



Seika Machinery, Inc. (SMI) is a subsidiary of Seika Corporation, Japan and member of the Mitsubishi Global Group. SMI provides electronics manufacturers with advanced machinery, superior materials and engineering services.

The company's product offerings range from quality assurance products to SMT and test and automated test equipment (ATE).

SMT Products ● ● ●

Tamura Reflow Ovens have a new ductless feature, enabling the oven to remain clean with less flux residue and corrosion. Minimum Delta T provides a superior thermal transfer ratio. The newly updated systems provide reduced running costs with low nitrogen consumption and component temperature control with top and bottom differential heating. The system also features improved productivity with a high heating capacity and quick set-up time. Tamura Reflow Ovens are easy to maintain with an advanced flux recovery system.



Tamura Reflow Ovens

YJ Link's SPI NG/Good Buffer is designed to stack NG PCBs and transfer good PCBs to the next process using FIFO. Features include PCB shock-free and noncontact power transmission, RS-232C interface with SPI, and NG PCB anti-touch verification. This method provides increased line efficiency and requires only minimal space for equipment. Using the SPI NG/Good Buffer, there is no need to filter

NG PCBs and SPI operates normally, even during NG PCB verification. **YJ Link's AOI NG Buffer** stacks NG PCBs and pushes good PCBs to the next AOI inspection process. This system also features a PCB shock-free and noncontact power transmission. Both systems feature a SMEMA interface, a slim, round design, adjustable stacking, a LED tower light and touch screen operation.



YJ Link's Conveyors

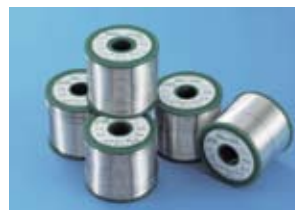
Sayaka Routers are the ideal solution for stress-free depanelization, providing a fixture-based highly efficient dust vacuum system. The routers provide clean and precise depanelization for densely populated PCBs, and the advanced image-processing software offers point-and-click operation for programming router paths. Additional features of Sayaka PCB Routers include automatic alignment compensation by CCD camera, user-friendly operation, extended bit life by automatic router bit depth adjustment, improved tact time, and a calibration-free linear robot.

Sayaka's feature model is the SAM-CT56NJ, a stress-free solution for depanelization that is designed to handle large size boards. The router features a highly efficient, fixture-based dust vacuum system and precise depanelization for densely populated PCBs. Advanced image-processing software offers point-and-click operation for programming router paths and automatic alignment compensation is provided by a CCD camera. As a further benefit, the system features user-friendly operation, improved tact time and extended bit life by automatic router bit depth adjustment.



Sayaka Router

NS Flux Cored Solder Wire Products. SN100C (040) is a halogen-free high-reliability no-clean flux-cored lead-free solder wire that does not contain F, Cl, Br and I. This wire provides good separation of the solder from the tip with reduced incidence of icicles. Additionally, it results in reduced cracking of flux residue, fewer shrinkage defects, reduced copper erosion, cost advantages and a stable intermetallic layer. SN100C (030) is a high-reliability no-clean flux-cored lead-free solder wire that does not contain F, Cl, Br and I. The wire provides good separation of the solder from the tip with reduced incidence of icicles. It also provides numerous benefits including less tip and pad carbonizing, less flux splatter, less flux residue cracking, fast soldering and melting, good spread, and substantial cost advantages. Additionally, the wire provides fewer shrinkage defects, reduced copper erosion and a stable intermetallic layer. SN100C (510) lead-free flux-cored solder wire generates very little spatter even with the high solder tip temperatures required to burn off polyurethane insulating enamel. The SN100C alloy reduces risk of copper *(continued on page 2)*



NS Flux Cored Solder Wire Products

erosion during soldering and slow growth of the interfacial intermetallic layer in service. Other features of the flux cored solder wire include low flux spattering, minimal cracking of flux residue, low fuming and odor, and cost-effective high-temperature soldering. As an additional service, Nihon Superior Co. Ltd. now offers preform capability. It can provide very fine wire/cored wire down to 0.1 mm. Also, the company can provide SN100C as a foil.

ATE Products ●●●

With the **Hioki 1220 In-Circuit Tester**, functions are combined in one bench-top cabinet. In-circuit testing (ICT) functions are assembled into a system or line to save space in the testing facility, enabling easy support of cell production. The system includes macro-test, a high-performance capability for testing even with only a few measurement points. With the Hioki 1220, faster ICT is achieved by a new measurement board design and optional board parallel testing greatly shortens test time. Additionally, self-diagnosis of the Hioki 1220 can be initiated over the Internet, enabling remote maintenance support even at factories located overseas. Because of its easy network configuration, customers can operate the system as their requirements demand. Test data from multiple 1220s can be centrally managed by a server PC. Applications can be constructed to include operations such as capturing test history, statistical data and operating conditions of each machine.

Seika will be featuring a new large board model of the **Anritsu**. The system features numerous advanced technology features including ultra-high resolution: horizontal and vertical, high-speed inspection and easy programming and maintenance in that program generation is accomplished in approximately five minutes and consistent results are provided, regardless of the operator. Additionally, the system offers many benefits to users such as an automatic calibration function for easy maintenance, SPC software that is included as standard for detailed analysis and traceability, and reliable and accurate zero plane reference points. Detailed specifications to be announced with new model release sometime in October 2009.

Quality Assurance Products ●●●

The **McDry HM 1001 Ultra-Low & Quick-Dehumidifying Storage Cabinet** provides optimal ultra-low humidity and moisture-proof storage for IC packages. The HM-1001 can maintain 1%RH and removes moisture at a very fast rate through the use of a powerful zeolite desiccant. The HM1001 is compliant with the ESD-IEC61340-5-1 standard, and the powerful desiccant never needs replacement. The unit features adjustable shelves that can hold up to 220 lb, and is equipped with a digital RH Meter. Other features include drying unit with a fan that quickly dehumidifies, tightly sealing lockable doors, and a door opening/closing frequency of only once every 10-20 minutes.



McDry Storage Cabinet



Sawa Stencil Cleaners

Sawa Stencil Cleaners are widely used in the Japanese Electronics Industry to ensure high yields when screen printing solder paste onto PCBs. Normal cloth wipe cleaning of stencils cannot completely remove solder paste especially in fine-pitch applications because a small amount of solder balls have a tendency to adhere to the corners of the apertures. Sawa Stencil Cleaners are able to completely remove solder paste using ultrasonic vibration and require no special solvents because they are effective with isopropyl alcohol, a water-based solvent or any other solvent. The Sawa SC-500HE removes solder balls from stencil apertures after normal wipe cleaning. A small handheld ultrasonic cleaning head (2.36" diameter) is manually applied over apertures with IPA, water or a non-VOC solvent. During application of the cleaning head, a small tray containing a foam pad soaked with solvent is held underneath the stencil to capture solder balls dislodged by the cleaning head. The Sawa SC-500HE can clean stencils without removing them from the printing machine, allowing stencils to be cleaned in just a few minutes.



Hirox's MX-BGAZ II Lens

HIROX's MX-BGAZ II Lens allows ball joints to be observed non-destructively. Additionally, a 3-D optical rotary ring enables 3-D observation. This lens incorporates special hardware, such as a prism tip with lighting and a cushion mechanism to ensure comfortable observation. Furthermore, observation of the BGA exterior in detail helps specify various problems, such as overheating, oxidation, air foam formation, and their causes. The MX-BGAZ II allows inspection of the BGA ball's upper and lower joints



by changing the observation angle through the optical rotary ring. This information is useful in reviewing the temperature profiles. Exterior observation allows for defect analysis of BGA mounting substrates and the creation of environments for preventing defects. The lens concentrates HIROX's unique knowledge and technologies for observing BGAs from various angles in an easy manner.



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