

# JUKI FlexSolder



JUKI FlexSolder S3532 High Speed Selective Stamp Soldering

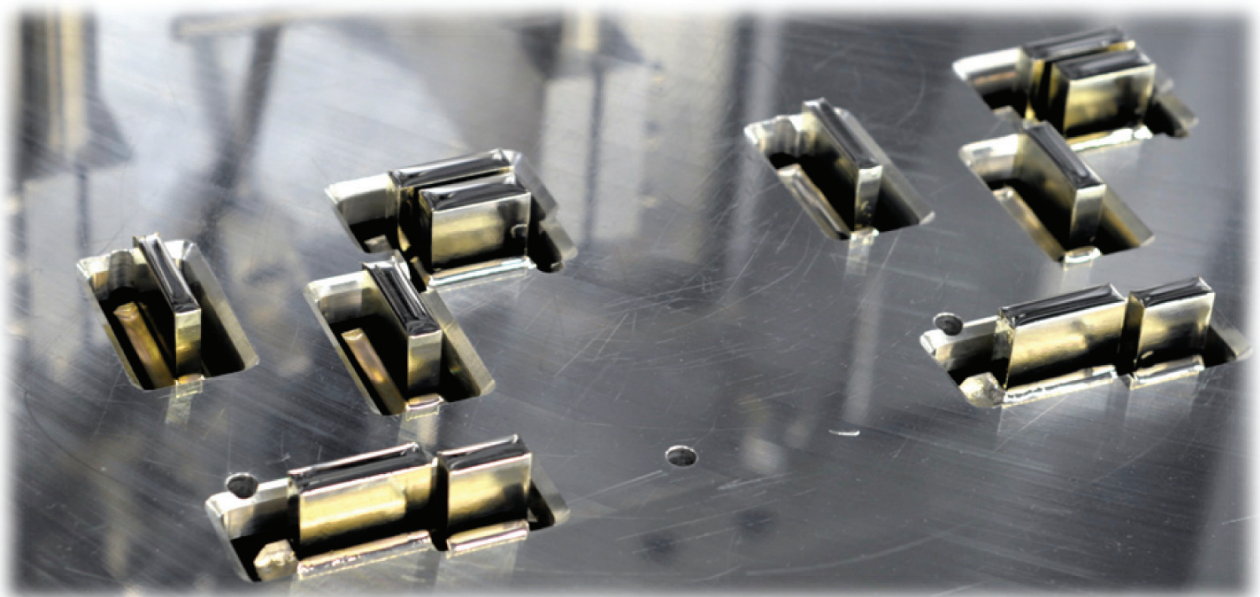
Introducing a new line of Selective Solder equipment from JUKI Automation Systems. Using proven technology since 1992 but with added Flexibility. In fact, the MOST flexibility in any Selective Soldering equipment available on the market.

Each new machine is part of the "FlexSolder" series, but each has different abilities and purposes. In most cases several types of soldering can be combined into a single machine for the ultimate in flexibility.

The FlexSolder S3532 is the new High Speed Stamp Soldering machine. Although new, it is built on years of experience of soldering expertise using the proven Volumetric Stamp Soldering method. If you want to solder like Bosch and other world-wide leaders of PCB manufacturing, then Volumetric Stamp Soldering should be your only choice.

The process takes place in a nitrogen atmosphere. A contour plate ensures absolute flatness of the PCB and this is the only machine in the world that guarantees that.

The FlexSolder S3532 is built to run 24 hours a day, 7 days a week. It is built around a heavy steel frame and uses all name brand components to ensure reliability, high up-time, and most importantly, great results.



Solder stamp and contour plate FlexSolder S3532

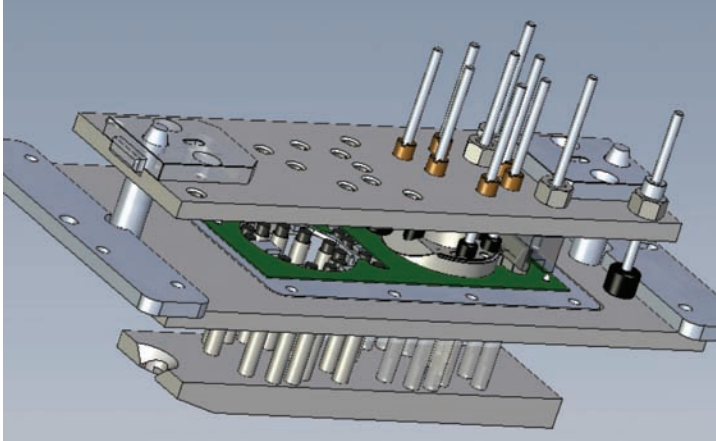
In addition to stamp soldering, the FlexSolder S3532 also incorporates stamp fluxing which has significant advantages. First of all, it has the same high speed advantage of the stamp soldering, i.e. the entire PCB is fluxed in 1 simple, fast, precise, clean motion. There are no spray fluxers, foam fluxers, or any other messy applicators that leave the machine messy with plenty of unwanted residue on the PCB.



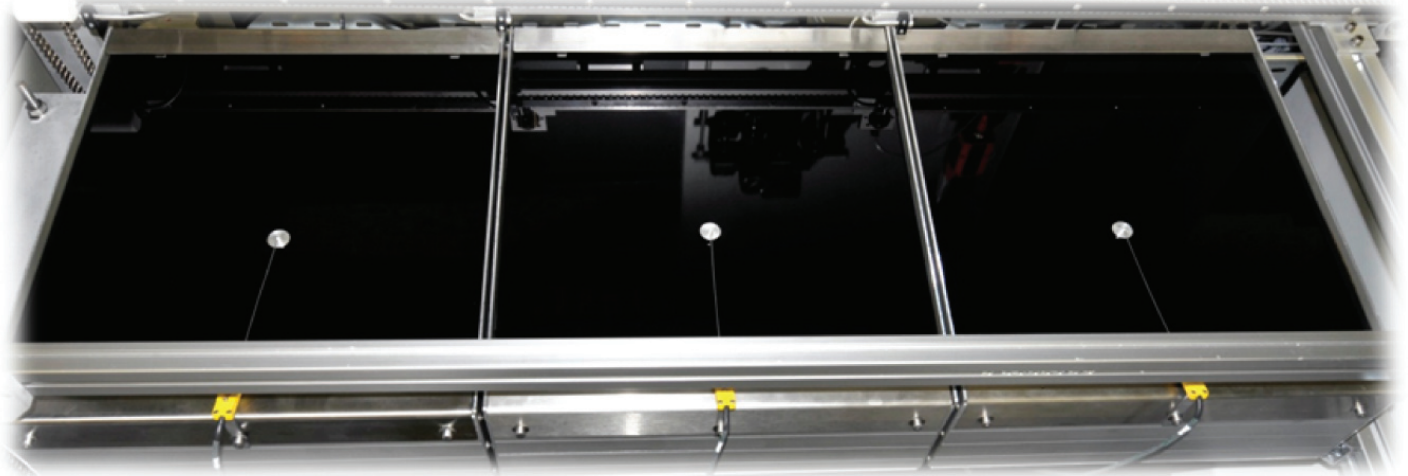
**Flux stamps in stamping position**

Above are fluxing stamps with various size brushes. These brushes precisely add the flux only where the soldering will take place.

On the left the drawing shows built in gripping units which help to keep components and the PCB in place during the process. Each individual stamp is visible under the PCB.

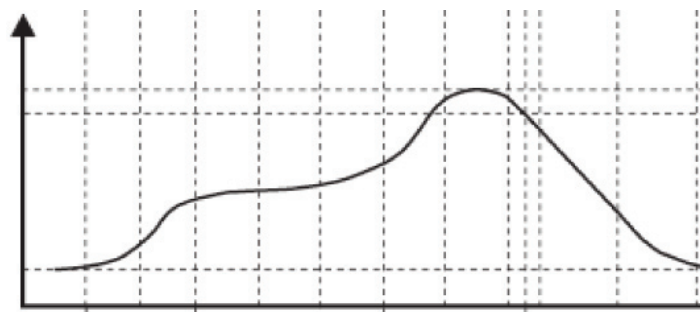


**Sectional drawing showing flux stamps**



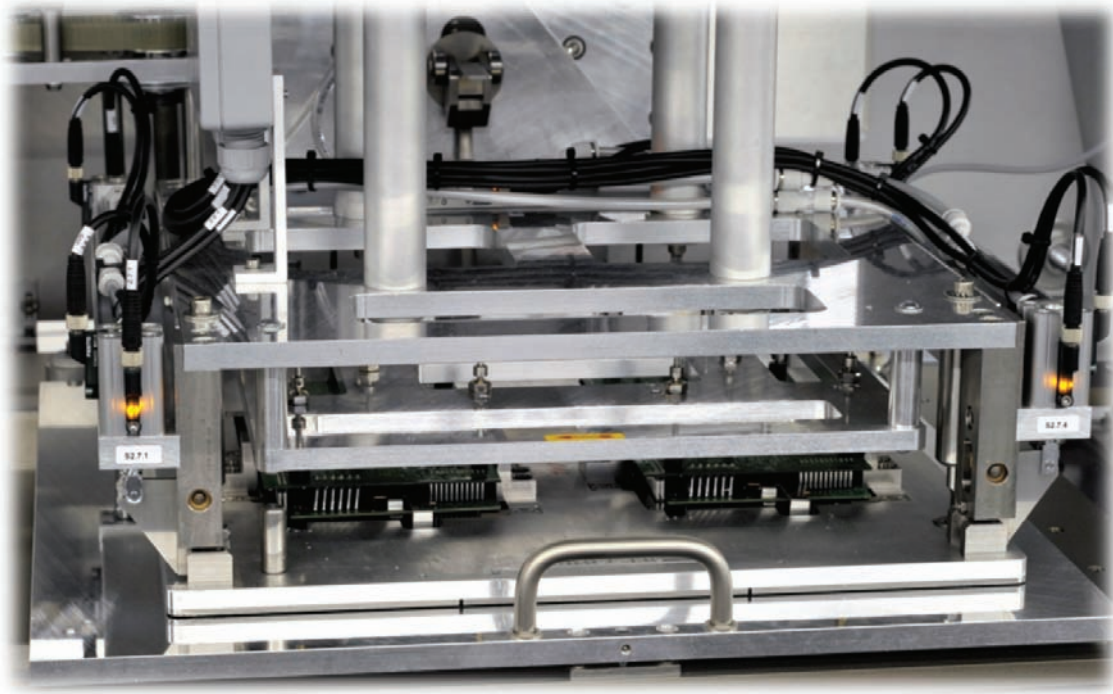
**3 Stage pre-heating with Radiant IR and convection**

With any selective soldering applications, pre-heating can be extremely important. That is why JUKI offers several variations of pre-heating systems available on the FlexSolder S3532. A very common type is the Radiant IR with convection as shown. This is a medium wave heater aided by convection fans for a very precise pre-heating environment.



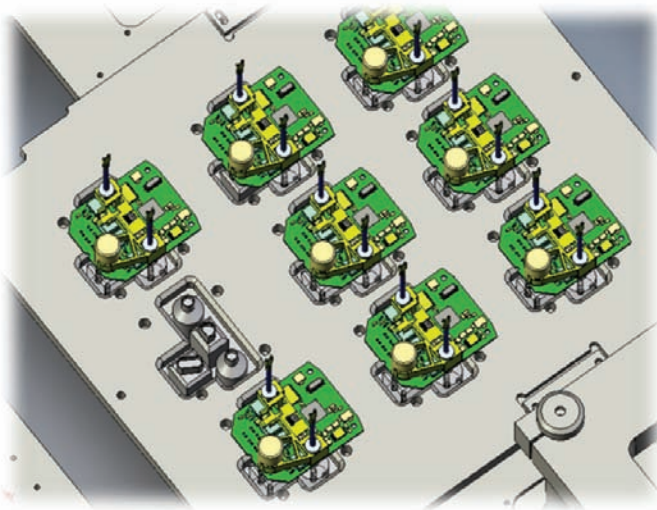
**Typical targeted profile**

## The process of Stamp Soldering

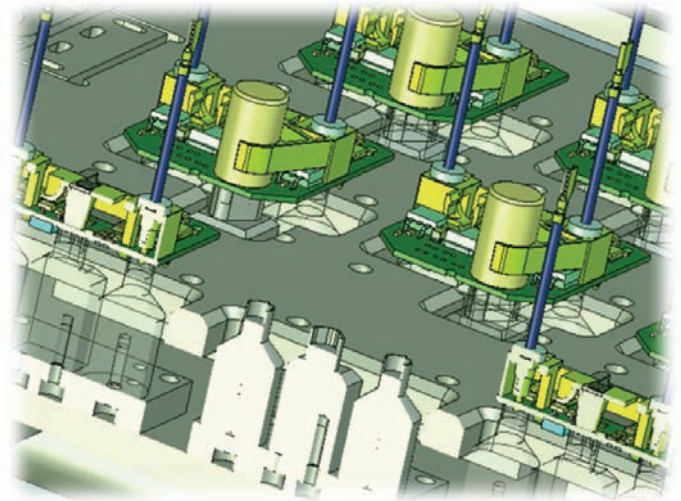


Contour and board carrier over the solder pot and solder stamps

The specially designed carrier or PCB is carried via a servo motor axis system and placed on top of the contour plate. This is a significant advantage in such that the board flatness is guaranteed. It is not controlled by a standard gripper or conveyor system that most systems rely on. This helps to eliminate cracking joints that may otherwise be soldered on a warped board. It also helps to eliminate shorts.



Top view of selective stamps and contour plate



Cross sectional view of actual volumetric stamps

There are no motors used to move the molten solder. The stamps are volumetrically controlled and designed specifically for each product. This ensures a precise amount of solder without instable waves being pumped through various size holes. There is also very minimal amounts of dross. Typical dross in an "around the clock" production is between 10lbs to 20lbs per week. This is significant savings especially when using Pb free alloys such as SAC 305.

**The JUKI FlexSolder series is by far the most flexible soldering machine on the market. For more information please contact JUKI at 919-460-0111**