

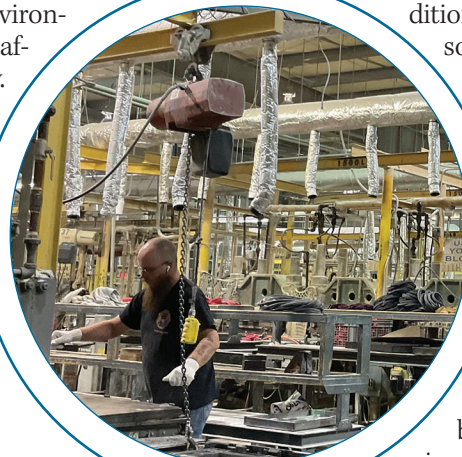


UniSpot Cooling Helps Rubber Factory Employees Keep Their Cool — and Employers Keep Their Workforce

Working in a rubber molding factory typically involves a range of environmental conditions that can affect employee comfort and productivity. Injection and molding presses operate at extremely high temperatures, often between 300–400°F, which can lead to ambient indoor temperatures of 120°F or more. With extreme heat also comes high levels of humidity and indoor air quality (IAQ) issues exacerbated by lack of airflow and materials used in the manufacturing process.

The Problem

Management at Johnson Brothers Rubber Company in West Salem, OH knew all too well the toll the high heat, humidity, and IAQ issues took on their employees. While their factory staff were all dedicated hard-working individuals, the human body can only



withstand so much exposure to such extreme conditions. Over the years, ownership tried many solutions to mitigate the high temperatures, from using industrial fans and allowing frequent breaks in air-conditioned areas of the facilities. These “solutions” were anything but: fans simply blew very hot air from one area to another, and extended A/C break times meant unattended extruders and presses.

Johnson Brothers were faced with continuous turnover in their factory workforce. Employees were literally burning out from the extreme heat, leading to constant churn of factory workers.

However, a large industrial facility with 20-foot-high ceilings is simply not a practical space to cool with conventional commercial HVAC equipment. The HVAC systems would have to operate continuously to compete with the heat generated by the processing machines and

The Unico System®



the resulting energy costs would be exorbitant. The company wrestled with finding a workable solution for years.

The Solution

Matt Slocum with Refrigeration Sales Corporation, a supplier of The Unico System in Ohio, knew the product had been used in industrial spot cooling applications with much success. With UniSpot Cooling, the system's unique flexible supply tubes are used to provide conditioned air to the worker rather than the workspace. This method effectively provides each employee with their very own personal air conditioning without needing to inefficiently attempt to cool the entire interior factory space.

Matt suggested using this approach to his client, Mechanical Sales and Project Manager Ryan Stevens with S.A. Comunale. Ryan's company is Johnson Brothers' provider of conventional commercial HVAC solutions for their offices as well as their fire suppression sprinkler system.

Working with the plant manager and Unico Manufacturer's Representative, Ken Petry with Miller Component Sales, Ryan and Matt determined the appropriate locations for the seven Unico air handlers providing a total of 32 nominal tons of cooling as well as the layout and suspension of the main trunk lines. Flexible supply tubes were then attached to the main trunk lines and used to provide air conditioning to the various production line stations.



The Results

The Unico air handlers were commissioned and tested on a day when the outside air temperature was 50°F, so there was no need to use the system's DX condensing coils. The factory workers were so ecstatic with the cooling provided by fresh outdoor air, they couldn't begin to imagine how good they would feel when fully conditioned air would be delivered in the hotter months. For their part, Johnson Brothers Rubber Company ownership stated that they wished they had used this solution years before, a sentiment their workers readily agreed with.

UniSpot Cooling – Cool the Worker, Not the Space

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Distributor:

Matt Slocum
Refrigeration Sales Corp
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Installing Contractor:

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Two of the UniSpot air handling units with suspended main trunk lines.





The Unico System®

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Unico, Inc. is the leader in Small-Duct High Velocity (SDHV) heating and cooling systems and other high-end HVAC systems. The company manufactures all of its products in St. Louis, Missouri, with over 125,000 square feet of modern manufacturing space. The company is well known for extensive use in older, architecturally unique homes and buildings as well as elite, high-end custom homes. The company is family owned and operated and is available throughout the United States and Canada, and in over 28 countries around the world.



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