

Rittal Solutions Keep Online Retailer's Fulfillment Center Running Smoothly

For online retailers, fast and reliable order fulfillment is the key component to building consistency and customer loyalty. Quick delivery coupled with broad product availability is exactly how one top online retailer, or e-tailer, built its business. As a result, the automation systems at the heart of its numerous fulfillment facilities are crucial.

With centers ranging in size from 500,000 to 1.5 million square feet, the sophisticated IP-enabled automation systems communicate with routers, sensors and devices throughout the facility to coordinate all of the stages of order fulfillment. To facilitate the movement of data necessary for real time decision making sensitive IT equipment is placed on the warehouse floor with no climate control, exposed to dust and other contaminants.

Several years ago, cooling units from two different competitors were not meeting the e-tailer's fulfillment center needs, so they turned to Rittal. The company soon standardized on the Rittal system that combined the security and protection from contaminants along with a self-contained cooling system, the Blue e+.



Rittal's Blue e+ cooling units use an innovative hybrid process that relies on parallel cooling circuits working together based on temperature difference while an integral heat pipe dissipates heat from the enclosure as soon as the ambient temperature falls below the set point for passive climatization. Active climatization is achieved via the compressor's cooling circuit with speed-controlled components for demand-based cooling. This unique inverter technology provides cooling output that is always exactly the amount needed at the time. Not only is energy consumption far less than with conventional technology, but the improved cooling leads to longer service life of the components inside the enclosure and the cooling unit itself.

"When we were discussing new products, they said 'We want to see if we can get more energy efficiency and reliability out of the cooling units.' Over the years, the Blue e+ has proven its efficiency and provided a very good end result," said George Correia, Business Development Manager, Data Center Solutions at Rittal.

Rittal created a purpose-built system for the e-tailer, including dedicated part numbers, that allow them to order new installations from either U.S. or U.K. ordering points. These are designed to be complementary with similar systems installed at other fulfillment centers around the globe.

"They system is streamlined and efficient for them," explained Correia. "They wanted a domestic solution that is well built, well designed, robust and reliable. They've been our customer for more than eight years. During that time, they have tested other systems, but stick with Rittal's because of the efficiency and reliability that we deliver."

The Blue e+ units are delivering superior energy savings for the e-tailer. When managing large buildings with complex infrastructure, the energy efficiency delivered by the units contributes significantly to the bottom line.

"Blue e+ has been shown to provide up to 70 percent energy savings," said Correia. "And they've reported back to us that the performance and reliability of the system are in line with what was predicted."

In addition, the e-tailer has installed redundant systems within each facility, greatly reducing the risk of downtime. Each fulfillment center has two complete and identical Rittal solutions installed to ensure that the center can continue managing orders.

"Recently, we added the IoT module for Blue e+ to centralize monitoring and control," said Correia. Within the past year, Rittal has supplied the retailer with nearly 50 IoT modules for Blue e+. There are plans to roll out more modules to the entire fulfillment center network. Although the IoT modules are not performing mission-critical functions at the control level, the retailer is able to use the data they provide for predictive insight into system performance and future requirements.

In addition, the e-tailer has engaged with Rittal for a service contract to maintain these systems. Rittal's service programs offer tailored solutions to support its customers' businesses. Rittal Service guarantees regional proximity of service technicians and fast response times to meet immediate needs and minimize expensive downtime.

"With the service program, we ensure our equipment operates efficiently and effectively," added Correia. "They have less to worry about and they save money."

Rittal's Blue e+ cooling solutions, custom products, IoT modules and maintenance contracts provide the top performance and reliability necessary for the e-tailer to ensure that orders are on track and keep more than 100 million customers happy.

For additional information on deploying equipment in uncontrolled environments, visit Rittal's blog post: <https://www.rittal.us/contents>.