



- ✦ Heater uniformity
- ✦ Process vibration
- ✦ Line speed
- ✦ Oxygen PPM
- ✦ Vacuum analysis
- ✦ Dual lane option

Verification of oven temperature, vibration, vacuum and oxygen PPM

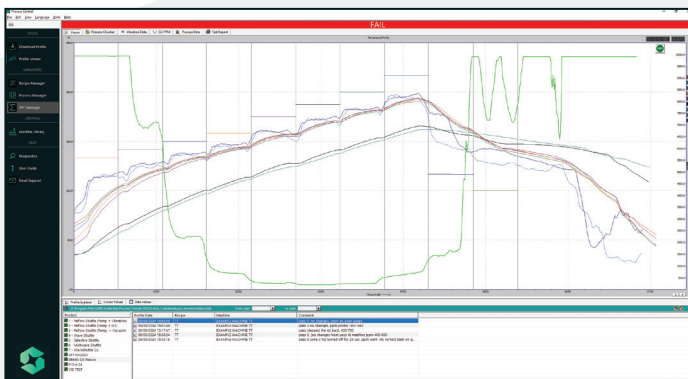
Process measurement shuttles provide the platform for advanced and repeatable machine verification, each shuttle features the Smartlink system to quickly connect your SLX datalogger.

Process specific instrumentation installed to each shuttle type enables the capture of all key parameters from soldering machines with a single pass through. Advanced parameters such as conveyor vibration, reflow vacuum level and oxygen PPM are measured alongside standard temperature profiles.

Measurements are auto-configured removing the need for computer set-up, making them an ideal tool for daily checking by all levels of user within the production environment.

Oxygen PPM Measurement

The reflow shuttle features an advanced oxygen measurement sensor, providing a PPM trace for every zone within the oven.



- ✦ Analysis of Oxygen PPM per zone
- ✦ Detect issues with Nitrogen Leaks
- ✦ Optimize Nitrogen consumption
- ✦ Detect flux build up issues

Temperature Profile Performance

The reflow shuttle is fitted with an array of sensors for independent measurement of advanced process parameters required for modern reflow soldering applications.

Temperature profile verification is achieved with an array of type-K sensors arranged to measure top and bottom heater performance.

At the front of the shuttle are matched temperature sensors which provide information regarding uniformity of heating across the width of the heated zone.



Process Vibration Measurement

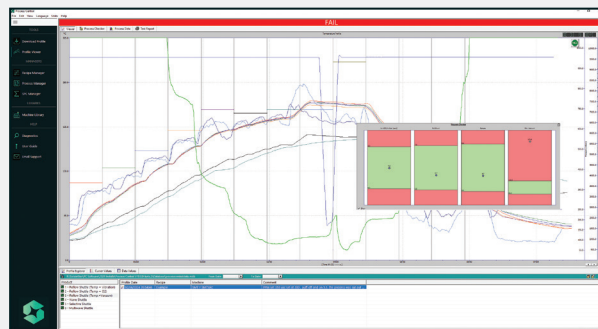


Process vibration measurement is a requirement for many manufacturers, to establish a baseline of acceptable levels in all 3-axis within the machine. Data captured can allow the engineer to see the effect of fan speed settings on vibration/harmonics in the process, along with detection of changes in vibration levels due to issues with the machine conveyor or extraction system.

Process Vacuum Measurement

Where a vacuum stage is added to the reflow process, an optional measurement module is fitted to the reflow shuttle allowing verification of vacuum levels down to 10 mbar.

Vacuum profiles are captured and displayed as an overlay with the PCB temperature profile. Hold time below a desired level vacuum level, pull down and release rates are calculated - essential for ensuring that component shift does not occur.



Reflow Shuttle Technical Specification

Material	Ricocel ES-3261A
Thermocouples	Type K, EN 05842:1993, Class 1 / ANSI MC 96.1
Size (LxW)	Single Lane: 350mm x 395mm Dual Lane: 200mm x 395mm
Vibration Sensor	3-Axis, Standard range +/-2g @12Hz , measurement sensitivity 0.244mg
Vacuum Sensor (optional)	10 to 1200 mbar ±1.5mbar (7.5 - 900 Torr ±1.125Torr)
Oxygen Sensor (optional)	Range: 100 - 10000ppm Resolution: +/- 2.5 ppm Accuracy: +/- 100ppm

For more information contact your regional Solderstar office



Solderstar Ltd
Unit C2 - Castle Park Industrial Estate
Bower Street, Oldham , OL1 3LN
United Kingdom
+44 (0)1706 354846
info@solderstar.co.uk



Solderstar Ltd
4600 140th Avenue North, Suite 180
Clearwater, Florida 33762-3814
United States
+ 1 (727) 461 2270
info@solderstar.com



Solderstar / PhoenixTM GmbH
Löhner Str. 108
Löhne, D-32584
Germany
+49 5731 3002811
info@solderstar.de