

✦ Vacuum Shuttle - for Vacuum Reflow



- ✦ Temperature profile setup
- ✦ Integrated thermal shield and vacuum sensor
- ✦ Measure hold time, pulldown and release rates
- ✦ Adjustable PCB area
- ✦ Cable management
- ✦ Measure down to 10 mbar
- ✦ Configurable for mbar or Torr

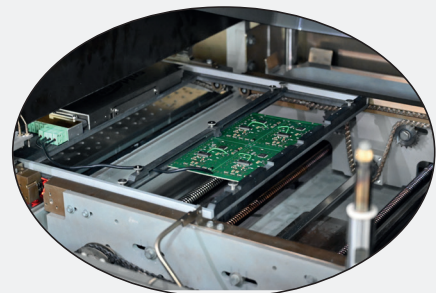
PCB Carrier and vacuum measure for vacuum reflow ovens

Modern reflow ovens increasingly incorporate an integrated vacuum stage positioned after the peak reflow zones. These vacuum stages subject the electronic assembly to a controlled vacuum while the solder joints remain molten, helping to significantly reduce voiding within the completed solder connection.

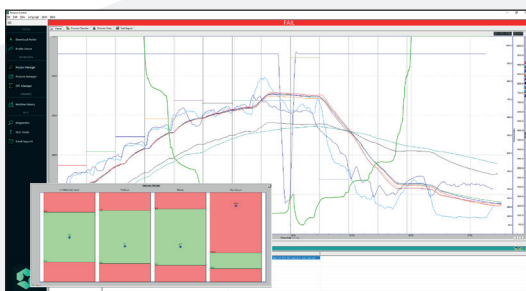
During profiling, both the Solderstar SLX profiler and the PCB under test must travel together through the heated zones and into the vacuum chamber while the vacuum cycle is applied. This innovative carrier system has been specifically developed to simplify and streamline the process of capturing accurate thermal and vacuum profiles from these advanced reflow ovens.

Temperature Profile Measurement

The Solderstar Vacuum Shuttle is a purpose-designed fixture featuring an adjustable holding area for both the PCB and thermocouple sensors. Integrated cable management clamps keep sensor wiring secure and organised, helping to ensure accurate, error-free profiling. A built-in 9-channel thermal profiling interface enables fast, convenient connection to your SLX datalogger. The shuttle also incorporates a high-precision atmospheric pressure sensor capable of measuring vacuum profiles down to 10 mbar.



Process Vacuum Measurement



The vacuum profile is captured and displayed as an overlay with the PCB temperature profile, providing a complete view of process conditions throughout the reflow cycle. Key vacuum parameters are automatically calculated, including hold time below the target vacuum level, vacuum pull-down rate, and vacuum release rate — essential for maintaining component stability and preventing component shift during processing. Additional configuration settings allow the vacuum stage position within the process to be defined, ensuring accurate alignment of all profile data.