ACE PRODUCTION TECHNOLOGIES
KEEP IT SIMPLE SOLDERING

Model KISS-LTS200

"Lead tinning system for reconditioning through hole components to comply with RoHs and HiRel requirements"

Made in America:

DESCRIPTION:

The **KISS-LTS200** is an automated machine specifically intended for the Hi-Rel lead tinning process whereby aged components can be refurbished in preparation for re-qualification to HiRel standards. The **KISS-LTS200** is built using common designs and components from the ACE selective soldering products, including the KISS-ware OS. The **KISS-LTS200** system has a central fluxing station with 2 solder pots, one to each side of the fluxer. One solder pot is usually dedicated to flushing off the original coating (or plating) while the other solder pot is dedicated to the "virgin" alloy for the final coating. The pallet holder accepts a wide variety of component specific pallets. making the very versatile with minimal change over time.

PROCESS OVERVIEW:

The system works in conjunction with pallets that hold the components in a known position through the process. Under program control a pallet of components moves to the central flux station where the component leads are immersed to a specific depth. The pallet then moves to the first solder pot (scavenging pot) to remove the existing coating. The pallet returns to the flux station where the leads are once again fluxed then to the second solder pot for the final homogenous intermetalic coating.

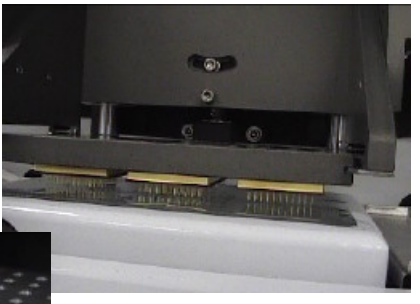
When fitted with two "lead free" solder pots the **KISS-LTS200** can be used to convert tin-lead plated components to RoHs compliance. In this process one pot is used to dissolve the original plating into the sacrificial alloy of the first pot. The component leads are re-fluxed followed by dipping into the second 2nd "virgin alloy" solder pot for the final lead-free coating.

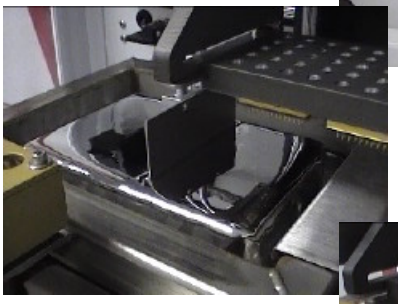
It is easy to create and add programmable routines such as "agitate in the solder" to help remove the original coating. You can specify and control "withdrawal rate" from the final solder bath to increase the solder thickness. The capabilities of the **KISS-LTS200** and other process lore available from ACE greatly enhance the quality of the final lead finish.

STANDARD FEATURES:

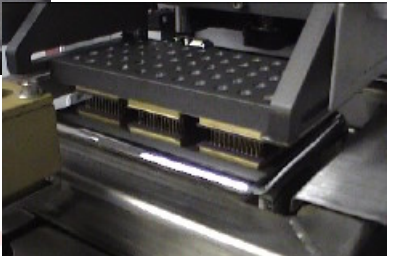
- 2 "flowing flat wave" solder pots (lead or lead-free)
- Individual PID temperature controllers
- Nitrogen inerted process
- Automated dross skimming just prior to immersion
- Centrally located flux pot that is easily accessible
- PC and LCD monitor
- ACE's standard KISS-ware OS used on all the KISS selective soldering machines provides unlimited process library
- 24-7 start up clock
- Instant program changeover
- Jog and teach programming on the machine
- Pallets available for Connectors (up to 5" long), Axials, Radials, DIPs, SIPs, QFPs, LCCs and others

Fluxing to a precise depth...





...Dross skimmer
...N2 inerting



Solder dip to a precise depth and thickness...

SOLDER POT:

The solder pot wetted surfaces are specially treated to withstand aggressive no-lead solder alloys. The heaters are sized to bring the solder safely to temperature within an hour. Re-circulation of solder is accomplished via a variable speed potentiometer controlled motor coupled to a impeller assembly. The solder distribution system is designed to virtually eliminate dross build up while providing an extremely consistent and repeatable flat wave.

A nitrogen blanket captured within the enclosed solder pot inerts the molten solder surfaces. The nitrogen escapes surrounding the solder process surface functionally minimizing icicles and solder bridges while providing an inerted return of the solder from the nozzle back into the pot.

The solder temperature is interlocked within ± 2°C of set point. The capacity of the solder pot ensures sufficient solder mass for tinning even the largest components.

SET-UP and OPERATION:

To set the machine for a given component type, first load the correct pallet into the folder on the **KISS-LTS200** The programming is accomplished by one of two methods, on the machine or optionally at your desktop. On the machine you can jog and set the position, speed and immersions at each solder pot and the flux station. Capture the positions with the “enter key” and the program is written for you. It is easy to generate specific articulation such as an “agitate” while immersed in the molten solder to assist in removing the initial coating or a dwell as the leads just touch the final solder surface to effectively preheat to leads. You can fine tune the X and Z positions, speeds, solder wave height and other parameters to perfect the process. Save the program for that specific component for future use.

Load the component pallet and start the cycle.

OPTIONS:

- Matching support bench with storage shelf, casters and leveling feet
- Extra flux and solder pots
- Off-line programming
- Indexing vacuum tip for QFPs
- Wave nozzle for LCCs
- Pre-heat
- Comprehensive inventory of component pallets

The KISS-LTS200 front view

SPECIFICATIONS:

Process area of the pallets

• Length and Width	4” x 5”
• Usable clearance above the pallet	4”
• Usable clearance bellow the pallet	3”

Motion

• Z-Axis	Accuracy/Repeatability +/-.002"
	Speed 0-15 inches/sec
	Travel Distance = 3.0”
• X Axis	Accuracy/Repeatability +/-.002"
	Speed 0-10 inches/sec.

Solder Pot

• Temperature Controller PID proportioning (0-350°C)	± 2°C
• Solder Capacity	90 lbs for each pot.
• Pump	Variable speed, programmable

Controls KISS-ware/Windows XP O.S.

Physical

• Dimensions	42" wide x 32" deep
• Weight	430 lbs.

Facilities

• Power	220 VAC/1 Ph 60 Hz
	20 amps
• Nitrogen	150 c.f.m @ 99.99+ purity
• Ventilation	500 c.f.m (2ea. 4” dia. Takeoffs)

Call for a free video of the KISS LTS200 machine: and the lead tinning process: