



# Suffix Electroless Plating System



Offering high performance, sophisticated system design, and low cost of ownership, the Suffix electroless plating system is the result of decades of unmatched vendor experience.

Suffix delivers the industry's best autocatalytic plating performance, with constant plating thickness across substrates as large as 510x515 mm, and maximum batch throughput. Its flexible, modular design allows for streamlined installation and precise configuration to customer needs. Loading can be manual, or fully automatic with a highly reliable and easily programmed robot arm. The versatile Suffix system can run multiple metals concurrently, including gold over nickel on aluminum, palladium over nickel on copper, and ENEPIG (nickel, palladium, and gold).

## Designed for Optimal Results

- Manual or automatic loading
- Exclusive laminar flow technology for uniform solution flow and even temperature distribution
- Unique 4-side overflow removes surface contamination
- Airflow management system controls particulates and captures fumes
- Online live monitoring and remote system control

**Yield Engineering Systems, Inc.**

Call: **1-510-954-6889** (worldwide) or **1-888-YES-3637** (US toll free)

[yieldengineering.com](http://yieldengineering.com)



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## DETAILS

### FLEXIBILITY

- Run multiple metals in a single tool
  - Dedicated prep stations
  - Shared rinses
  - Dedicated base layer
  - Shared nickel stations
  - Dedicated final metals
  - Shared dryer
- Reverse processing
  - Lots can repeat previous stations during single recipe, i.e., Zn
- Can be installed in mirror image orientation to conserve space
- SMIF available for 200 mm
- Modular design for ease of installation
- Wiring with connectors and modular power distribution
- Liquids pre-piped and factory tested

### MANUAL LOAD

- Multi-diameter with automatic size sensing
  - Standard configuration
    - 150 mm in two cassettes
    - 200 mm in two cassettes
  - Optional capacities
    - 300 mm via reduced pitch cassette, 25 wafers
    - 100 mm in four cassettes via fixture
- Interlocked load/unload drawers
- In-line process
- Gold over nickel on aluminum
- Electroless Ni, electroless Pd, immersion Au (ENEPIG)

### FULL AUTOMATIC LOAD

- 300 mm FOUPs with dual IsoPorts
- Extremely reliable single wafer robot arm with simple one-touch position teaching
- Custom PFA process cassette with reduced pitch; vertical wafer orientation via tilter
- SECS/GEM compliant via ToolLink
- Palladium over nickel on copper
- ENEPIG
  - Dual nickel, dual palladium, single gold stations for continuous 200 mm production
  - Systems available with SMIF pod openers, reduced footprints, and other options

### AIRFLOW MANAGEMENT

- Controls particulates
- Captures fumes
- Minimizes costs
- Filter blower (optional)

### CHEMICAL DELIVERY MANAGEMENT

- Automatic blending and adjustment provide safety, accuracy, and control
  - Interfaces for bulk delivery from facilities supply
  - Dedicated delivery systems using drums for solution make-up
  - On-board reservoirs and bottles for precise dosing
  - Liquid and powder compatible hardware available
- Automatic dosing controls
  - Deposition rate calculations
  - Product throughput
  - Duration-based
  - pH control
  - Feedback from external and internal analyzers

### COST SAVINGS AND ENVIRONMENTAL COMPLIANCE

- Can be installed in mirror image orientation to conserve space
- Automatic lids reduce evaporation on hot solutions
- Highly reliable magnetically levitated circulation pumps (only one moving part)
- Redundant monitoring for precision control of hot processes
- Adjustable, programmable quick-dump rinse (PVDF for purity or NPP for cost savings)
- Wastewater separation to comply with facility requirements

### CHEMISTRY MANAGEMENT

- Integrated analysis and process feedback
  - pH
  - Resistivity
  - Stability index
  - Metals content
    - Palm
    - Ancosys
    - ECI
  - Auto-dosing
  - Auto solution change
- Sample ports for offline analysis

### FAST DRYING

- IPA vapor dryer standard; alternate dryers available
- 7 mins/lot, with low effluent generation
- Front access panels for rapid access to servo drive and temperature control components
- Can be rolled outside the cleanroom as necessary

### EASE OF SERVICE

- Full visibility service panels
- Dedicated drains for precious metal reclaim
- Segregated enclosures
- Modular wiring and piping
- Online live monitoring, software upload/download, and analysis