



## FLOMAX<sup>®</sup>-S NOZZLES

HIGH-EFFICIENCY STEAM NOZZLES  
OPTIMIZE GAS COOLING & ELIMINATE  
THE NEED FOR COMPRESSED AIR



*Spraying Systems Co.*<sup>®</sup>  
Experts in Spray Technology



## UNIQUE, HIGH-EFFICIENCY, COST-EFFECTIVE SOLUTION FOR GAS COOLING

FloMax<sup>®</sup>-S nozzles produce the very small drops required for cooling and quick evaporation. Unlike air atomizing nozzles that require compressed air, FloMax-S nozzles use steam to atomize fluids and slurries. The proprietary, patent-pending design of the nozzles ensures tight drop size control for precise, efficient gas cooling.



### BENEFITS

- Use of available steam eliminates the need for costly compressed air
- Efficient atomization and fluid mixing eliminates condensation problems that can interfere with drop size consistency
- Long service life due to use of wear-resistant materials
- Simple design ensures fast and easy maintenance
- Standard and built-to order injectors are available in a wide range of materials and configurations to accommodate various applications
- Pre-assembled valve regulation packages are also available to save engineering and installation time







#### IDEAL FOR:

- Process gas cooling
- Gas scrubbing
- Moisturizing
- Desuperheating

#### INDUSTRIES:

- Aluminum/Steel
- Cement
- Chemical/Petrochem
- Power Generation
- Pulp and Paper
- Refinery

### OVERVIEW OF THE FLOMAX-S NOZZLE LINE

FloMax-S Series:	FM01S 	FM5S 	FM10S 	FM25S 
Flow rate:	0.4 to 15.8 gph (1.5 to 60 lph)	2 to 8 gpm (7.6 to 30 lpm)	5 to 17 gpm (19.0 to 64 lpm)	8 to 25 gpm (30 to 97 lpm)
Spray angle standard:	70°		55°	
Max. free passage and recommended mesh size:	0.047" (1.19 mm), Mesh size: 25	0.040" (1.016 mm), Mesh size: 25	0.055" (1.397 mm), Mesh size: 18	0.070" (1.778 mm), Mesh size: 14
Materials:	Bodies and tips: 316 stainless steel, 310 stainless steel or Hastelloy <sup>®</sup> Gaskets: copper or 316 stainless steel Other materials available upon request			

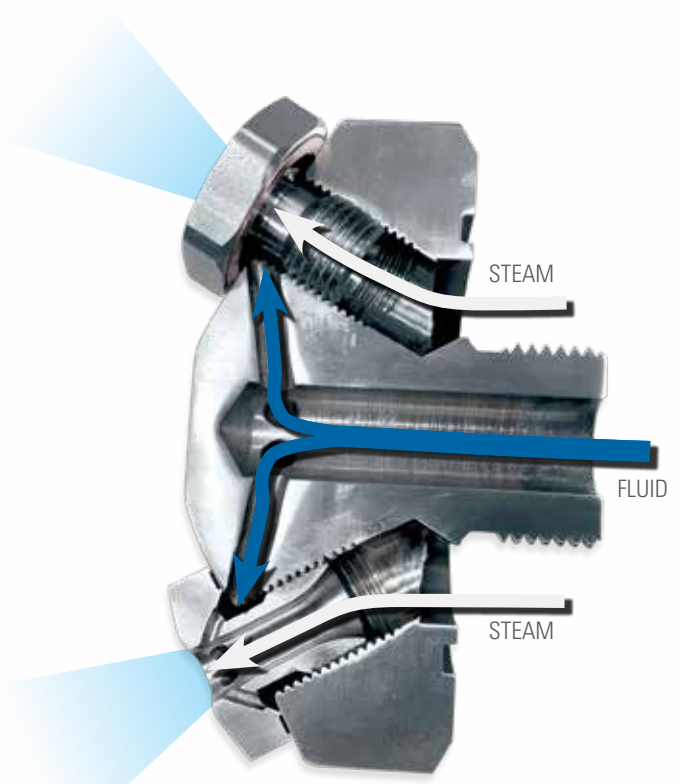


FloMax-S nozzles feature a simple 3-piece design. Assembly can be completed in minutes. Place the gaskets on the body, then insert the spray tips.



## ADVANTAGES OF USING FLOMAX®-S NOZZLES

- **Small drops, efficient cooling, flexible operation** – Drop size remains consistent over a wide range of liquid temperatures, 72°F to 200°F (22°C to 93°C)
- **Eliminate costly compressed air, compressors and some process piping** – Significant reductions in operating costs result when using available steam
- **Simple and economical adjustments are possible should process conditions change** – All spray tips fit on the same size body
- **Maintenance is fast and easy** – FloMax-S nozzles consist of only three pieces: nozzle body, nozzle inserts, and gaskets. No special tools are required for installation or maintenance
- **Single source supply ensures optimal performance** – Integration problems are eliminated by purchasing nozzles, injectors, engineering services and/or computational fluid dynamics (CFD) modeling from the same source

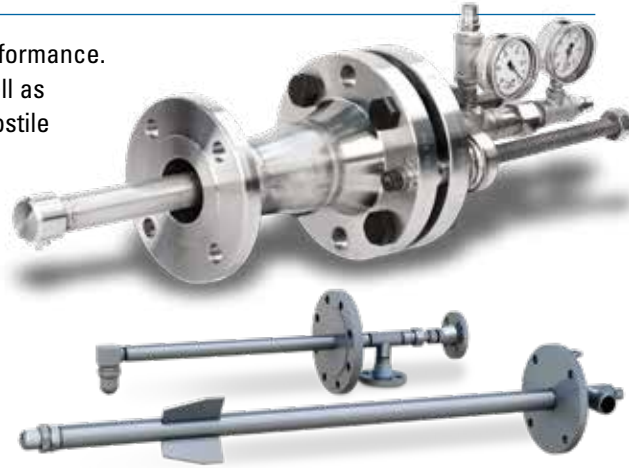


The mixing of steam and fluid just prior to exiting the nozzle orifices ensures tight drop size control.



## INJECTOR SOLUTIONS FROM SIMPLE TO COMPLEX

Spray injectors help ensure optimal FloMax®-S nozzle performance. We offer a standard line of 0°, 45° and 90° injectors as well as built-to-order conventional and retractable versions for hostile or challenging physical environments.



## ENSURE OPTIMAL PERFORMANCE WITH COMPUTATIONAL FLUID DYNAMICS

There are dozens of variables that can affect spray performance in a gas stream. In many cases, we can predict performance by using our sophisticated, proprietary gas cooling software and conducting spray characterization testing in our fully equipped spray laboratories. However, in some applications, we rely on Computational Fluid Dynamics (CFD) to model gas flow based on actual operating conditions.



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