

# Ultrasonic Accuracy and Control for Selective Flux Coatings

#### The SelectaFlux system has many integrated features and benefits:

- Compatible with ALL fluxes
- Easily retrofits into all major selective solder machines
- Reduced wasteful overspray and atmospheric contamination
- Minimal servicing and downtime
- Self-cleaning ultrasonic nozzle prevents clogging
- Controlled-velocity will not harm or disturb components while giving maximum top side fill
- Spray pattern adjustable from 2 mm 38 mm (0.080" 1.50")
- Wide range of delivery rates from 1 250 microliters/second
- Also ideal for tinning and odd-shaped components

The SelectaFlux Ultrasonic Fluxing System from Sono•Tek offers the highest degree of accuracy, precision and fine-line control in the industry.



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SelectaFlux nozzles can spray in any orientation

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# **Operating Principle**

The SelectaFlux system is a complete, ready-to-integrate selective fluxing system with customer-supplied liquid delivery. It combines Sono•Tek's unique Microspray ultrasonic atomizing nozzle with lowpressure air to produce a controlled, highly focused beam of spray. A separate control module handles input/output system functions.

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 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. The distance between nozzle and substrate can be varied from near-contact to approximately two inches.



### **Complete System Includes**

Ultrasonic nozzle with focus-adjustable air shroud, Broadband ultrasonic nozzle generator, electrical and I/O connections.



#### SELECTAFLUX SYSTEM SPECIFICATIONS

## **Ultrasonic Nozzle Specifications**

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Weight	500 g (1.1 lbs)
Materials	
Nozzle Body*	Titanium alloy 6AI-4V
Nozzle Housing	316 stainless steel
O-rings*	Kalrez®
Air Shroud	Delrin <sup>®</sup> /316 stainless steel
Liquid Inlet*	316 stainless steel (6 mm)
Air Inlet	Nickel-plated brass(4 mm barb)
Operating Temperature	20 - 150° C (68 - 302° F)
Solenoid Valve*	
Materials	316 stainless steel, Kalrez <sup>®</sup> ,
	400 series stainless steel
Power requirements	24 VDC @ 10.5 Watts
Air Pressure	0-14 kPa (0-2 psi)
Spray Pattern Diameter (Optional)	2 mm - 13 mm (0.080″ - 0.50″ ) or 5 mm - 38 mm (0.20″ - 1.50″)
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Broadband Ultrasonic	Generator Specifications
Input Power Requirements	90 - 260 VAC, 50/60 Hz, 75 VA max.

Output Power	12 W max. continuous 20 W max. intermittent
Frequency	48 kHz
External Trigger Input	5 - 240 V (AC or DC) or switch closure
External Power Control Input	0 - 10 VDC, 20 k-Ohms input impedance
Alarm Output	Relay contacts NC / NO
Operating Temperature Range	0 - 40° C (32 - 105° F)
Dimensions	216 x 229 x 57 mm (8 <sup>1</sup> / <sub>2</sub> " W x 9" D x 2 <sup>1</sup> / <sub>4</sub> " H)
Weight	2.0 kg (4.3 lbs)

\*Wetted materials

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SONO •TEK Corporation industry's leader in spray fluxing

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