Maintaining Heating Elements in Packaging Machine Sealers

PreciseCal Services Inc, a calibration services company, has a customer who utilizes a packaging machine designed to seal plastic and foil bags. The machine's sealing surface needs to attain a specified temperature and hold it for a specified time to seal the bags properly.



The surface then cools and releases at a specified temperature to allow for the subsequent package placement. Based on the materials and bag design, temperature settings are different for each batch, requiring a burst test before performing production sealing.

As heating elements may degrade or fail over time, or the Teflon surfaces wear and provide uneven heating, the calibration provider must test the machine when switching setups. To verify the temperature at the machine's Teflon sealing faces, a flat (leaf) thermocouple is inserted between the two heating surfaces. A peak measurement function determines the maximum temperature provided to ensure the system reaches the particular setup's specified temperature. The check verifies that the machine's heating elements are operating properly, and confirms the temperature is uniform across the surface.

The calibration company's challenge was to find a temperature calibrator with the functions to quickly and accurately test and calibrate their temperature measurement.

The ASC-400 Calibrator Provided the Perfect Solution

They selected the JOFRA ASC-400 multifunction process calibrator because it offers the required peak detection feature. They connect the temperature sensor, and it indicates the highest temperature the machine produces. They can then make adjustments to the machine if necessary.

Not only did it meet the application requirements for this particular job, it also offered them solutions to many other applications. These included freezer checks, pressure calibrations, and different temperature calibrations. In many cases, the ASC-400 multifunction process calibrator provided an additional digit of resolution over their previous equipment. Beyond being a technical solution, they found the unit very easy to use with minimal or no training needed for their technicians. The unit is smaller and lighter than the calibrator they'd used before, and has a much more modern user interface and display. In addition, the location of the cable connections adds less strain to the connectors than their previous unit. The calibration provider is very pleased with the ASC-400.



JOFRA ASC-400 Multifunction Process Calibrator