



Selective Soldering

CT Production has proved that by automating UK production it is able to significantly narrow the gap with its offshore competitors.

Traditional manual operations have been replaced where practicable by precision machinery in a move to drive down the cost of production. Although this was the main reason for adopting a selective soldering process, a number of other less obvious benefits have become apparent.

- Fast, flexible process
- Consistent accuracy
- Superb solder flow-through
- Low flux residues
- Low tooling costs
- IPC A 610 class 3 quality

The KISS process - 'Keep-it-simple-soldering' - comprises a fixed preheat facility and a unit which moves in X-Y-Z axes under the PCB to perform fast and accurate robotic soldering. This unit includes a 'drop jet' pre-fluxing nozzle for fast, precise application of flux, plus a small lead-free solder bath and a solder wave/nozzle operating in a local nitrogen environment to avoid oxidation.

Traditional wave soldering can be cost-effective, but today's technology is driving PCB design towards denser, double-sided SMT with just a few through-hole parts. Wave soldering is not always cost-effective or possible for this mix where masking or jiggling is needed or the product requires soldering by hand.

The machine has proved reliable in delivering repeated IPC A 610 class 3 solder flow-through on multilayer PCBs with heavy copper planes, previously found to be unachievable by hand or wave solder. It can also operate at two to three times the speed of a trained operator without the associated human variability.

CT Production has proved that it can be more competitive, capable, and flexible, using automated selective soldering on through-hole components, with repeatable quality for mixed technology PCBs.

