

# ROBOWORLD: PROTECTING ROBOTS IN EXTREME ENVIRONMENTS

## Overview

In 1994, after a career of more than 20 years as an engineer designing products for major corporations in the field of robotics and automation, Charlie Tur identified a pressing yet unmet need among companies using robots. Tur decided to found a new company to fill that niche—creating suits to protect robots. More than a decade later, Tur's company, Roboworld, has offices in both Ohio and Wisconsin and provides custom-built Robosuits to shield robotic equipment in extreme manufacturing environments. Roboworld's worldwide manufacturing clients, such as Motoman, FANUC, and Lincoln Electric, benefit from well-designed robot "clothing" which protects their automation investments while increasing uptime.

## The Challenge

Roboworld Vice President for Design, Sales and Support Mike Tur explains "robots typically are placed in environments where you don't want to put people—very hot or extremely cold environments, for example. The robots may also do highly repetitive tasks or handle work most human labor would find too unpleasant or unsafe to perform. This means these robots are subject to conditions which could potentially cause damage. Our suits protect them from such hazards...one of which is high temperature environments. However, in those high temperature environments, if you install a protective suit on an electrically-driven device (robot), the heat level can rise even higher than the ambient temperature." Thus the need for some method of cooling the robot suits is especially strong in these high heat environments.

## The Solution

Tur realized from the start that the company's Robosuits required a cooling unit. Initially, the firm contracted with several air cooling equipment suppliers, including Vortec, for cooling tubes installed inside the suits. Over time, Tur notes, Vortec distinguished itself from the competition through "better pricing, prompt delivery of products as well as ease of operation —customers can quickly grasp the vortex tube concept and how it works." He observes that "for years now, we've only used Vortec. There's no reason to use another supplier." Roboworld uses Vortec's 308 and 328 series vortex tubes for their cooling applications.



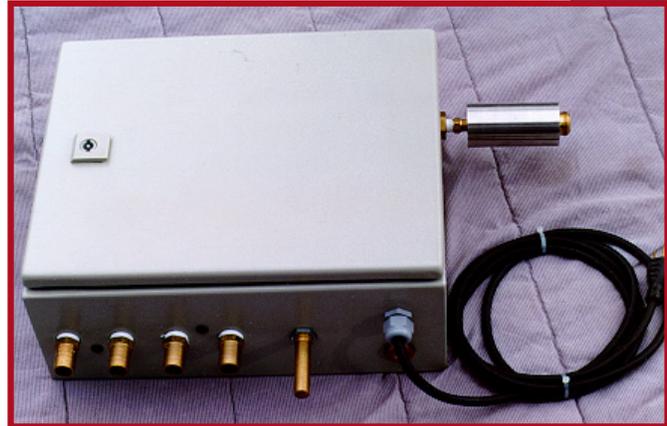
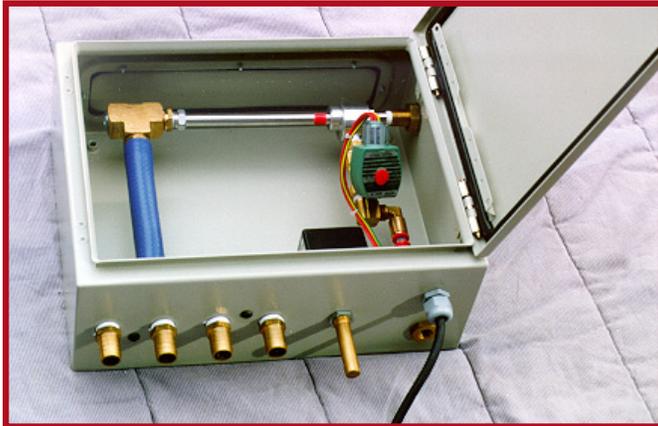
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## How Roboworld Benefits from Vortec Products

Tur characterizes Vortec's cooling tubes as an affordable, effective solution while providing a high level of reliability. "We create a high quality product for our customers and we need cooling devices which stack up," he states. He also notes that Roboworld has expanded its use of Vortec cooling products: "We now use them not just to cool the suits for robots themselves, but also to provide cooling in the covers we make for robot controllers."



Vortex tube model 308-35-H installed in Roboworld's climate control unit, provides cooling to their Robosuit™.

## Conclusion

Mike Tur observes that "We have a good relationship with Vortec because of the consistency and quality of their products and their service." Thanks to his company's positive experience with Vortec, Tur has referred clients seeking industrial cooling solutions to Vortec.

**For more information on Vortex Tubes, [click here](#) or scan this QR code with your smart phone.**

