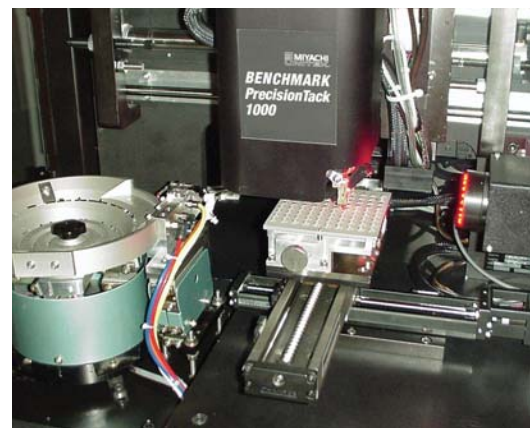


The Highest Yield Lid Placement for the Smallest Packages

The PrecisionTack 1000 Automated Lid Placement System from Unitek Benchmark uses advanced technology to handle the most challenging lid alignment and tacking requirements. Every part of the system is designed for precise performance. A high resolution real-time vision system from Cognex Corporation captures images of both the package seal ring and lid simultaneously and guides a high speed vacuum placement head to position the lid accurately within the target. Precision voice coil technology provides the ultimate in force control so that each lid is positioned accurately, yet delicately with precise force. Double lids are detected and eliminated removing this potential source of yield loss automatically. The PrecisionTack 1000 uses the high-performance Miyachi Unitek 125 DP/60WS capacitive discharge welding power supply to deliver the programmed tack energy regardless of local line voltage fluctuations.



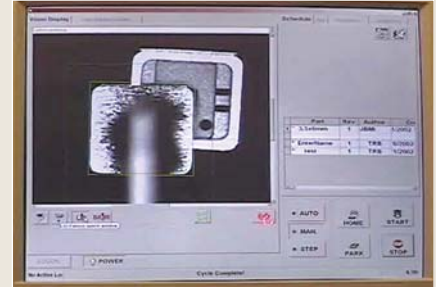
- **Precisely places and tacks lids onto ceramic, nickel, stainless steel, Kovar™ and other metal packages** as small as 2mm square.
- **Quick changeover** – all parts of the system are designed to simplify changeover from one package size to another.
- **Sophisticated real-time Cognex vision system** for perfect automated lid alignment. And the PrecisionTack 1000's powerful vision software is easy to program, easy to troubleshoot and easy-to-use.
- **Powerful, easy-to-use Microsoft Windows®- based operating software** on a powerful Pentium™ computer makes it simple to load and edit package setups.
- **Highly accurate force control using voice coil technology** delicately places fragile lids without dents or deformation – providing high yield at the seam sealing process.
- **Unique “dual pulse” tack weld insures perfect results every time.** The first pulse insures the tack electrodes are properly seated on the lid. The second pulse completes the tack.
- **Double lids are sensed and eliminated automatically.** The system keeps watch for lids that are stuck together and removes them from the process – so you don't have to worry about them.
- **High volume lid bowl feeder allows the use of low cost, bulk flat lids.** Lid handling and prep costs are also reduced.
- **All this powerful technology is housed within a small footprint of under 0.5 square meters (32" x 22")** and engineered to provide maintenance-free operation in a high-volume production environment.



PrecisionTack 1000 Automated Lid Placement System

High precision with easy set-up and changeover. The PrecisionTack 1000 is simple to set-up, operate and maintain. Lid pickup and tacking routines for new packages or matrix layouts can be easily developed on the system's intuitive Windows® programming environment. System software is powerful and flexible:

- Programmable parameters: Force, energy and package size
- Step mode for process development and debug
- Integrated, real-time vision feed to the computer monitor
- Unlimited package schedule storage



Hardware changeover from one package size to another can be accomplished in under 10 minutes. The PrecisionTack 1000 is designed for rapid, easy set-up! The PrecisionTack 1000 is designed for high throughput and accuracy, too. It incorporates an ultra-high speed precision vacuum pick head to achieve precise, repeatable lid pickup from a vibratory bowl feed mechanism. Lid placement accuracy is achieved through the integration of the real-time vision system with the precision pick head. Lid tacking is accomplished using specially designed copper alloy tack electrodes integrated into the vacuum pick head.

The PrecisionTack 1000 provides easy, stand-alone operation. Or, it can be integrated with other Miyachi Unitek equipment for an integrated hermetic sealing production line. The system's minimal electrical requirements eliminate the need for special facility wiring. In addition, the integrated stored-energy power supply eliminates the impact of local power line conditions on the tacking process. The system also features an Integrated Emergency Stop button and safety interlocks for operator safety.

Positioning Accuracy:

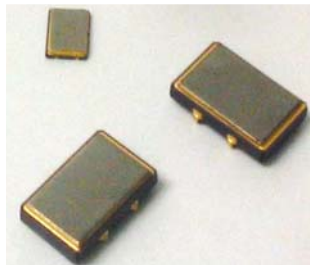
- Maximum lid offset X direction: 0.0635mm (0.0025 inches)
- Maximum lid offset Y direction: 0.0635mm (0.0025 inches)
- Maximum lid rotation from parallel: 2.0°

Tack Power Supply:

Type: Dual Pulse capacitive discharge

Range: to 60/watt-seconds (joules)

Resolution: ±1%



Force:

Range: to minimum 60 grams (0.6 Newtons)

Repeatability: ±1%

Throughput:

Up to 1,200 parts per hour, depending upon package size and array density

Electrical:

Input Voltage: Single phase 115 VAC 50/60 HZ

Input Current: 15 Amps

Your Local Representative



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