



The Automatic Passivation Series

Automated Ultrasonic Series

Automated Passivation Equipment

Large Capacity Automated Ultrasonic Passivation System



**Completely closed, modular
system incorporating integrated
heated storage containment tanks
with a self-contained,
automatic ultrasonic washer**



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Features & Specs



Passivation Process:

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



E992-100 Automated Ultrasonic Washer

- Cabinet: 40" x 36" x 42"H
- Tank: 36" x 30" x 24"D (100 gallons)
 - Ultrasonic wattage: 6,000
 - Hot Air Dryer: 4,500 watts
- Pneumatic lid opener
- In-tank flow (simultaneous fill/drain) for fluid agitation.
- Rinse spray header in dryer cover
- PLC data logger for retrievable cycle data for validation purposes (NADCAP)



135 Gallon Heated Storage Tanks

- Cabinet: 52" x 22" x 48"
- Tanks (ID): 40" x 20" x 40"H
- 12,000 watts, temperature controlled immersion heaters
- Closed-loop filtration
- Self-neutralizing rinse water

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 passivation systems provide a unique and closed process of cleaning-rinsing-passivating-rinsing and drying all at the push of a button. Easily described as a one-of-a-kind process, these systems are designed and built to provide aerospace manufacturing operations an alternative to outsourcing their parts passivation by incorporating this modular equipment into the manufacturing process. These systems do not require much floor space and provide great cost savings when compared to other automated robotic passivation systems.

AUTOMATED PROCESS MOVING FLUIDS NOT PARTS

The process will easily integrate into virtually any manufacturing line. 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. PLC controlled monitoring systems integrate with company servers through standard Ethernet connectivity to provide data collection for process steps and are an important upstream factor for ensuring a validated state. Durable stainless steel construction, an unconditional 1-year warranty, and industry-recognized customer service make Esma's automated ultrasonic systems a cost saving step for in-house cleaning and passivating.



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