

## SMT EMS

**DAICO** Industries, Inc., a trusted supplier to the Defense and Aerospace Industries, is a vertically Integrated EMS provider of custom high reliability components and subassemblies. We offer a wide range of capabilities, from a single service to complete product development, we take your design concept and bring it into reality. Offering solutions to the Military/Aerospace, Medical and Industrial Electronic Industries among others. Excelling in first class technical customer service, we welcome your inquiry.

### Our Mission

DAICO Industries, Inc. is committed to delivering Best-In-Class: Performance, Quality, Reliability and Value to our customers; and to the relentless pursuit of 100% Customer Satisfaction.

### DAICO Quality

DAICO's reputation for quality is a matter of record, spanning more than five decades of service to the defense and military sectors, we combine the selection of the highest grade components with an efficient material handling system and proven processes and controls. DAICO's space and military experience also ensures competence and compliance with strong documentation and traceability. The result: the highest manufacturing yields, the lowest rejection rates and consistent customer satisfaction.

### The Choice is DAICO

- 50 years of Providing IF/RF/Microwave design, manufacturing and assembly solutions
- Full design, manufacturing and testing in 1 facility
- Reduction in design complexity for greater reliability
- Custom features can be added easily
- Custom solutions built around standardized templates
- Providing faster and less costly solutions
- No higher level quality and service than DAICO

### Our Services

- Engineering and Design
- Build-to-Print/Custom Design
- Component Procurement and Kitting
- Hybrid and PCB Assembly
- Full Turnkey and Higher Level Assembly
- Electrical and Environmental Screening/Testing
- Re-tinning Services



**DAICO**  
**SMT**  
**EMS**

*Our EMS facility features a high speed SMT line with in-line stencil printing, in-line reflow ovens and AOI inspections. This line will also processes prototype assemblies!*

## Key Equipment



### 1707 Mark III Series

1700 models support high mix/medium volume throughput... at speeds up to 24 inches (60 centimeters) per minute.

Rapid response times and precise temperature controls assure process uniformity, regardless of component density or board loading, with identical profile performance in either air or nitrogen.

### Heller 1707 SMT Reflow Oven

#### Highest Yields and Tight Process Control

The most efficient heat transfer from extra high volume, high-velocity, heating modules, producing heater module response of less than one second to temperature changes of less than 0.1°C, thereby maintaining profile integrity for heavy board loads.

Wide process window for "universal profiling" - allows many different boards to be run on a single temperature profile.

Advanced 5 thermocouple PCB profiling and process parameter logging capability with the capacity to store up to 500 temperature recipes and 500 profile graphs.

### MYDATA MY100 SMT Pick and Place Equipment

#### COMPONENT RANGE

Chips (from 0201), 5028, SOT223, SOJ20, PLCC32, MELF, SOD, TSOP Chips (from 01005), SOIC, PLCC, TSOP. QFP. BGA, flip chip, odd-shape, surface-mount connectors, through-hole component CSP. CCGA, DPack, Alcap, Tantalum.

#### COMPONENT SPECIFICATION

Minimum: 0.4 x 0.2 mm (0.016" x 0.008") (01005)  
 Maximum: 56 x 56 x 15 mm (2.20" x 2.20" x 0.59")  
 Maximum: component weight: 140 g \*\*

### PLACEMENT SPEED AND ACCURACY - MY100DX 10/14

Rated Speed	34 000 CPH
IPC 9850 Chip Net Throughput	27 500 CPH
IPC 9850 Chip Tact Time	0.120 sec
IPC 9850 Chip Repeatability 3cr (X, Y, Theta)	57 µm, 1.8°
IPC 9850 Chip Accuracy@ Cpk = 1.33 (X, Y, Theta)	95 µm, 2.6°
IPC 9850 Fine Pitch Net Throughput	4 400 CPH
IPC 9850 Fine Pitch Tact Time	0.720 sec
IPC 9850 Fine Pitch Repeatability 3cr (X, Y, Theta)	21 µm, 0.05°
IPC 9850 Fine Pitch Accuracy@ Cpk = 1.33 (X, Y, Theta)	35 µm, 0.09°



## **YTV F1 Series AOI Automatic Optical Inspection Equipment**

YESTech's advanced Thin Camera™ technology offers high-speed PCB inspection with exceptional defect coverage. With up to two top-down viewing cameras and four side viewing cameras, the F1-Series inspects solder joints and verifies correct part assembly enabling users to improve quality and increase throughput.

Newly available image processing technology integrates several techniques, including color, normalized correlation and rule-based algorithms, to provide complete inspection coverage with an extremely low false failure rate. Configurable for all line positions, the F1-Series is equally effective for paste, pre/post-reflow or final assembly inspection. Off-line programming maximizes machine utilization and real-time SPC monitoring provides a valuable yield enhancement solution.



### **AUTOMATED INSPECTION FOR:**

Solder defects  
Lead defects  
Component presence and position  
Correct part/polarity  
Through-hole parts  
Paste

## **DEK Horizon 03i Screen Printing**

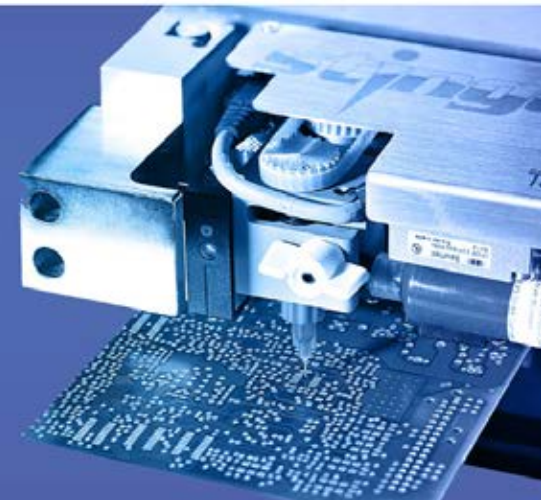
Accuracy and Repeatability: 1.33 Cpk @ +/- 25 m  
Cycle Core Time: 14 seconds  
Maximum Board Size (Print Area): 508mm (X) x 508mm (Y)  
Print Speed: 2mm to 150mm/seconds  
Squeegee Pressure Mechanism: Software controlled, motorized  
Tooling: Magnetic tooling pins  
Camera: Graphite digital camera, using IEEE 1394 interface. Single channel.  
Fiducial Recognition: Automatic fiducial teach and find  
Operating System: Windows XP  
Operator Interface: Color TFT display, kb and trackball with DEK Instinctiv™ software  
Stencil Loading: Manual with screen depth adjuster  
Stencil Alignment: Motorized via actuators X, Y and Theta  
Machine Interface: Upline and downline FMI included  
Squeegee: Clamped double trailing edge squeegee (1 set inc)  
Voltage: 100 Volts to 240 Volts +/-10% Single Phase 50/60Hz  
Air: Pressure 5 bar to 8 bar at 5 Liters/minute



### **HIGH SPEED MOUNTHEAD - HYDRA ZS**



### **DEK 03i SMT Screen printing equipment**



## SMT EMS

*We ensure quality throughout our electronic manufacturing service assembly operations by performing 100% kit inspection audits, BOM scrubbing, CAM programming and data comparisons.*

**Offering the highest level of quality from prototype to both low and high volume production.**

## Manufacturing Techniques

- Single Chip Devices for Lower Cost
- Laser-Seal for Large Assemblies
- Pick and Place for Automation
- EDM Technique to Produce Miniature Shielding Cavity
- Solder Reflow for Surface Mount Technology
- Comprehensive MRP

## Specifications and Standards

- ISO-9001
- IPC-A-610/J-STD-001
- MIL and Hi-Rel Class H and Class K
- ESD Program IAW MIL-STD-1686
- ANSI/NCSL Z540-1 Calibration
- SPC (Statistical Process Control)
- Attribute and Variable Data Recorded
- TQM (Total Quality Management)
- MIL-PRF-38534 (Screen and Qualification)
- MIL-STD-883 (General Procedures for Hybrids)



## Additional Information

For more information on this or other DAICO products, please call or contact us at [sales@daico.com](mailto:sales@daico.com)

## Engineering Objectives

To Meet the Contractual Commitments of

- Electrical Performance
- Envelope/Interface Limits
- Environmental Conditions
- Total Compliance to your Specifications
- Cost Targets
- Delivery Requirements

## Engineering and Design

- Custom Designs Specifically for Your Application and Program
- Build-to-Print/Custom Design
- Engineering and Technology Driven Designs
- Experts in Hi-Rel Design Disciplines
- Single Function Devices to Multifunction Subassemblies
- Value-Added
- Successful in Design and Redesign
- Reliability Designed into All Daico Products
- Design Simulation Software
- Prototyping and Breadboard Designs
- Environmental Screening and Life Testing

## Markets Served

- IF/RF/Microwave, DC-18 GHz
- DEFENSE Surveillance, Missiles, Fire Control...
- AEROSPACE Navigation Radar, Communications...
- COMMERCIAL SPACE Communications, Payloads...
- INDUSTRIAL Controls
- Medical

**AS9100 | ISO 9001-2015**