

# Process Calibration tools

For Hot Bar Reflow Soldering, Heat Seal Bonding, Heat Staking and ACF Laminating

For all Hot bar application, Process Calibration instruments are imperative to ensure and maintain a reliable, repetitive and accurate production processes. C-Tech Systems offers calibration tools for planarity, temperature and pressure calibration. All created to meet the parameters and manage the processes precisely.

## Co-planarity Calibration

In order to achieve the perfect joining quality it is necessary to reach the maximum planarity between the thermode and the product/bond support. Co-planarity paper can be used to check the force parameters after a thermode or jig change, to ensure a constant production quality.

### Co-planarity check paper

UO-5233 Co-planarity check paper



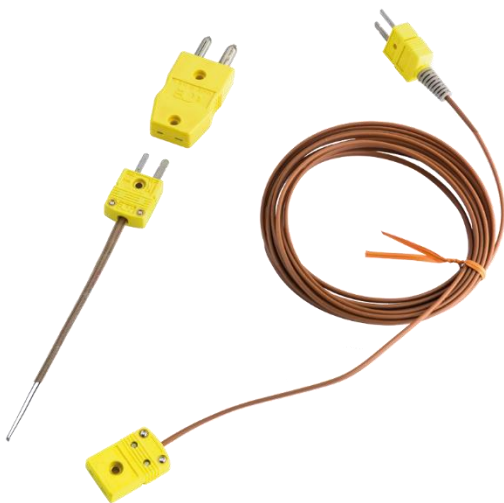
Co-planarity error



Co-planarity error



Co-planarity OK



## Temperature Calibration

Ensuring process temperature accuracy involves calibrating the temperature of the thermode, exactly in that area where the bond or solder joint is being created.

### Flat thermocouple

Fast response flat leaf-type thermocouple ideal for measuring the temperature in the area that needs bonding or soldering. The thin foil thermocouple is 100 mm long, 3.2 mm wide and 0.05 mm thick. Max. service temperature is 210° C (410° F). Supplied with an adaptor and extension cable (3 m).

UO-5230 Flat thermocouple with measuring device

### Read out unit for thermocouple

A hand held digital thermometer. Readings from the two inputs are displayed simultaneously. Standard features include min/ max reading, reading hold, and °C to °F switchable units. The measured temperature range is from -200 to 1370°C (-328 to 2498°F).

- Wide Measurement Range, -200 to 1370°C
- Dual Input and Display
- Resolution 0.1°C/0.1°F

UO-5231 Read out unit for thermocouple



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## Force Pressure Calibration

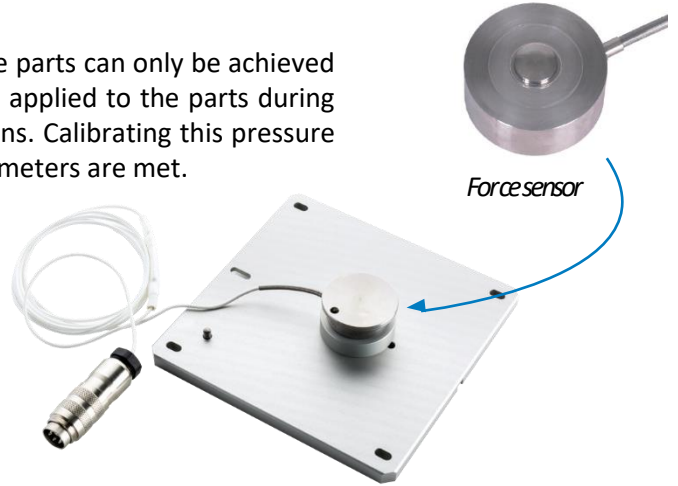
Creating strong joints with delicate parts can only be achieved if the right amount of pressure is applied to the parts during bonding and soldering applications. Calibrating this pressure makes sure that the required parameters are met.



Read out unit



Read out unit  
with RS-232



Adapter plate with  
flat circular disc on top of the force sensor

## Force Measuring sensor

On top of the force sensor a flat circular disc is placed to ensure that the force measurement is done centrally and without any transverse vectors. The adapter plate makes sure all stays in place during the measurement and can be easily positioned on our systems. Ensure that the system and adaptor plate is mounted on a smooth and even surface.

- Measuring ranges from 0 to 100N and 0 to 1000N
- For static and dynamic measurements
- Stainless steel
- Protection class IP64
- Standardized output signal 1mV/V

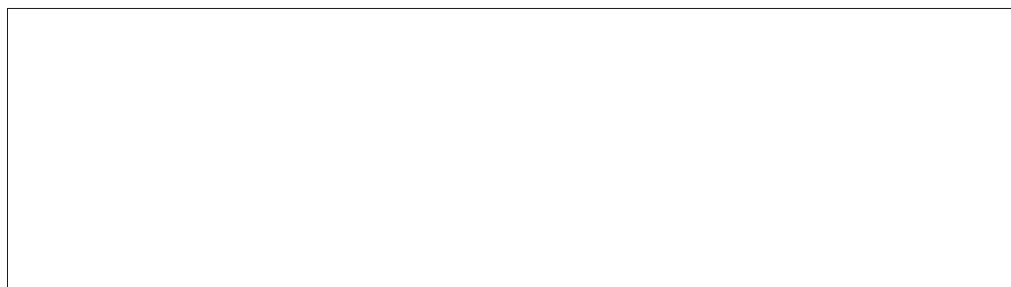
UO-5240	Force measuring sensor from 0 to 100N including adapter plate and circular disc
UO-5241	Force measuring sensor from 0 to 1000N including adapter plate and disc

## Read-out units

Portable force measuring battery powered read-out units. Two separate ranges are available, which enable the instrument to read and display two units of measure. The menu options offer the ability to tailor the instruments response to the application. Gross, Net, Peak and Trough measurements are easily selected.

- 7 digit LCD display
- Tactile keyboard, with dual range selection, peak/valley hold, gross/net and on/off controls
- Accepts an input range of up to 50mV/V
- Environmentally sealed to IP65 / NEMA 4

UO-5242	Hand held read-out unit
UO-5243	Hand held read-out unit with RS-232



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