

Model LTS200

“Lead tinning system for reconditioning through hole components to comply with RoHs and Hi-Rel requirements”



Made in America

DESCRIPTION:

Removing gold plating, replacing RoHS finish with Pb, refurbishing legacy components and tin whisker mitigation are the major reasons to hot solder dip component leads. The **LTS200** is an automated machine specifically intended for Hi-Rel lead tinning process whereby component leads (or terminations) can be refurbished in preparation for re-qualification to Hi-Rel standards.

The **LTS200** system features 2 dynamic N2 inerted solder pots (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), a dynamic flat wave fluxing station and a forced hot air pre-heat station. The pallet holder accepts a wide variety of component specific pallets. making it 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 flux station where the component leads are immersed to a specific depth followed with preheating the component bodies, then 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 intermetallic coating.

When fitted with two “lead free” solder pots the **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.

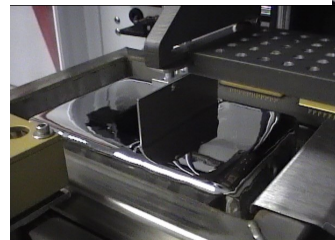
DESCRIPTION:

The **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 Hi-Rel standards. The **LTS200** is built using common designs and components from the ACE selective soldering products, including the KISS-ware OS. The **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.

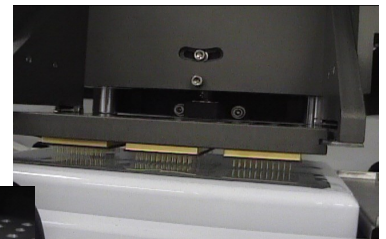
STANDARD FEATURES:

- 2 “flowing flat wave” solder pots (lead or lead-free)
- Individual PID temperature controllers
- Nitrogen inerted process
- Automated dross skimming just prior to immersion
- Dynamic flux pot that easily facilitates flux exchange
- Forced air pre-heater, PID controlled
- PC and LCD monitor
- ACE’s KISSware O/S 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” (127mm) long), Axials, Radials, DIPs, SIPs, QFPs, LCCs and others

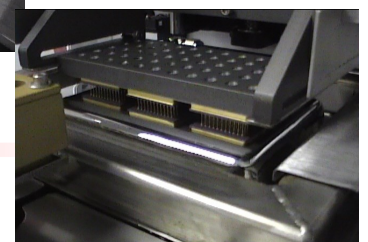
Fluxing to a precise depth...



Solder dip to a precise depth and thickness...



**...Dross skimmer
...N2 inerting**



The LTS200 process stations

SET-UP and OPERATION:

To set the machine for a given component type, first load the correct pallet into the folder on the **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 and generate a pre-heat profile. 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 pre-heat 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.

Flexible but repeatable process:

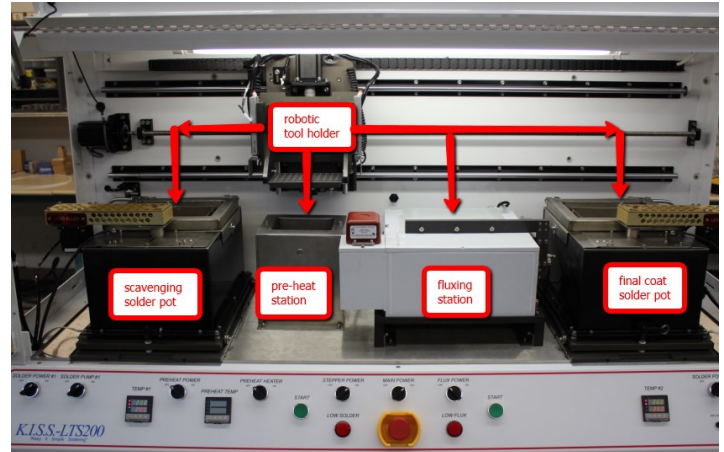
It is easy to create and add programmable routines such as "agitate in the solder" to help remove the original coating. You can specify and control "withdrawal rate" from the final solder bath to increase the solder thickness. The capabilities of the **LTS200** and other process lore available from ACE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

Examples of compatible components:



OPTIONS:

- Pallets available for Connectors (up to 5" (127mm) long), Axials, Radials, DIPs, SIPs, QFPs, LCCs and others
- Extra flux and solder pots
- Wave nozzle for LCCs
- Solder pot maintenance table



SPECIFICATIONS:

Process area of the pallets

- Length and Width 4" x 5" (102mm x 127mm)
- Usable clearance above the pallet 4" (102mm)
- Usable clearance below the pallet 3" (76mm)

Motion

- Z-Axis Accuracy/Repeatability +/- .002"
Speed 0-15 inches/sec
Travel Distance = 3.0" (76mm)
- 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. (41 kilos) for each pot.
- Pump Variable speed, programmable

Pre-Heater

Forced air, PID controlled (0-350°C)

Controls

KISS-ware/Windows XP O.S.

Physical

- Dimensions 60" wide x 32" deep + monitor x 62" tall (1524mm wide x 813mm deep + monitor)
- Weight 630 lbs. (286 kilos)
- Facilities
 - Power 220 VAC/1 Ph 60 Hz 30 amps
 - Nitrogen 150 CFH @ 99.99+ purity
 - Ventilation 150-200 CFM (2ea.6" (152mm) dia. Take offs)

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