

# Large retailer improves electrical safety in the workplace

## Result

- Global retailer is able to implement a zero tolerance policy for working on energized circuits above 120V. This essentially eliminates the risk of an arc flash event.
- The motor starter touchscreen not only helps with their electrical safety program but also provides them with critical compressor motor data, oil pump motor data and overall power quality data that is used in their preventive and predictive maintenance program. This has captured problems with compressors, compressor motors, oil pumps, oil pump motors and their utility's power quality – as a result, they were able to take action before a serious and unexpected problem occurred.
- The touchscreen also helps with quicker troubleshooting when there are problems – allowing the technicians to get the equipment up and running quicker.
- With intelligent components, our global retailer is able to integrate their Vilter™ motor starters into their network, further utilizing motor starter data and monitoring power consumption



## Application

Global retail leader installs smart and safe motor starters in their refrigerated distribution centers.

## Customer

A global U.S. retail leader.

## Challenge #1

Many U.S. companies are facing challenges when complying with OSHA's Standard 29 CFR Part 1910 Subpart S that addresses electrical safety in the workplace. NFPA 70E provides a road map to comply with the OSHA standard, but



**EMERSON**  
Climate Technologies

many companies do not have 'qualified person(s)' to safely perform the necessary electrical tasks. In fact, even those companies with 'qualified person(s)' do not want them to work on energized equipment – and for a good reason, everyday 5-10 arc flash accidents occur in the workplace causing serious injuries to employees, potentially costing the employer up to \$10 million per accident.

Our global retailer faced the same challenges: how do we reduce or eliminate our engine room technician's exposure to electrical hazards while providing them with the tools to troubleshoot, set-up and gather data on our large horsepower compressors?

## Solution #1

The global retailer installed Vilter's engineered motor starter solution in place of their existing traditional compressor motor starters.

Vilter's motor starters use a touchscreen interface to communicate with intelligent components on the inside of the motor starter; as a result, we eliminate the need to enter an energized motor starter and exposure to electrical hazards.

A separate enclosure contains the low voltage control circuit and components. Now when troubleshooting the control circuit technicians are only exposed to 120V/24VDC, greatly reducing the hazard risk category.

Also, a separate main breaker enclosure, keeps line voltage out of the main motor starter enclosure when breaker is in the off position. It also ensures the technician is de-energizing the correct motor starter before entering enclosure.

Permanent electrical safety devices provide a visual and electromechanical means of confirming voltage is present or not in the main motor starter enclosure. This design verifies zero voltage before placing motor starter in an electrically safe work condition per NFPA 70E.

Electromechanical door interlock is energized off the main breaker keeping the main enclosure door locked until breaker is placed in the off position

## Challenge #2

Global retailer has many refrigeration distribution centers with traditional motor starters. How do we replace the existing motor starters while keeping the facility running?



## Solution #2

Working with our Vilter distributor we engineered a turnkey solution that included hiring electrical contractors to perform the retrofit installation.

First we perform a site survey at each facility. We then engineer a separate solution for each site. When the retailer approves our solution we commence with engineering the motor starters per site and hire contractors for the installation. Once we build and ship the motor starters the contractors meet us on site to review the project. We shut one compressor down at a time; replace one motor starter at a time so the distribution center is only down one compressor at any time. Once we start up the compressor, we move on the next motor starter. We manage the entire project from site survey to start-up and training.

## Resources

Learn more about Vilter motor starters at:  
[EmersonClimate.com/Vilter](http://EmersonClimate.com/Vilter)

# EmersonClimate.com