



# 7100 ELITE ETCH Cu

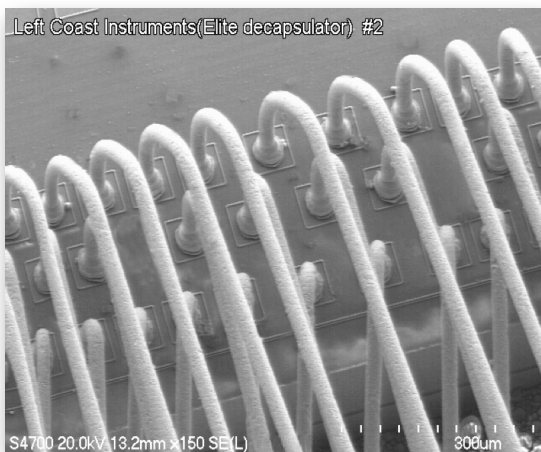
## Acid Decapsulation for Copper

### *The first acid decapsulator made for copper*

The Elite Etch-Cu from RKD Engineering is an Automated Mixed Acid Decapsulator, with advanced feature integration to enable high productivity. This Decapsulator rapidly and easily opens even the most delicate packages by delivering precise, micro-aliquots of nitric, sulfuric, or acid mixes to the package with no sample damage. The delivery of each micro-aliquot is done with sufficient pressure to create extreme turbulence in the etched cavity that greatly accelerates the rate of encapsulant removal. Very low, precise acid temperatures, combined with high micro-aliquot delivery rates allow for the decapsulation of copper wired devices with no wire or metallization damage. An exclusive acid delivery function can be selected that delivers the highest pulse rate possible while consuming less than maximum acid volume. The specially designed acid heat exchanger can accurately control acid temperature down to 15°C and up to 250°C, with flow rates to 8 ml. per minute. The high acid pulse rates achieve reasonable etch times even at the lowest temperatures. The Elite Etch operates at temperatures up to 250°C enabling operational versatility with any combination of acids.

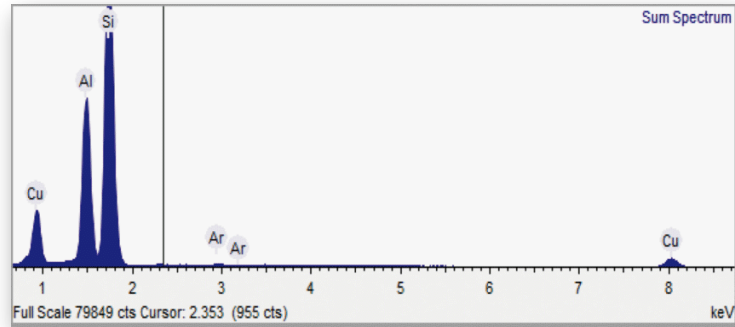
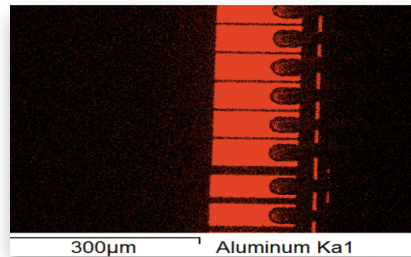
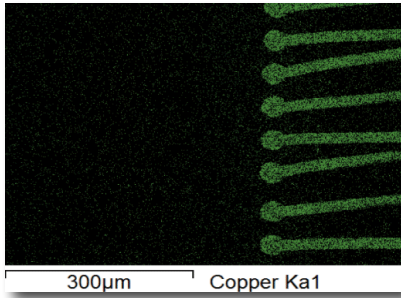


The monolithic etch head is machined from premium grade silicon carbide for unsurpassed acid resistance. The etch head is designed to reduce the fuming of any residual acids left on the etch head at the end of the process.



The device hold down assembly (ram nose) is pneumatically activated and is designed for a large amount of travel. The ram nose is normally retracted and only extends after the safety cover is fully closed. The vertical movement of the ram nose secures the device to the etch head thus eliminating movement of either the package or its fixturing.

RKD Engineering is the only company to incorporate true double containment for all fluid couplings between the bottle container and the decapsulator. Interconnects run inside Teflon containment tubing that can be fed from either side of the Bottle Box.



The Bottle Box Assembly and the Etcher Unit contain fluid sensors to operator in the unlikely event of an acid leak from any of the bottles or internal fittings. Bottle exchange on any decapsulator includes possible risk to the operator. To minimize this RKD incorporates a universal pivoting interconnect that allows simple and trouble free bottle exchange with minimal exposure to residual acid.

## SPECIFICATIONS

Dimensions -	Decapsulator 7.5 x 12.5 x 12 inch (190 x 318 x 305 mm) Bottle Assembly 10 x 5 x 11 inch (254 x 127 x 279 mm)
Weight -	approx. 35 lbs. (16 Kg)
Power Source	90 -130 or 230-250 VAC ~ 49 to 61 Hz
Acid temp. range	15°C to 250°C. Independent of ambient room temperature
Acid temp. set point	1.0°C ± 1% of setting. Independent of ambient temperature.
Etch cavity (up to)	21x21 mm. (30 mm. max diagonal)
Choice of Acids	fuming nitric acids, mixed fuming nitric and sulfuric acids, or fuming/concentrated sulfuric acid
Acid Mix Ratios -	(nitric to sulfuric ratios) 6:1, 5:1, 4:1, 3:1, 2:1, 1:1
Post Etch Rinse Options	sulfuric acids, fuming nitric acids, mixed acids, or no rinse
Etch Times -	1 to 2,400 seconds in 1 sec. increments (1 sec to 40 minutes) dynamic ( <i>real time</i> ) adjustment of etch time
Etchant Volume Selection -	1 to 8 ml. per minute - for all acids & acid mixes.
Etch Delivery Functions	pulsed or REAP (reciprocal etch acid process) for lower acid consumption
Operator Program Storage -	100 programs stored to nonvolatile memory
Warranty	most comprehensive and inclusive warranty in industry ( <i>ask for full details</i> )



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