



Flexi•Coat^{OP3}

Ideal for R&D or low-volume production, the FlexiCoat^{OP3} is easily configured with Sono-Tek ultrasonic nozzles to customize spray patterns for your specific application. Patterns are easily shaped, ranging from 0.08 - 6" wide (2 - 153 mm). Several liquid delivery options are available with a wide range of flow rate capabilities, depending upon the system configuration.



Multiple nozzle configuration

The FlexiCoat^{OP3} is a standalone programmable three-axis robot ultrasonic full coating solution. This system employs robust ball-screw slides driven by brushless DC servo motors. Any Sono-Tek ultrasonic nozzle can be integrated. Spray pattern widths can be easily shaped depending on which nozzle is used. Custom Windows-based software makes it easy to program and store a variety of spray patterns for automated processes.

The FlexiCoat^{OP3} includes many integrated features:

- Robust standalone enclosure
- 420 mm x 490 mm x 85 mm (16.5" x 19.2" x 3.3") range of motion (X, Y, and Z axes respectively)
- Windows®-based programming software (PC included)
- On-screen teach device
- Coordinated motion in all three axes simultaneously
- Integrated nozzle power, pump control, and heat plate control (optional)
- Sealed linear slides to protect ball screw drives

Sono-Tek ultrasonic nozzles feature:

- Up to 80% reduction in material consumption
- Reduced wasteful overspray and atmospheric contamination
- Non-clogging design results in minimal servicing and downtime
- Precise, repeatable spray patterns are easily shaped
- Highly controllable spray produces reliable, consistent results
- Corrosion-resistant titanium and stainless steel construction
- Ultra-low flow rate capabilities, intermittent or continuous
- No moving parts to wear out



FlexiCoat^{OP3} Programmable Coating System Specifications

Tooling Plate Size: 445 x 445mm
(17.5 x 17.5 in)

Range of Motion: 420 x 490 x 85 mm*
(16.5" x 19.2" x 3.3")*

*NOTE: Coating area may be reduced depending on nozzle configuration, options and accessories

Repeatability: 0.025 mm (0.001 in)

Resolution: 0.02 mm

Motor: Brushless DC servo

Drive Mechanism: Ball screw drive

Work Payload: 5 kg (11 lbs.)

Inputs/Outputs: 96 digital + 4 analog (standard), expandable to: 1024 digital inputs/outputs, 32 analog inputs, 16 analog outputs

Software Control: Windows®-based

Power: 100-240VAC, 50/60 Hz

4.5A max base system

17A max with standard heat plate

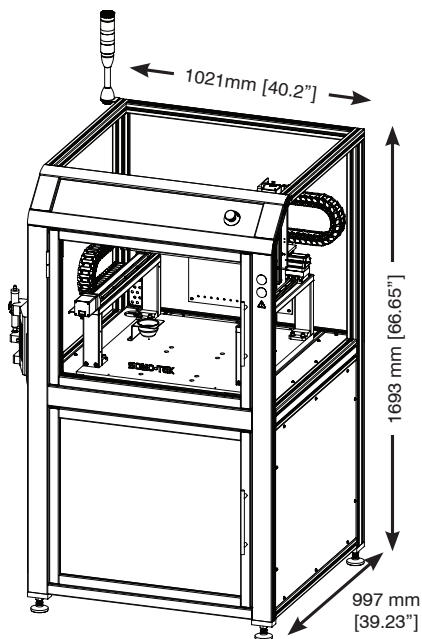
Air: 80 PSI dry unlubricated air

Exhaust: 150-200+ cfm (4248-5663+ lpm) - customer supplied

Dimensions:

Gantry: 731mm W x 655mm H x 725mm D
(28.8"W x 25.8"H x 28.6"D)

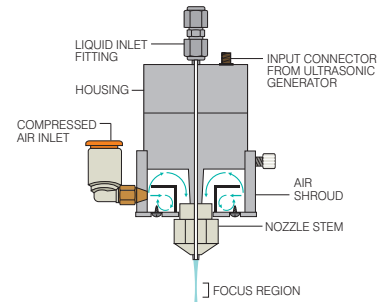
Enclosure: 1021mm W x 1693mm H x 997mm D
(40.2"W x 66.7"H x 39.2"D)



Sono-Tek ultrasonic nozzles can create a variety of precise spray patterns:

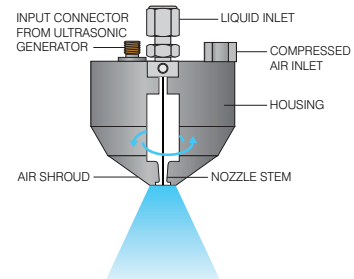
The AccuMist™ nozzle creates a narrow, slightly bow-shaped spray pattern.

Pattern width adjustable from 0.070 - 0.250" (1.778 - 6.35 mm).



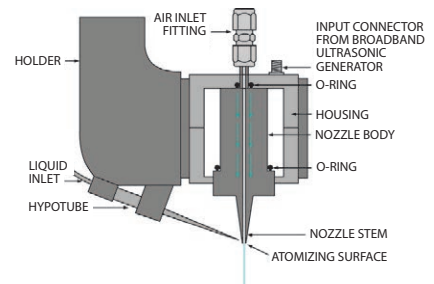
The Vortex nozzle produces a wide, conical spray pattern.

Pattern width adjustable from 2 - 4" (50 - 102 mm) in diameter.



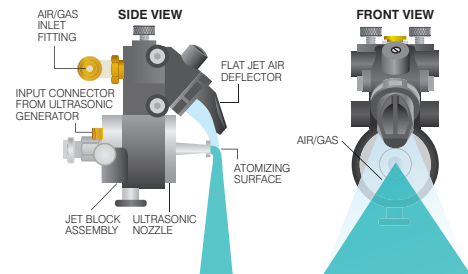
The MicroMist™ nozzle creates a very narrow, cylindrical spray pattern.

Pattern width adjustable from 0.010 - 0.030" (0.26 - 0.77 mm).



The Impact nozzle creates a wide, fan-shaped spray pattern.

Pattern width adjustable from 2 - 6" (50 - 150 mm).



All four nozzles shown create precise, repeatable, controllable, low-volume atomized spray patterns and can be easily integrated with the FlexiCoat™ OP3 Programmable Coating System.

The system is most commonly used with a Sono-Tek syringe pump for precision, low-flow applications.

Sono-Tek Laboratory Services

Sono-Tek's in-house laboratory services offer the expertise of our engineering and technical staff in resolving process issues and tailoring our technology to meet the needs of our customers.

