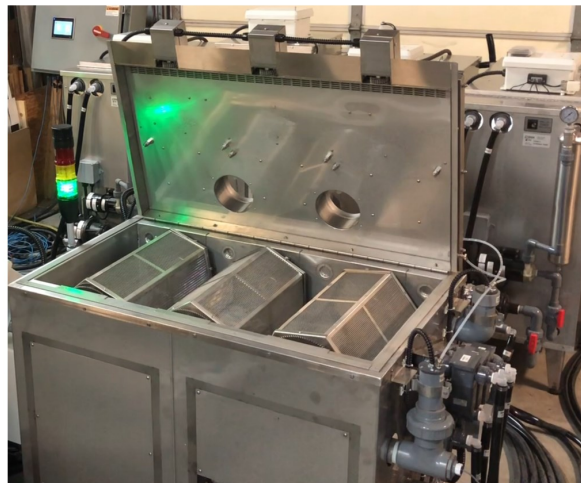




The Automatic Ultrasonic Series

Automated Ultrasonic Wash Equipment

Automated Ultrasonic Cleaning and Passivation Systems Model E992-3T



**Automated ultrasonic process unit with
3 independent rotational part baskets.
Completely closed, modular system
incorporating integrated heated
storage containment tanks for fluids**



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South Holland, IL 60473
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Features & Specs



Passivation Process: (50—60 minutes)

1. Ultrasonic clean (alkaline)
2. Ultrasonic Rinse from Storage
3. Ultrasonic Passivation
4. Ultrasonic Rinse from Rinse Storage#1
5. Ultrasonic Rinse from Rinse Storage#2
6. Final Ultrasonic Rinse from Bldg. Water Source
7. Dry

** User defined programming available

Esma brand chemistries which can be used in system

- Esma Metal Wash—Mildly alkaline cleaning detergent
- Esma General Purpose Cleaner—Alkaline cleaning detergent
- Esma DeOx 964—Citric Acid Passivation Solution (meets ASTM 967-01 Standard)

Esma's automatic ultrasonic cleaning and passivation systems provide a unique and closed process of cleaning-rinsing-passivating-rinsing and drying all at the push of a button.

AUTOMATED PROCESS MOVING FLUIDS NOT PARTS

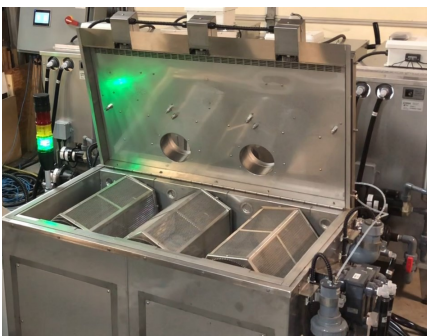
By moving fluids in and out of a single high-powered ultrasonic cleaning tank, the system eliminates the need of an operator moving parts through a series of baths, and reduces interaction with dangerous chemicals. Modular, covered, heated storage tanks are integrated with the system to allow re-use of chemicals and rinse water.

“Let’s get ready to tumble”

The E992-3T System, incorporates 3 independent rotational baskets within a single automated ultrasonic cleaning bath. The combination of tumbling and ultrasonic cleaning clears many of the obstacles normally associated with aqueous cleaning systems. Chips, oils, debris, etc. that accumulate in blind holes/cavities can be effectively loosened and removed. Small parts that tend to cluster are kept separate for optimum cleaning. Trapped air can escape allowing ultrasonic cavitations to penetrate the part, which can be very beneficial in small part passivation processing.

Trapped liquids can escape during drying for increased efficiency. Parts move consistently through the nodes of increased energy that naturally form within ultrasonic bath. Whether cleaning, rinsing or drying within the cleaning cycle, tumbling and ultrasonics form a very effective combination.

Slow Rotation Tumbled parts suspended in fluid may have minimal damage from part to part contact—speeds from 0-3 RPM.



FEATURES:

- Easily removes chips, oil, debris, etc. from parts with blind holes
- Excellent cleaning of small parts that tend to cluster in a static tank
- Eliminate trapped air allowing ultrasonics to penetrate internal bores
- Effectively move parts through nodes of increased energy that develop in ultrasonic tanks
- Eliminate trapped liquid for easy drying
- Weight capacity up to 15 lbs. of parts per basket!

Systems can be configured as single or dual process systems as shown to the right. A dual process system has 2 independent E992-3T units sharing the same set of storage tanks. Dual systems will double the throughput without doubling the cost or space of 2 independent systems.



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