

JetEtch TotalPROTECT



JETETCH TOTALPROTECT HIGHLIGHTS

- Etches the widest variety of integrated circuits of any system on the market.
- Maintains the integrity of sensitive components.
- Incorporates patented bias voltage application process.
- Allows sub-ambient cooling of the etching acid through special cooling feature.
- Offers tremendous range of etching parameters for virtually limitless recipe combinations.

Innovative Features of JetEtch Pro

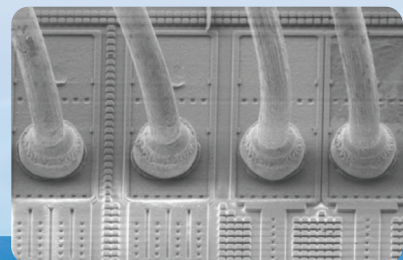
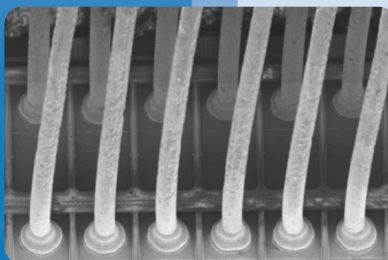
- Industry-leading safety features
- Faster etch processing times
- Flexible etch head designs
- Superior pump longevity
- The most effective software in the industry

ADVANCED DECAPSULATION SYSTEM

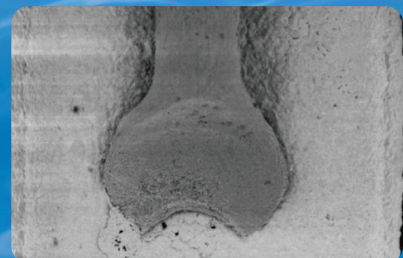
The JetEtch Pro TotalPROTECT is the latest in a series of innovative solutions for the failure analysis industry from Nisene Technology Group.

The JetEtch TotalPROTECT is the world's most advanced decapsulation system. With an unequalled feature set, the JetEtch TotalPROTECT can etch the widest variety of integrated circuits of any system on the market, while maintaining the integrity of sensitive internal components. Its operation is similar to that of Nisene's other industry-leading JetEtch products. It retains the intuitive user interface, premier etching capabilities, and robust safety features you've come to expect from Nisene Technology Group equipment.

In addition, the JetEtch Pro TotalPROTECT incorporates the patented bias voltage application process capability of the JetEtch CuPROTECT. It also has a special cooling feature that allows sub-ambient cooling of the etching acid. When combined with the bias voltage application process, the JetEtch TotalPROTECT offers the end user a tremendous range of etching parameters for virtually endless recipe combinations – making it the total package for total protection of sensitive components.



SEM images
showing
preserved
copper wires



JETETCH TOTALPROTECT SPECIFICATIONS

DIMENSIONS

Etcher unit (mm/in)

290 h x 290 w x 419 d / 11.5 h x 11.5 w x 16.5 d

Bottle container, each unit (mm/in)

230 h x 110 w x 110 d / 9 h x 4.25 w x 4.25 d

Weight (Kg/lbs)

17 / 38 (excluding bottle container and accessories)

POWER

350 W @ 95 - 130 VAC or 350 W @ 210 - 250 VAC

CDA/N₂ REQUIREMENTS

CDA 4.2 Kg/cm² / 60 - 100 psi

Nitrogen supply 2.8 lpm / 0.1 cfm

ETCHANTS AVAILABLE

Etchant volume 1.0 to 10.0 mL/min (software selectable)

Fuming nitric acid

Fuming sulfuric acid

Sulfuric acid (concentrated reagent grade)

Nitric : sulfuric acid mix 6:1, 5:1, 4:1, 3:1

Sulfuric : nitric acid mix 6:1, 5:1, 4:1, 3:1

TEMPERATURE RANGES

Nitric acid (°C) 10 - 90

Sulfuric acid (°C) 10 - 250

Mixed acids (°C) 10 - 100

(mixed etchant range automatically calibrated to ratio selected)

ETCHING TIME & MODALITY (user selectable)

1 - 1800 seconds in 1.0-second increments

Pulse Etch mode, Vortex Etch mode (user selectable)

Bias selection: 0.0 - 20 V in 0.1-V increments

Program capacity: 100, user-defined, in nonvolatile memory

Specifications are subject to change without notice.

HEAT-UP TIME

(user selectable)

0 - 120 seconds in 1.0-second increments

RINSE OPTIONS

Nitric acid, sulfuric acid, no rinse

RESERVOIRS

500-mL or 1-litre bottles

33/38/40/45-mm cap sizes

4 bottles standard: 2 acid, 2 waste

CERTIFICATIONS

CE certification, SEMI S-2-93, SEMI S-2-2000

ACCESSORIES

All JetEtch Pro systems are supplied with a standard basic Accessory Kit. A wide range of Accessory Kits and custom-designed Monolithic Gaskets is available (contact Nisene for details).

DIP/SIP Kit 0300601

QFP Kit 0300604

QFN/MLP Kit 0300609

PLCC Kit 0300602

PBGA Kit 0300605

SOIC Kit 0300603

Die-down BGA Kit 0300606

Universal Accessory Kit 0300612

WARRANTIES

12-month warranty includes all parts and labor. Excludes consumable items.

5-year warranty for micrometering pump assembly.

INSTALLATION

Installation in chemical fume hood required. 0.5 meters/sec minimum flow rate (100 surface ft/min)

CONTACT US

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