



Helping deliver your holiday meal!

Midwest Food Processing Company Reduces Costs, Increases Processing Speed, and Improves Measurement Accuracy with the Wahl Digi-Stem®

THE CHALLENGE

A Midwestern U.S. Food Company requires high accuracy temperature measurement on their food coolers. After processing, the product must be cooled to the appropriate temperature as fast and efficiently as possible to ship product quickly while minimizing energy usage. If the cooler temperature is too low, energy costs will be higher than necessary; but, if the cooler temperature is not low enough, processing speeds are diminished and customer delivery is delayed.



To meet USDA requirements, the temperature measurement device in this application must have an accuracy of at least $\pm 1^\circ\text{F}$. The processor was previously using a five inch dial bimetal thermometer – large enough to read the temperature across the room.

The bimetal thermometer required a long stem to reach through the concrete walls and into the edge of the cooler. The mechanical mechanism within the long stem of the bimetal introduced a source

of potential measurement error – resulting in wasted time verifying the accuracy and calibration of each thermometer.

To make matters worse, the wall area of a cooler is the least accurate spot to measure temperature.

An accurate and reliable temperature monitoring system was needed for this company to meet their quality requirements and customer expectations without wasting energy and money.

THE SOLUTION

Our solution is a highly reliable, easy-to-read digital thermometer measuring from the middle of the cooler, with accuracy better than required. The Wahl Digi-Stem® DST500 Digital RTD Meter with large, one inch high local LCD display and hard wired remote probe solves all of the client's challenges.

The Wahl Digi-Stem DST500 is a digital RTD (resistance temperature detector) meter, utilizing Pt100, Class A, 4 wire platinum RTD sensors in MgO packed cable to provide consistently accurate temperature readings. System accuracy is $\pm 0.4^\circ\text{F}^1$.

The DST500 Digi-Stem features an LCD Screen with easy-to-read one inch high digits and resolution to 0.1° . This large display is readable from 30 feet away.

¹ System accuracy of $\pm 0.4^\circ\text{F}$ / 0.22°C or $\pm 0.5\%$ of reading, over 1 year period (@ $T_{\text{amb}} = 23^\circ\text{C}$)



Selecting our hard wired remote RTD probe with 25 feet of cable allowed the temperature measurement to be taken from the middle of the cooler – the location with a temperature representative of the entire cooler – improving the accuracy of the temperature readings. The hard wired remote probe provides additional protection against any possible moisture intrusion during wash-down.

As the DST500 Digi-Stem is battery powered, no additional electrical access was required, reducing installation cost.

THE RESULT

The customer is meeting the USDA requirements while saving time and frustration by eliminating the need for frequent calibrations. More accurate temperature readings save energy costs and improve processing speeds to meet customer expectations.

