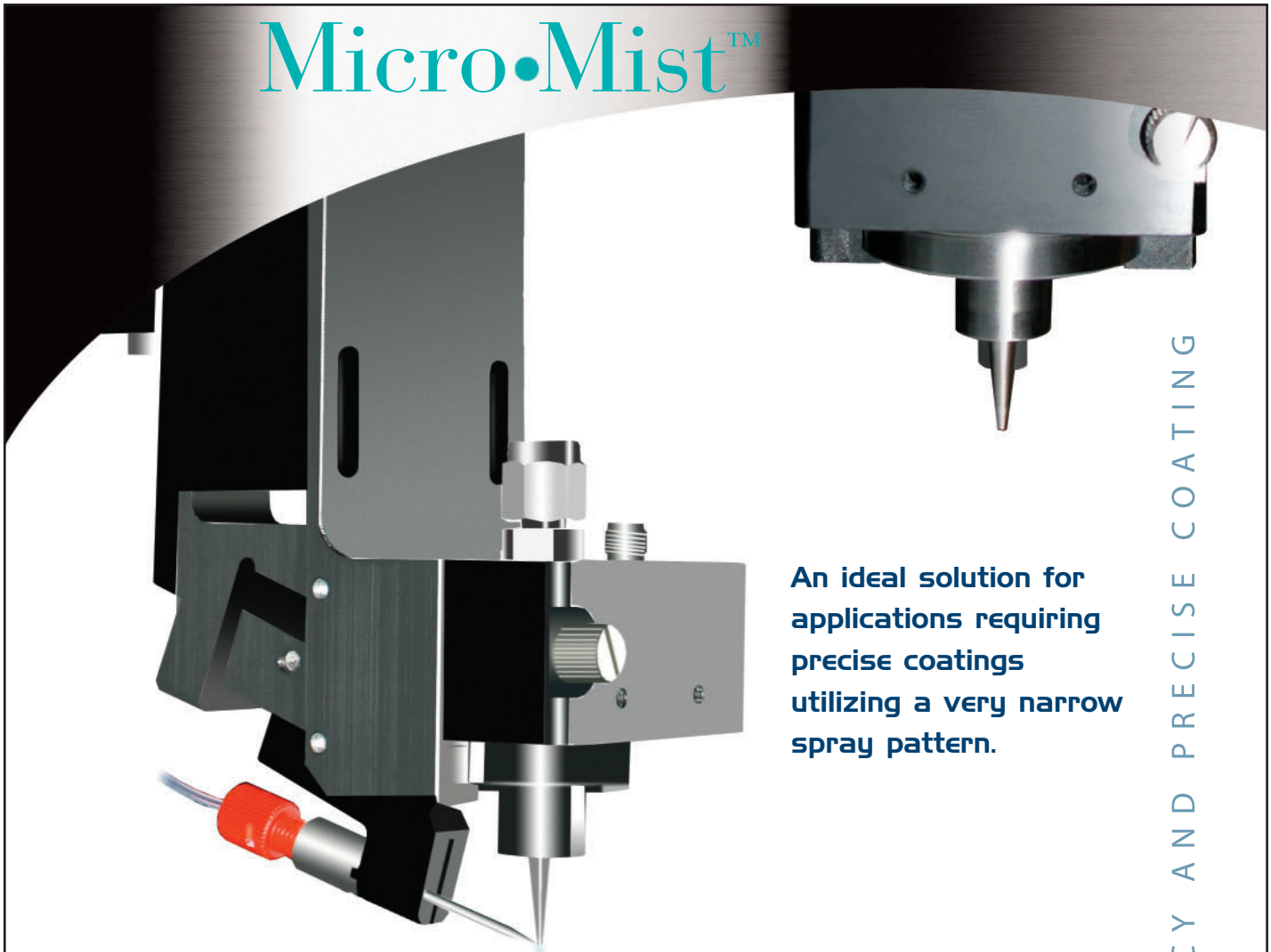
Micro•Mist™



An ideal solution for applications requiring precise coatings utilizing a very narrow spray pattern.

ULTRASONIC ACCURACY AND PRECISE COATING

- Liquids are delivered through an external hypotube to the nozzle's atomizing surface
- A low-pressure air stream through the nozzle's central orifice entrains the spray and produces a very tight, precise spray pattern
- Spray widths as low as 0.015" (0.4 mm) are possible
- Soft, low-velocity atomized spray can be targeted with unmatched precision
- Minimal overspray (minimal waste)
- Ultra-low flow rates over a wide range (from 0.3 - 9 ml/hour)
- Self-cleaning ultrasonic nozzle prevents clogging

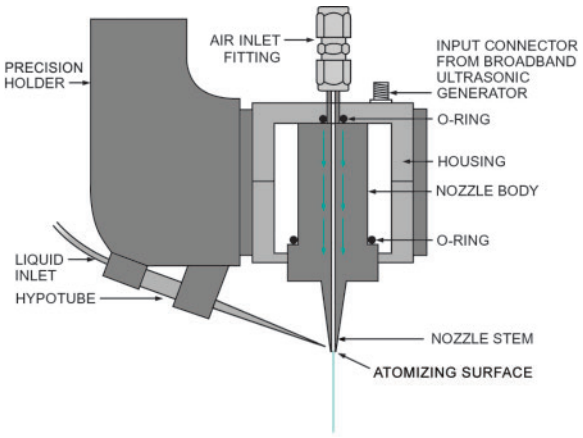
SONO•TEK Corporation

ISO 9001:2000 CERTIFIED

Operating Principle

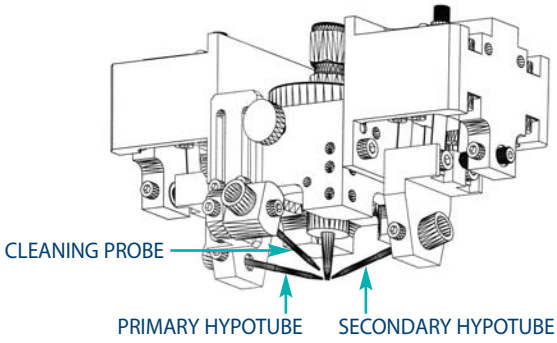
The MicroMist™ system combines Sono•Tek's unique Microspray ultrasonic atomizing nozzle with low-pressure air to produce a soft, highly focused beam of small spray drops.

The small size of the nozzle tip and air orifice of the MicroMist™ produces a very fine, focused beam. An isolated hypotube delivers liquid to the nozzle tip while compressed air, delivered through the nozzle orifice at a fixed low pressure, shapes the atomized droplets into a very precise, targeted spray.



Multiple Hypotubes/Cleaning Probe

Multiple hypotube probes can be installed for use in applications requiring the delivery of more than one liquid. A cleaning probe option is also available.



MICROMIST™ NOZZLE SPECIFICATIONS

Liquid Delivery Specifications

For high accuracy liquid delivery, the MicroMist™ system is typically used in conjunction with either a Sono•Tek syringe pump or the Accu•Flow™ pump.

	Sono•Tek Syringe Pump	Accu•Flow™ Pump
Controls	Microprocessor operated, LCD display, keyboard	LCD display, Self-diagnostic ten key operation
Input/Output Interfaces	RS232 and TTI types for control of pump and nozzle	Full PC control, 3 event outputs, time programmable
Capacity	Two syringes: up to 60 ml each, or one syringe: up to 140 ml	Unlimited continuous feed from reservoir
Flow Rate Range	0.01 µ/hr - 71 ml/min	0.001 ml/min to 4.0 ml/min with 0.001 ml increments by ten key operations
Flow Rate Stability	± 1%	Less than ± 1%

Service 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®
	Precision Holder	Anodized Aluminum
	Liquid Inlet(1/16" tubing)*	Tefzel®
	Air Inlet (1/8" 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)

Operating Temperature	20 - 150° C
Air Pressure	0 - 2 psi
Flow Rate	0.3 - 9 ml/hr
Spray Pattern Diameter	0.010 - 0.030 inches (0.26 - 0.77 mm)

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

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

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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