

LINEAR TRANSFER ACID BENCHES

Automated Linear Transfer Acid Processing Station

This Acid Processing Station will simultaneously process multiple loads of silicon wafers through selected heated or ambient temperature chemical baths and rinse tanks. Each load consists of two cassettes of 4,5,6 or 8" wafers. This Bench is designed to be used with aqueous chemical processes, which may include Buffered Oxide Etch, Common Oxide Etch, Nitride Etch, or other processes which utilize Strong Acid or Alkaline Solutions. The bench features:

- ◆ Turntable load and unload stations
- ◆ Fully automatic, dual axis closed loop servo transfer hoist maintains extremely accurate position and speed control during the entire wafer handling process.
- ◆ Programmable Logic Controller allows multiple processes and recipes to be available, and utilizes many different types of I/O cards such as analog in, analog out, high speed counter and temperature control to maintain close control on the entire bench process.
- ◆ Completely programmable cycle time is process dependent.
- ◆ An Industrial Computer with a touch screen overlay is the main operator interface. It also is capable of collecting and storing data for processing history, or Statistical Process Control.
- ◆ All hoist positions and speed variables are programmable from the touch screen.
- ◆ Critical positions may also be programmed using a "teach pendant" to insure proper interfacing between the carrier and the hoist arm. The pendant allows jogging of the hoist during maintenance.



- ◆ All bench alarms are indicated by a visual light tree and an audible alarm, with identification on the operator panel.
- ◆ Fire protection is provided by an agent release fire control system, with a fire damper which closes when fire is detected to prevent fire and smoke from leaving the bench through the exhaust duct.
- ◆ All panels that have electrical or pneumatic components behind them require a tool to gain access to them. Each front and rear access panel requires removal of two screws, and releasing the panel latch.
- ◆ Each front and rear process area access door is electrically interlocked. Hoist movement is immediately halted when any operator access door is opened.
- ◆ A lockout valve is provided for facility air, nitrogen or bulk-fill chemical inlets to prevent unwanted operation during servicing and maintenance.
- ◆ Controls for pneumatics, hoist servo drives, tank heat relays, circuit breakers, and all required wiring connections are located in the central control console.
- ◆ A sampling valve is provided for checking DI water specifications.
- ◆ Deck design is sectional, with electrical quick-disconnects, lip exhaust and drop-in tanks. All facility connections are located at the rear of the bench for easy access.
- ◆ The chiller units may be remotely located up to 25 feet away.

SEMI S2 Product Testing and Certification Available

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All specifications are subject to change without notice.



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