Operation Warp Speed outlined a requirement of cold chain logistics for COVID-19 vaccines. The challenge was met by an Alabama company with years of refrigeration manufacturing expertise.
On May 15, 2020, the federal government announced its plan to accelerate the development, production, and distribution of COVID-19 vaccines. Operation Warp Speed was born. Operation Warp Speed is a public-private partnership, utilizing resources and expertise from both the federal government and the private sector. It outlines the specific needs surrounding the safe and effective distribution of COVID-19 vaccine doses throughout the country. A north-Alabama company was called upon to help in this monumental task.

Early in 2020, Heat Transfer Products Groups, LLC (HTPG), a standalone division of Rheem and a leading manufacturer of commercial refrigeration, was asked by a customer, KPS Global, to leverage their expertise in cold chain logistics to help maintain the integrity of the healthcare supply chain. Since that time, HTPG has been working alongside KPS, a supplier to McKesson. Known as a leader in the healthcare industry, McKesson expanded its already established partnership with the Centers for Disease Control (CDC) to be a part of Operation Warp Speed as a distributor of the COVID-19 vaccine.

Through this partnership, HTPG developed and produced equipment that allows the COVID-19 vaccines to be stored at a specific, regulated temperature. According to the CDC, these vaccines, while still stored in the temperature range of traditionally recommend vaccines, have a much tighter window and therefore require specific refrigeration technology and monitoring.

"Vaccines such as the ones for COVID-19 must be stored in an exact temperature range to ensure potency," said Mark Evans, vice president and general manager of HTPG. "We ramped up production at our factory to maximum levels as part of our commitment to meet deadlines and respond to this critical moment in our nation’s history."

The Scottsboro facility was reconfigured in September to meet the demands of this task, increasing output and accommodating the new production line. In one month, the production line was ready to go. In working with KPS, there was an expressed urgency to ensure refrigeration units were ready and available when the appropriate time came. This meant that the units had to be completed and cooled to sub-zero temperatures prior to vaccine storage.

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Those working with the HTPG production line developed two units - the evaporator and the condensing unit - to lower the temperature and create the ideal environment for pharmaceuticals like the COVID-19 vaccine. Generally speaking, the evaporator is the piece of equipment that cools the air, absorbing heat to evaporate the refrigerant, and therefore cooling the air. The condensing unit is designed to condense refrigerant vapor to a liquid by compressing the vapor in a compressor and rejecting heat to a condenser.

In order to produce these units quickly and efficiently, it required a large amount of configuration and communication. Different areas of the facility were closed to reallocate machinery and personnel to the task at hand. Other customers’ orders were placed on hold until the completion of these units.

"Our employee response was extraordinary," said Evans. "Our team is honored to be part of this process and proud to build equipment that will maintain specific temperatures for life-saving vaccines.”

As of early February, HTPG had produced 96 evaporators and 36 condensing units. Working 10-hour days, seven days a week allowed the team to stay on this accelerated schedule and complete production. "The amount of overtime, the amount of teamwork, the amount of collaboration that we needed externally and internally to be able to accomplish this really was a humbling experience," said Brandon Norris, director of operations for HTPG. "To be able to come back and say every intricacy of these units is helping us be good stewards of the community.”

HTPG produces refrigeration products that are sold nationwide under the recognized brands of Russell, Witt, Kramer, and ColdZone, and can be seen in grocery stores, restaurants, and large warehouses. HTPG is a standalone division of Rheem, which was founded in 1925 and is America’s number one water-heating brand with products available in more than 50 countries.
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