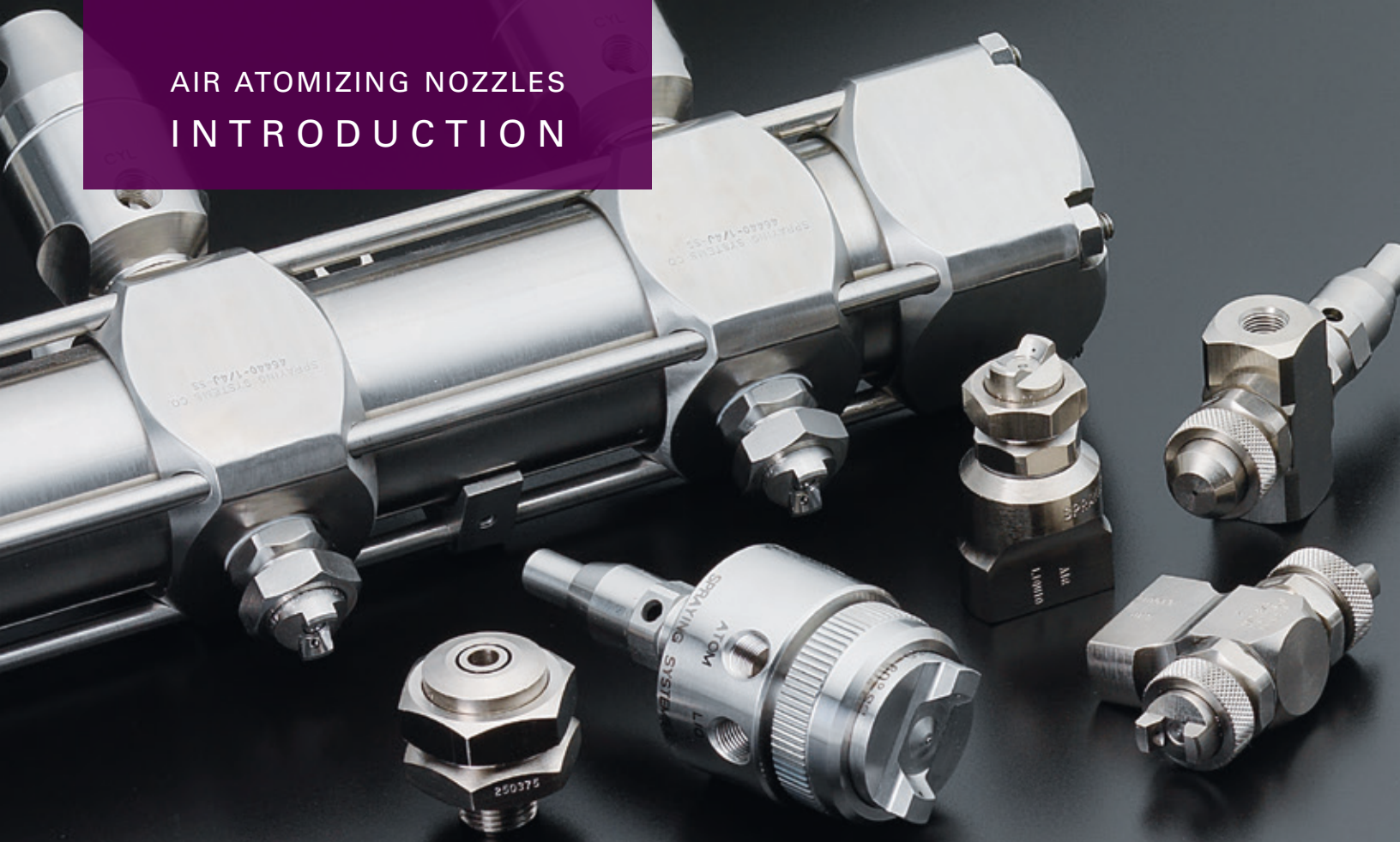




AIR ATOMIZING SPRAY NOZZLES

CHEMICAL INJECTION • PASSIVATING
COATING • STERILIZING • FOGGING
HUMIDIFYING • MISTING • COATING
MOISTURIZING • GAS COOLING
LUBRICATING

AIR ATOMIZING NOZZLES INTRODUCTION



LARGEST SELECTION OF NOZZLES IN THE INDUSTRY

INTRODUCTION

If your application requires air atomizing – or “two-fluid” – nozzles, you’ll find information on the largest selection available in the industry in this section. Choose from a wide variety of nozzle assemblies and spray set-ups to get the precise performance you require.

Fluid lines for air atomizing nozzles can be pressurized or supplied using a siphon- or gravity-fed configuration. Nozzles equipped with clean-out and/or shut-off needles may require an additional air line. All air and fluid lines should be equipped with the proper filters, regulators and valves.

Air atomizing nozzles require spray set-ups, which consist of an air cap and fluid cap. Hundreds of spray set-ups are available to provide the precise performance you require.

PRODUCT RANGE

J Series Nozzles

Available in many configurations with flow rates up to 29 gpm (110 lpm).

JJ Compact Series Nozzles

Available with clean-out needles and shut-off needles; flow rates range up to 33 gph (126 lph).

QMJ Series Nozzles

Quick-connect convenience for spray set-up installation and flow rates up to 26 gph (98 lph).

Variable Spray Nozzles

Independent control of liquid, atomizing air and fan air pressures enables fine tuning of spray performance.

High Efficiency, High Flow Spray Nozzles

Very small droplet size with low air consumption and flow rates up to 45 gpm (170 lpm).



AIR ATOMIZING NOZZLES TABLE OF CONTENTS



J AND JJ NOZZLE SERIES

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QUICKMIST® NOZZLE SERIES

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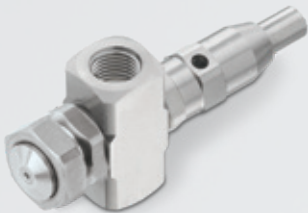
VARIABLE SPRAY NOZZLE SERIES

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OPTIMIZE PERFORMANCE WITH:



Use air atomizing nozzles with clean-out needles to eliminate clogging and ensure optimum performance.
See page B7



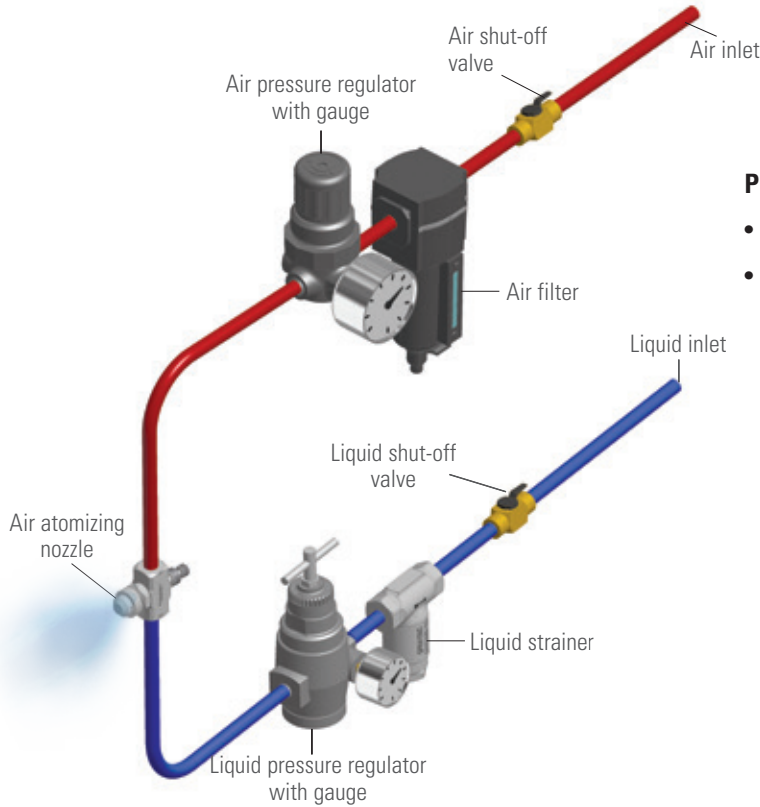
Use liquid strainers and air filters to reduce maintenance and extend nozzle life.
See page G4



Pressure tanks provide a convenient liquid supply source for low volume spraying.
See page G23

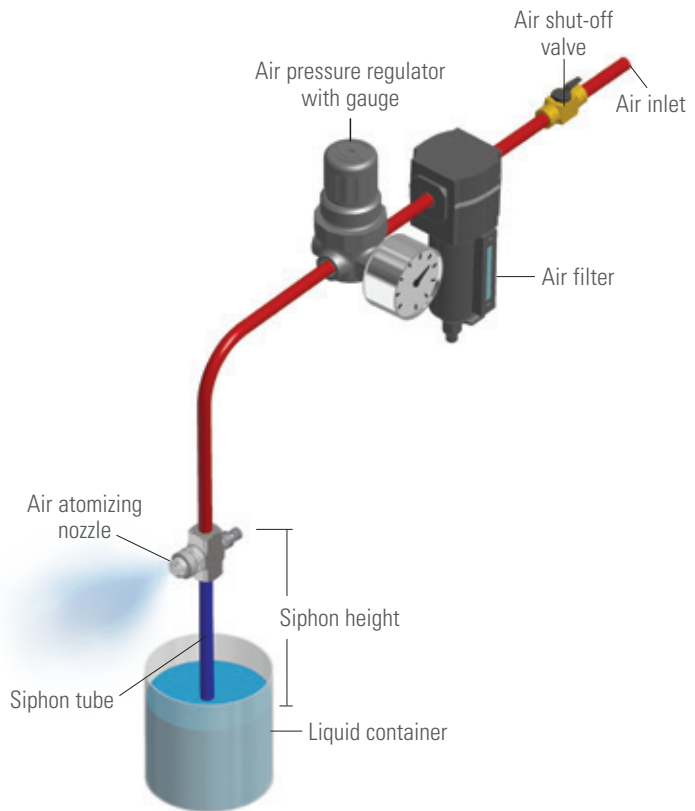
OVERVIEW: AIR ATOMIZING NOZZLE SET-UPS

Liquid can be supplied to the nozzle under pressure or it can be supplied through a liquid siphon or gravity-feed.



Pressure Spray Set-Ups

- Liquid is supplied to the nozzle under pressure
- Air and liquid can be externally or internally mixed to produce a completely atomized spray



Siphon/Gravity-Fed Spray Set-Ups

- Liquid is supplied via liquid siphon or is gravity-fed
- These set-ups are designed to draw liquid through the feed line into the air flow where it is atomized

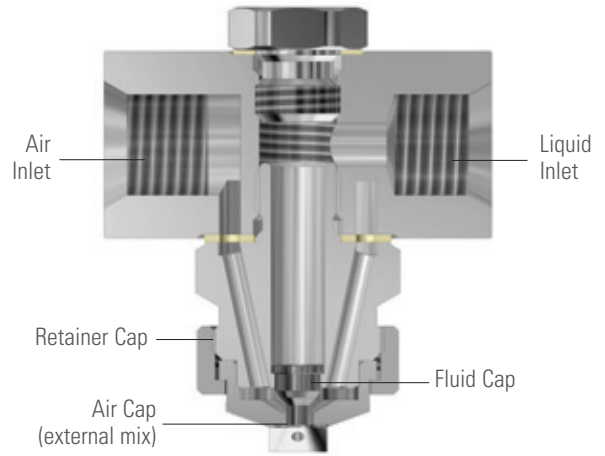
PLACING YOUR ORDER

Call 1.630.665.5000 for application assistance or to place an order.

FOR DETAILED SPRAY SET-UP PERFORMANCE DATA
SEE SECTION D

OVERVIEW: J AND JJ SERIES NOZZLES

- 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



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.

QUICK REFERENCE GUIDE

| Product Number | Inlet Connection Size (in.) | Max Flow | Max Temp (liquid) | Spray Set-Ups |
|---------------------|-----------------------------|-----------------------|-------------------|-----------------------------|
| 1/4J Series | 1/4 (F) NPT or BSPT | 72 gph (273 lph) | 160°F (71°C) | 1/4J set-ups (page D32) |
| 1/8JJ Series | 1/8 (F) NPT or BSPT | 33.2 gph (126 lph) | 160°F (71°C) | 1/8JJ set-ups (page D35) |
| 1/2J Series | 1/2 (F) NPT or BSPT | 306 gph (1158 lph) | 160°F (71°C) | 1/2J set-ups (page D43) |
| 1J Series | 1 (F) NPT or BSPT | 29 gpm (110 lpm) | 160°F (71°C) | 1J set-ups (page D49) |

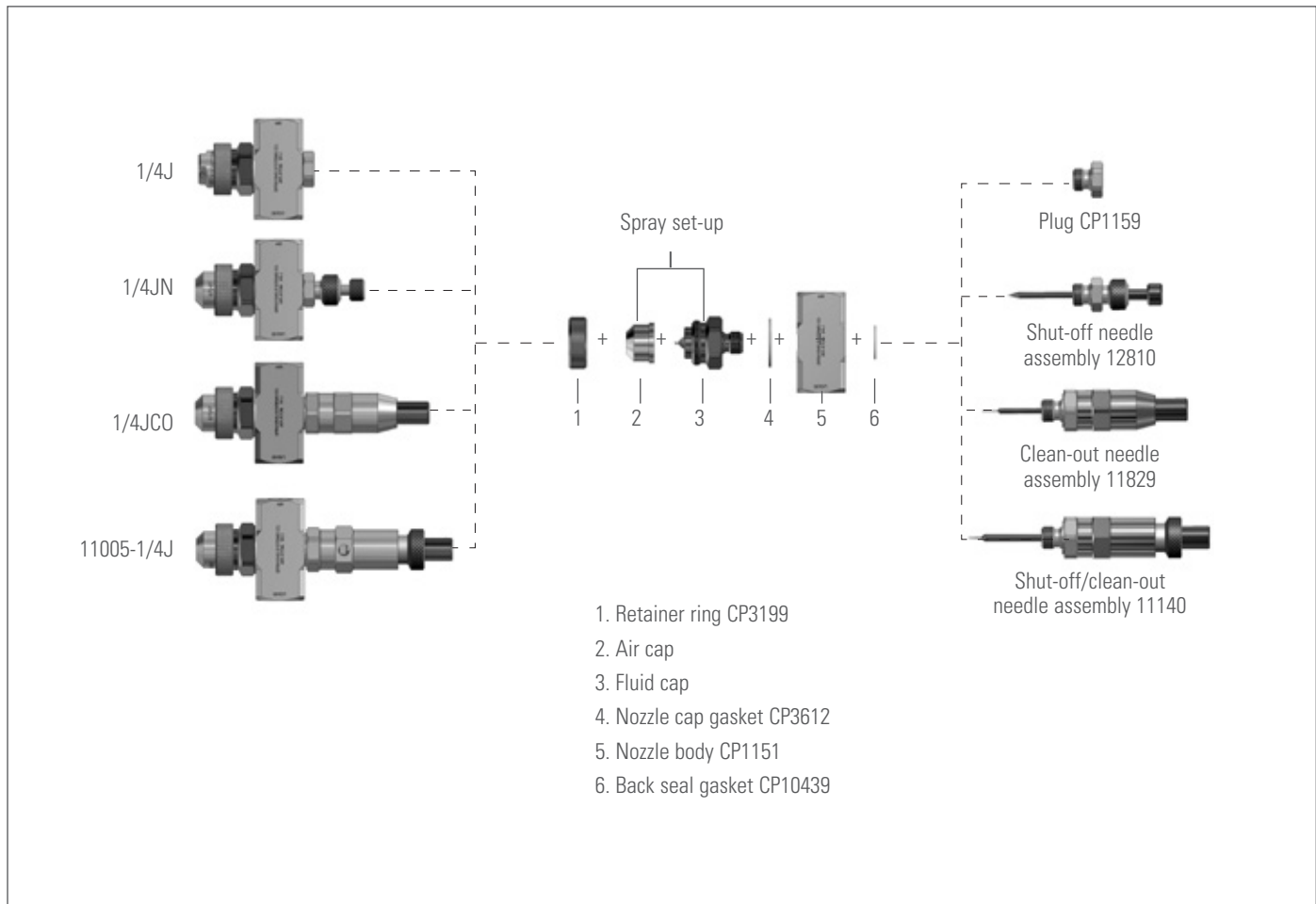
1/4J SERIES NOZZLES

- 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 1/4J 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



**1/4J
Nozzles**

1/4J NOZZLE OPTIONS



1/4J NOZZLE OPTIONS



1/4JN – Manual shut-off needle to stop liquid flow



1/4JCO – Manual clean-out needle to clear obstructions from the fluid orifice



11005-1/4J – Combination shut-off/clean-out needle



1/4JBC – Air and liquid inlets at the back of the nozzle body, in line with the spray direction



8650 – Cluster type assembly includes four or five spray set-ups



6552-1/8JAC – Miniature design is only 1/2" thick with a 1-5/32" by 1-1/4" rectangular face. The air and liquid inlets on the same side of the nozzle body – 90° to the spray direction



1/4JBCJ – Steam jacket around the nozzle body for spraying liquids too viscous to spray at room temperatures



1/4JAC – Air and liquid inlets on the same side of the nozzle body – 90° to the spray direction



1/4JACN – Air and liquid inlets on the same side of the nozzle body – 90° to spray direction – with manual shut-off needle

WALL MOUNT ADAPTER OPTIONS

Thick wall adapters for 1/4J with 3/4" NPT or BSPT (M) adapter connections use CP3376 wall mount adapter. Replace retainer rings on nozzle assemblies and fit into threaded wall openings. *See page G22 for more details*

Thin wall adapters for 1/4J assemblies. For thin walls add adapter CP6378 locknut and CP2804-3 gasket to CP3376 wall mount adapter to provide secure mounting. *See page G22 for more details*

PLACING YOUR ORDER

Call 1.630.665.5000 for application assistance or to place an order.

FOR DETAILED SPRAY SET-UP PERFORMANCE DATA
SEE SECTION D



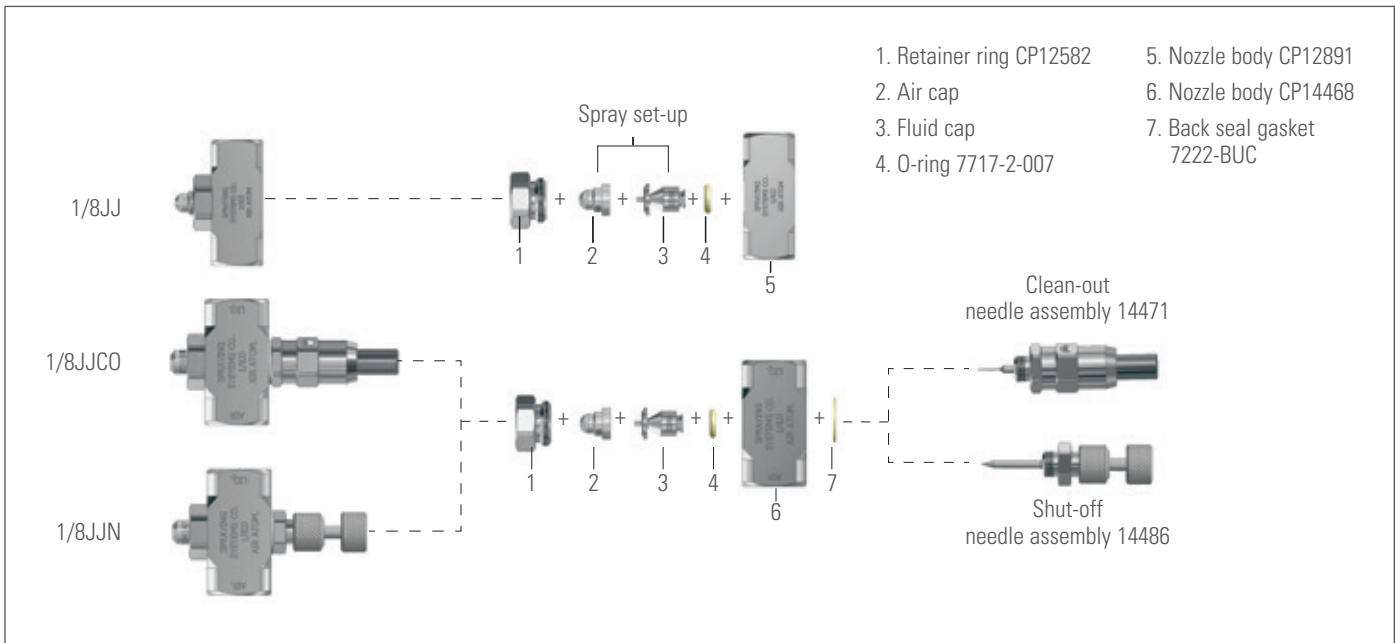
1/8JJ SERIES NOZZLES

- 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



1/8JJN – Manual shut-off needle to stop liquid flow



1/8JJCO – Manual clean-out needle to clear obstructions from the fluid orifice

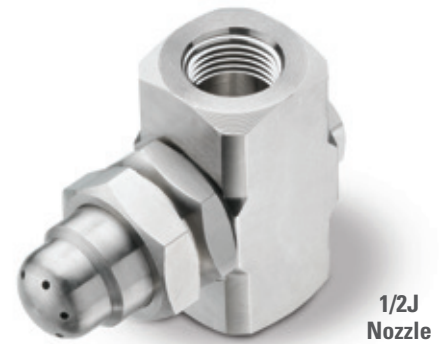
PLACING YOUR ORDER

Call 1.630.665.5000 for application assistance or to place an order.

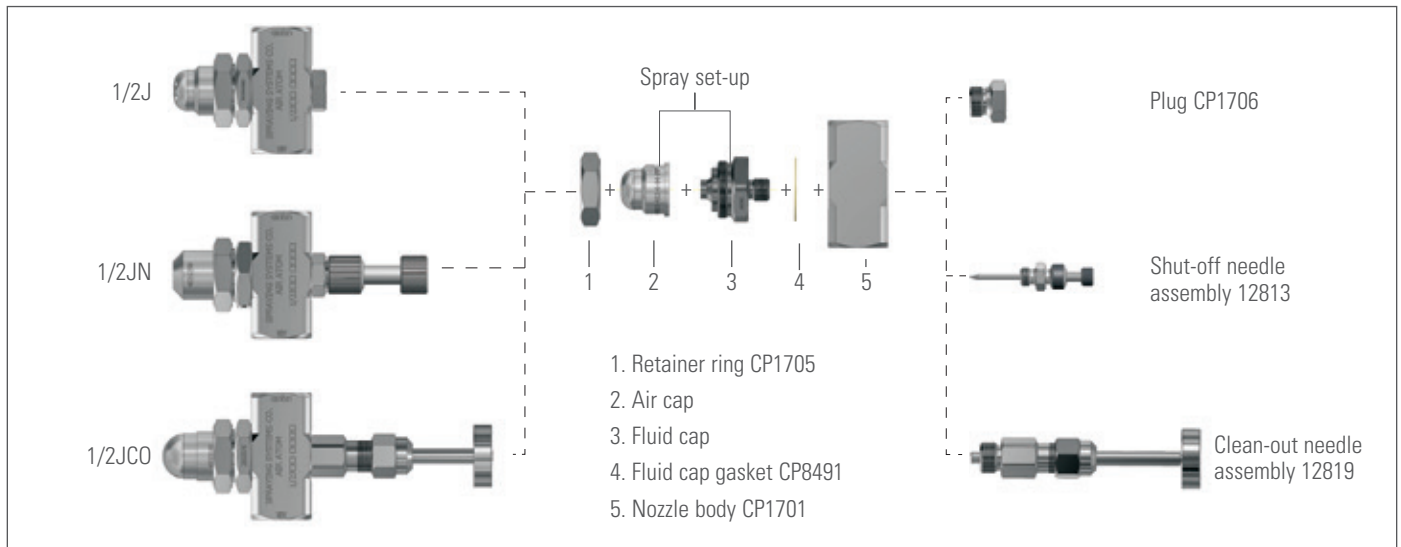
**FOR DETAILED SPRAY SET-UP PERFORMANCE DATA
SEE SECTION D**

1/2J 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 306 gph (1158 lph) in various spray patterns
- Basic 1/2J 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



1/2J NOZZLE OPTIONS



1/2JN – Manual shut-off needle to stop liquid flow



1/2JCO – Manual clean-out needle to clear obstructions from the fluid orifice



1/2JBC – Air and liquid inlets at the back of the nozzle body, in line with the spray direction



1/2JBCJ – Steam jacket around the nozzle body for spraying liquids too viscous to spray at room temperatures



1/2-2J – 1/2" air and liquid inlet connections on opposing sides of the nozzle body with two opposing spray set-ups

WALL MOUNT ADAPTER OPTIONS

Thick wall adapters for 1/4J with 3/4" NPT or BSPT (M) adapter connections use CP4886 wall mount adapters. Replace retainer rings on nozzle assemblies and fit into threaded wall openings. *See page G22 for more details*

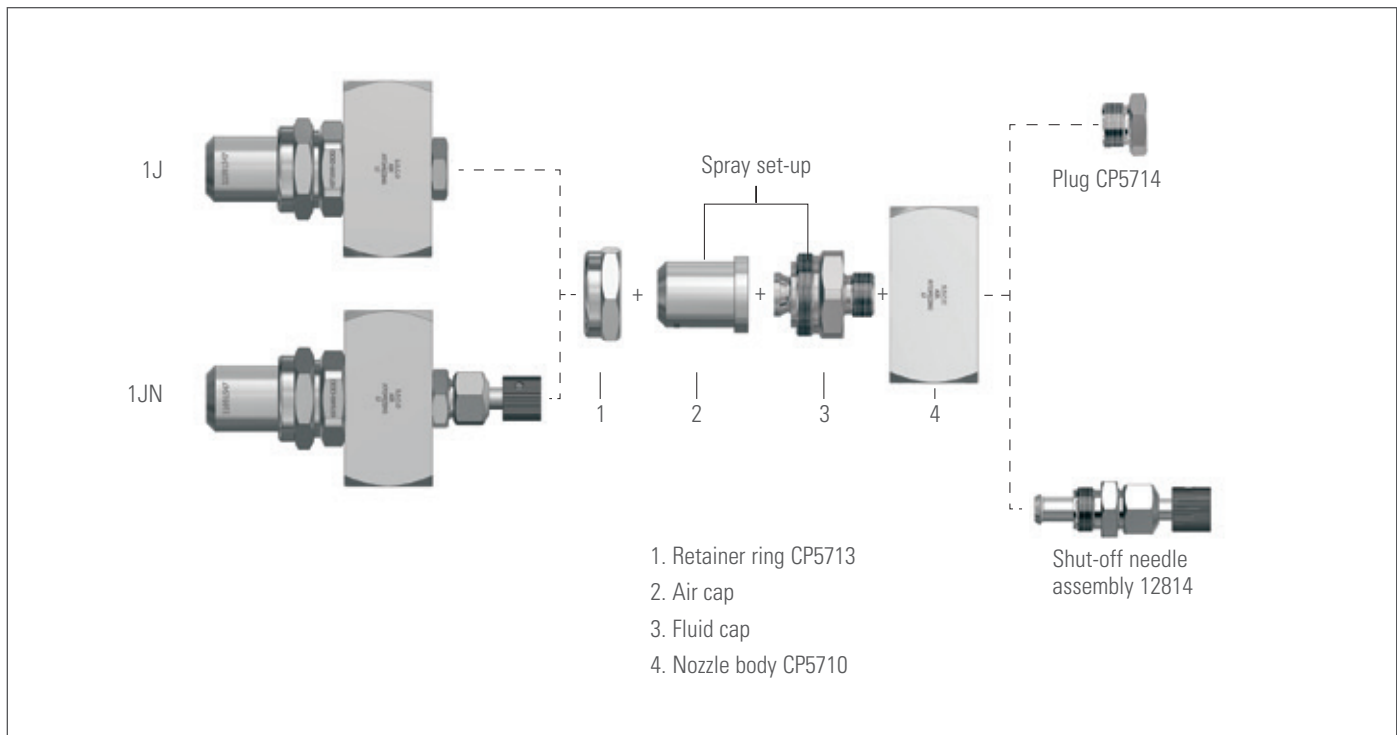
1J SERIES NOZZLES

- 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 29 gpm (110 lpm) in various spray patterns
- Basic 1J 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



1J Nozzle

1J NOZZLE OPTIONS



1JN – Manual shut-off needle to stop liquid flow

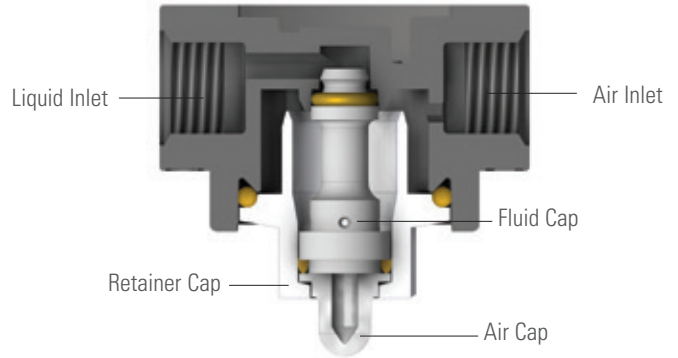
PLACING YOUR ORDER

**Call 1.630.665.5000 for application assistance
or to place an order.**

**FOR DETAILED SPRAY SET-UP PERFORMANCE DATA
SEE SECTION D**

OVERVIEW: QUICKMIST® SERIES NOZZLES

- Liquid and compressed air enter the nozzle body and are mixed by the spray set-up to produce a very finely atomized spray pattern
- The efficient design of QuickMist nozzles uses less air than typical air atomizing nozzles
- No tools are required for cleaning or replacement of spray set-ups
- Lightweight fluoropolymer material provides excellent chemical resistance
- Wide variety of spray set-ups available



1/4QMJ Nozzle

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

QUICK REFERENCE GUIDE

| Product Number | Inlet Connection Size (in.) | Max Flow | Max Temp (liquid) | Spray Set-Ups |
|-------------------|-----------------------------|--------------------|-------------------|---------------------------|
| QMJ Series | 1/4 (F) NPT or BSPT | 26 gph (98 lph) | 200°F (93°C) | SUQ set-ups (page D54) |

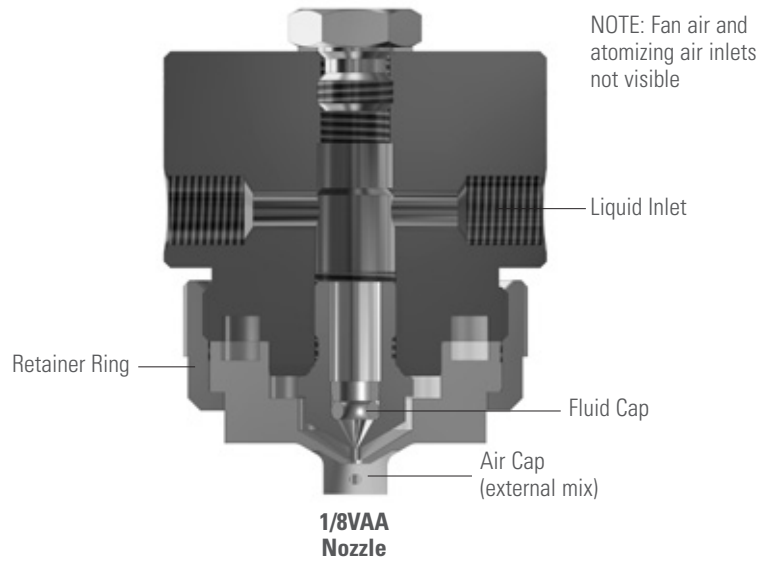
QUICKMIST® SERIES NOZZLES – 1/4QMJ AND 1/4QMJML

- QuickMist 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 26 gph (98 lph) and various spray patterns
- Nozzle bodies have liquid and air inlets on opposing sides
- Flat spray set-ups can be easily aligned in 45° increments
- QMJML nozzle bodies include mounting lugs for easy installation
- Kynar® construction with Viton® O-rings



OVERVIEW: VARIABLE SPRAY NOZZLE SERIES

- Variable spray nozzles provide uniform spray distribution, even when spraying viscous liquids
- Independent control of liquid, atomizing air and fan air pressures make it possible to fine-tune flow rate, drop size, spray distribution and coverage
- The air atomizing line can be adjusted to vary spray drop size without affecting liquid flow rates
- Additional liquid inlet/outlet port allows for recirculation that effectively maintains the flow of viscous liquids



Independent control of liquid, fan air and atomizing air provides maximum control of spray performance.

QUICK REFERENCE GUIDE

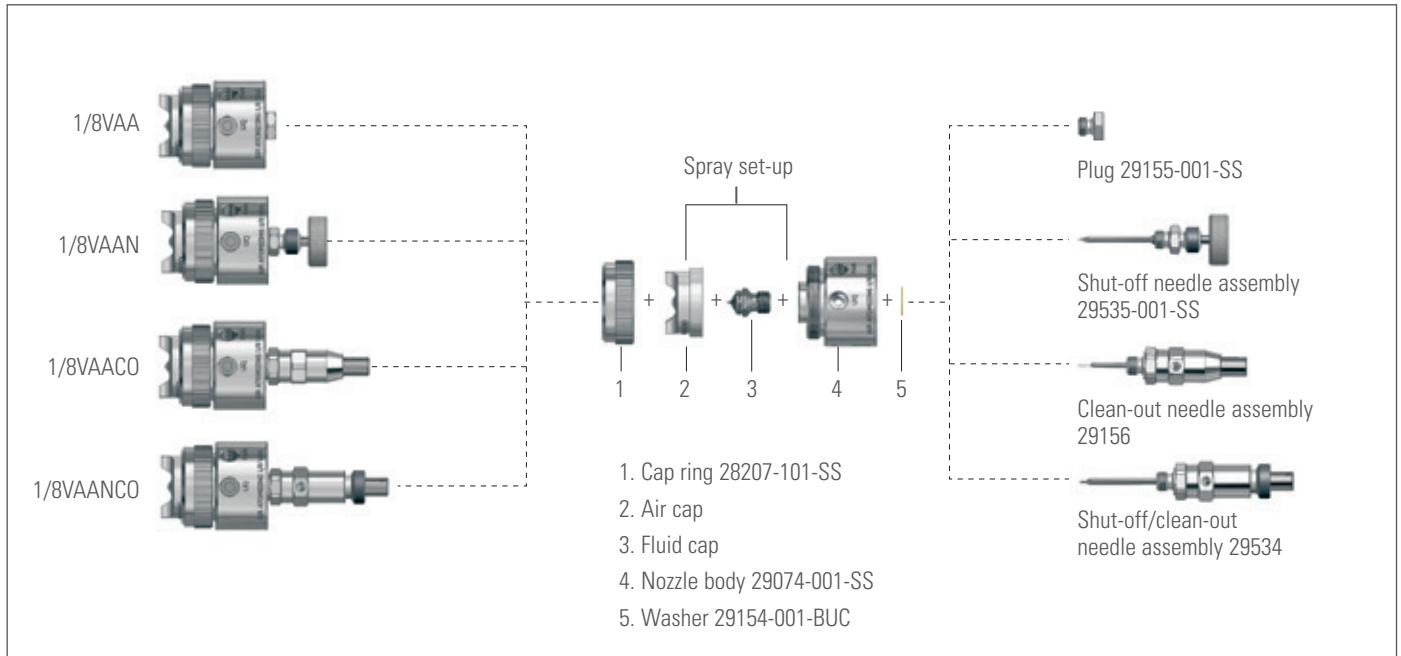
| Product Number | Inlet Connection Size (in.) | Max Flow | Max Temp (liquid) | Spray Set-Ups |
|-------------------|---|-----------------------|-------------------|----------------------------|
| VAA Series | 1/8 (F) NPT or BSPT atomizing air, fan air and liquid | 49.8 gph (189 lph) | 200°F (93°C) | SUV set-ups (pages D62) |

PLACING YOUR ORDER

Call **1.630.665.5000** for application assistance or to place an order.

**FOR DETAILED SPRAY SET-UP PERFORMANCE DATA
SEE SECTION D**

VARIABLE SPRAY NOZZLE OPTIONS



1/8VAA SERIES NOZZLES

- Flow rates up to 49.8 gph (189 lph)
- Stainless steel construction
- With fan air in operation, a flat spray pattern is produced; a round spray pattern is produced when fan air is off
- Atomizing air line can be adjusted to vary spray drop size without affecting flow rate
- Dual liquid inlets allow recirculating of sprayed fluid
- Anti-bearding spray set-ups are available



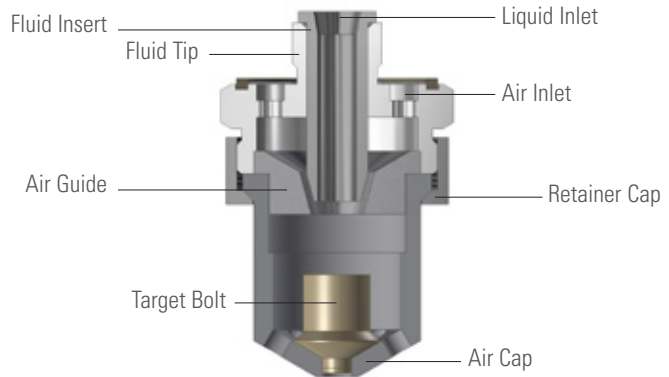
1/8VAA Nozzle

1/8VAA NOZZLE OPTIONS

| | | |
|--|---|--|
|  <p>1/8VAAN – Manual shut-off needle to stop liquid flow</p> |  <p>1/8VAACO – Manual clean-out needle to clear obstructions from the fluid orifice</p> |  <p>1/8VAANCO – Combination shut-off/clean-out needle direction</p> |
|--|---|--|

OVERVIEW: HIGH EFFICIENCY SPRAY NOZZLE SERIES

- A patented three-stage atomization process produces relatively high liquid flows with very small drops using low air consumption
- Tight droplet size control for critical spray applications
- Significantly higher turndown ratios than standard air atomizing nozzles for maximum operating flexibility
- Large free passages reduce the risk of clogging
- Available with threaded inlet connections or mounted on standard or made-to-order spray injectors
- Ideal for gas cooling and conditioning applications
- Use with lance and injector spray systems



FMA FloMax® Nozzle

Air and liquid converge, allowing high velocity air to shear the liquid. The liquid/air mixture then impacts the target bolt forcing additional mechanical breakup. As the mixture exits the orifices of the air cap, the additional pressure drop further atomizes the liquid.

QUICK REFERENCE GUIDE

| Product Number | Max Flow | Materials |
|------------------------|-----------------------|--|
| FloMax X Series | 1.5 gpm (5.67 lpm) | 310 and 316 stainless steel, Hastelloy® Other materials available upon request |
| FloMax A Series | 45 gpm (170 lpm) | Nozzle materials include 310 and 316 stainless and Hastelloy Air cap materials include reaction-bonded silicon carbide, Stellite®, ceramic and tungsten carbide |

HIGH EFFICIENCY SPRAY NOZZLE SERIES OPTIONS

FloMax X Series

- Flow rates up to 1.5 gpm (5.67 lpm)
- Spray angles of 20°, 55° and 90°
- Stainless steel or Hastelloy construction. Other materials available upon request



FloMax A Series

- Flow rates up to 45 gpm (171.3 lpm)
- Spray angles of 20° and 55°
- Stainless steel or Hastelloy construction. Other materials available upon request
- Anti-bearding design available to reduce maintenance in high-particulate spraying applications



PLACING YOUR ORDER

**Call 1.630.665.5000 for application assistance
or to place an order.**