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## Controlling Temperature in the Delivery of COVID-19 Vaccines

Allerød, Denmark –Pharmaceutical companies worldwide are diligently working overtime to produce an accepted COVID-19 vaccine. While this work continues, other companies are already planning how to distribute a potential vaccine. Perhaps the most significant challenge exists in temperature control, as some COVID-19 vaccine candidates will require ultra-low temperature (ULT), typically ranging from -86 to -45°C.

For COVID-19 vaccines requiring ULTs, maintaining these freezing temperatures throughout the process, from manufacturing to delivery to patients, is necessary. Failure at any point to do so can result in wasted vaccines, which are so desperately needed.

To maintain the quality of the vaccine, temperature sensors will monitor and, in some cases, record the temperature inside the storage and shipping containers. They will prove that the vaccine remained at ULT temperatures at all times, and therefore are at maximum efficacy. Because they are the source trusted to measuring and provide important temperature data, some users might make the mistake of thinking they are automatically accurate. In reality, temperature sensors drift and degrade over time, so periodic checking and adjustment or complete replacement is a critical step that cannot be forgotten. However, finding the equipment to accurately test and calibrate to ULT temperatures of -86°C is a challenge.

AMETEK STC has a solution in its [JOFRA RTC Reference Temperature Calibrator Series](#), particularly the RTC-159 model. The RTC-159 has a low-temperature range of -100°C, giving it plenty of available range to calibrate temperature sensors used in ULT measurement. Apart from its range, the RTC-159 features accuracy to 0.06°C, stability to 0.03°C, and the patented DLC system, bringing unmatched temperature uniformity and accuracy in the insert.

JOFRA's production facility in Denmark is ready to meet the industry's urgent temperature calibrator demands. A white paper with additional details on the critical temperature calibration for the distribution of COVID-19 vaccines is available at <https://www.ametekcalibration.com/knowledge/library/white-papers/temperature-sensor-calibration-covid-19-vaccine>.

### **About AMETEK STC and JOFRA**

AMETEK STC manufactures and supplies calibration instruments for temperature, pressure, and process signals under JOFRA and Crystal brands. JOFRA temperature calibrators are known worldwide for their accuracy, stability, and reliability. For more information, visit [www.ametekcalibration.com](http://www.ametekcalibration.com).

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