

Accu•Mist™



**The AccuMist System
from Sono-Tek Offers
the Highest Degree of
Accuracy, Precision and
Fine-Line Control in
Ultrasonic Deposition**

ULTRASONIC ACCURACY AND PRECISE COATING

- Sono-Tek ultrasonic nozzles have industry proven success in producing high quality coatings
- Soft, low-velocity atomized spray can be targeted with unmatched precision
- Small ultrasonically generated drops provide excellent penetration
- Minimal overspray (minimal waste)
- Wide range of delivery rates from 1-100 ml/hour
- Self-cleaning ultrasonic nozzle prevents clogging
- Adapts easily to robotic control

SONO•TEK Corporation

**ISO 9001:2000
CERTIFIED**

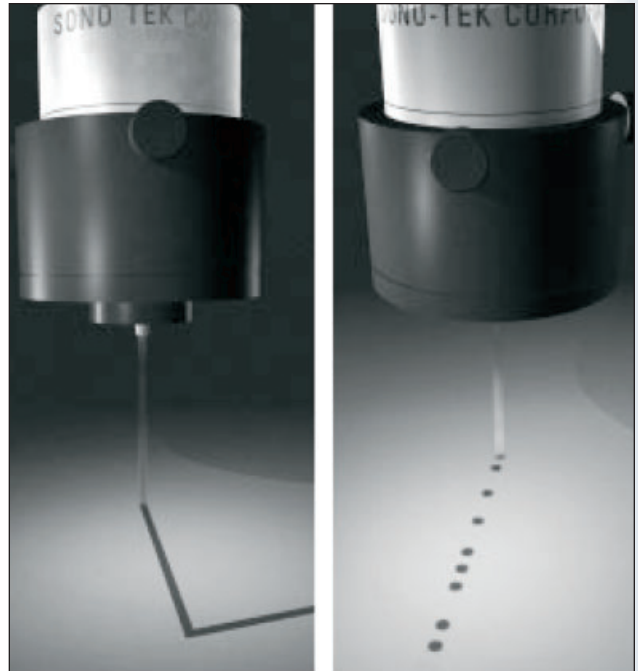
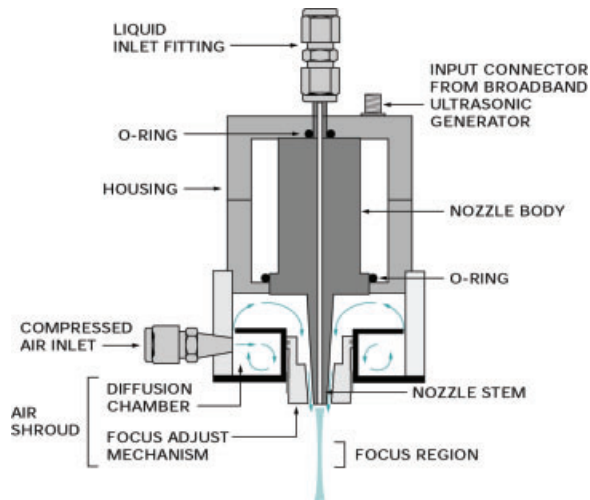
Operating Principle

The AccuMist™ system combines Sono-Tek's unique Microspray ultrasonic atomizing nozzle with low-pressure air to produce a soft, highly focused beam of small spray drops.

Compressed air, typically at 1 psi, is introduced into the diffusion chamber of the air shroud, which produces a uniformly distributed flow of air around the nozzle stem.

The ultrasonically produced spray at the tip of the stem is immediately entrained in the low pressure air stream. An adjustable focusing mechanism on the air shroud allows complete control of spray width.

The spray envelope is bow-shaped. The width of the bow is controlled by moving the focus-adjust mechanism in and out.



With over 30 years of technical experience in ultrasonic spray technology, Sono-Tek systems are the leading edge of precision, thin film coatings.

ACCUMIST™ NOZZLE SPECIFICATIONS

Liquid Delivery Specifications

For high accuracy liquid delivery, the AccuMist™ system is typically used in conjunction with either a Sono-Tek syringe pump or pressure reservoir.

	Sono-Tek Syringe Pump	Pressure Reservoir
Controls	Microprocessor operated, LCD display, keyboard	Manual Pressure Regulator
Input/Output Interfaces	RS232 and TTI types for control of pump and nozzle	Fluid Level Sensor (contact closure output)
Capacity	Two syringes: up to 60 ml each, or one syringe: up to 140 ml	1 liter or 3.8 liter
Flow Rate Range	0.01 µ/hr - 71 ml/min	0.001 ml/min to maximum capacity of the nozzle
Flow Rate Stability	± 1%	± 10%

Requirements

Power	100-240 VAC, 50/60 Hz single phase, 2.5A
Compressed air	15-150 psi/100-1000 kPa, clean, dry air or gas

Ultrasonic Nozzle Specifications

Materials		
Nozzle Body*	Titanium alloy 6Al-4V	
Nozzle Housing	316 stainless steel	
O-rings	Kalrez®	
Air Shroud	Delrin®/316 stainless steel	
Liquid Inlet*	316 stainless steel (1/8" or 1/16" tubing)	
Air Inlet (1/4" tubing)	316 stainless steel	

Ultrasonic nozzles are available in three (3) operating frequencies, each of which produces drops of a different size range. Median drop diameter (based on water): 120 kHz (18 microns), 60 Hz (31 microns), 48 kHz (38 microns), 25 kHz (70 microns)

Operating Temperature 20 - 150° C

Air Pressure 0 - 2 psi

Flow Rate 1 - 100 ml/hr

Spray Pattern Diameter 0.070 - 0.250 inches (1.778 - 6.35 mm) or 0.25 - 0.75 inches (6.35 - 19.05 mm)

*Wetted materials
Teflon®, Kalrez® and Delrin® are registered trademarks of E.I. DuPont de Nemours & Company
Specification may change without notice

Global Solutions in Ultrasonic Spray Technology

Sono-Tek's corporate headquarters are located in Milton, NY USA, with additional offices in Hong Kong. Our extensive global support and distribution network provides factory trained personnel with local language support in dozens of countries worldwide.



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Comprehensive Solutions in Process Automation and Technology