

735 WATER STREET

MAGNETEK QUATTRO® DC ELEVATOR DRIVES



PROJECT The 17-story CityCenter at
735 North Water Street
Milwaukee, Wisconsin

CONTRACTOR Schindler Elevator Corporation

CONSULTANT Performance Elevator
Consulting, LLC.

PRODUCT Seven Quattro® DC Regenerative
Elevator Drives and Schindler
TXR5 Car Controller with PORT
(Destination Dispatch) Technology

Challenge

- The seven Otis gearless DC machines (35 horsepower) that were installed around 1913 did not meet the efficiency expectations of the building owner. An eighth motor unit had failed at an earlier date and was replaced with a modern DC motor and SCR based-DC drive.
- An increasing number of service issues resulted in a higher level of maintenance support to keep the system operational for the building's tenants.
- Sourcing spare parts for an aging controller was becoming difficult.
- Implementing sustainable operations to achieve green building program certifications.
- Providing tenants with an upgraded ride quality.
- Reducing the amount of equipment and machine room space required to run multiple elevators.

Solution

Eight elevators were fitted with Quattro® DC drives during the elevator modernization process, which included the integration of Schindler TXR5 car controllers with PORT (destination dispatch technology).

Results

The building's modernized elevator system now achieves 38 percent daily energy savings.

AN INVESTMENT IN SATISFACTION & ENERGY SAVINGS

Compass Properties wasn't about to let an aging, inefficient elevator system keep them from accomplishing their goals. Even if one of those goals was to achieve the first "high performance," high-rise tower designation in the state of Wisconsin.

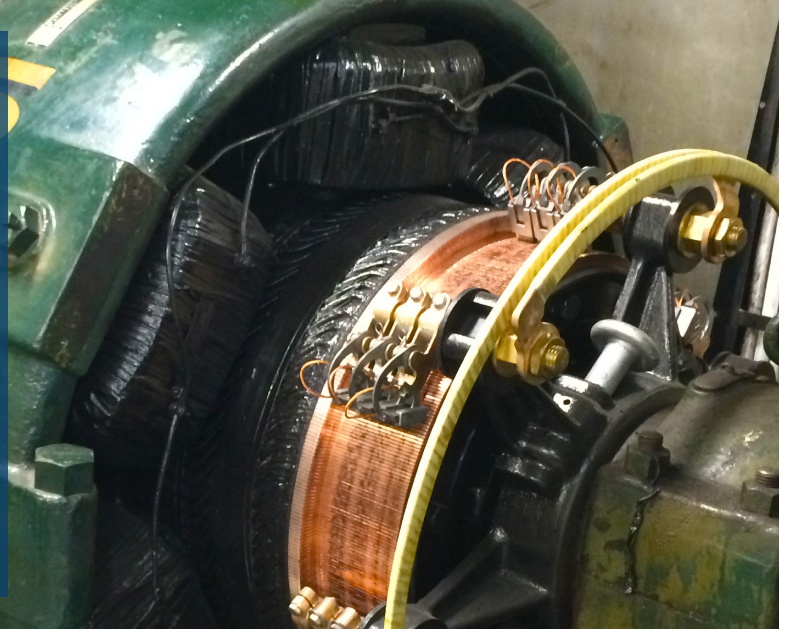
The 17-story CityCenter 735 building in the heart of downtown Milwaukee was built in 1913 along the Milwaukee River. The "tenant-centric" facility contains 360,000 sq. ft. of premium office space that once served as the cornerstone of Milwaukee's budding financial district. Despite the building having been well maintained, the structure's aging elevator system had remained relatively unaltered over the years and was powered by seven Otis gearless DC motors that had been operated continuously since 1913—all of the units were still powered by antiquated motor-generator set controls.

In order to help Compass Properties achieve their "high performance" goals for the property, Sheldon Opperman, the executive vice president at Compass Properties and his team recognized the need to modernize the facilities elevator system to improve reliability and increase energy efficiency. They elected to take a cost-effective and less time-intensive approach by continuing to use the reliable DC motors that had served the building's tenants dependably for many years and incorporate them into the modernization project.

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WHY "CLEAN HARMONICS" MATTER

The primary advantages of high power factor and clean drive harmonics are reduced heating, better utilization of existing distribution-line equipment, and prevention of interference with other devices, including computers, fed from the building's electrical supply system. The Quattro elevator drive's clean utility side drive harmonics (<8% THDI) are built right into the drive—no need for an add-on filter. Quattro's clean harmonics and high power factor further reduce installation costs by eliminating the need to upgrade the building's existing utility feeder supply.



In 2014, Compass Properties partnered with Performance Elevator Consulting, LLC, for an ambitious modernization project designed to improve energy efficiency, provide improved ride quality for tenants, and deliver sustainable operations. Elevating his company's commitment to tenant satisfaction to the next level, the project incorporated Schindler Elevator Corporation's Destination Dispatch PORT technology, which provides optimized traffic flow throughout the building.

By replacing the building's antiquated elevator motor controls with Magnetek's energy-saving Quattro DC adjustable speed drives with clean utility side harmonics and regenerative technology, the CityCenter's elevators are today able to achieve 38 percent daily energy savings based on an average of 500 runs per day by each car.

By utilizing Quattro DC elevator drives the building's elevator system was able to achieve the highest levels of functionality, safety, and comfort, as well as:

- Near unity power factor and clean harmonics (IEEE 519 Standards)
- Improved tenant ride quality
- Reduced peak and power demand

"To us, high performance is results-driven and doesn't encompass just one thing, like energy conservation," Oppermann told *High Rise Facilities Magazine* in an article about the property. "Energy conservation will decrease operating costs, but we also ask, 'Can you use energy conservation measures to raise revenue?'"

If you consider the fact that this downtown property was the first in Wisconsin to receive the prestigious BOMA 360 Performance Program® designation in 2010 and consistently receives positive reviews from tenants, then the answer is a resounding "yes."

The BOMA 360 Performance Program evaluates buildings in six major areas: building operations and management; training and education; life safety; security and risk management; tenant relations; and energy savings/environmental sustainability.

Magnetek Quattro drives used in the modernization project are designed to consume the lowest energy possible and their precise, accurate controls provide smooth acceleration and deceleration, resulting in both superior ride quality and reliability.

Once Again, **Magnetek's Energy Savings Calculator Is**

RIGHT ON THE MONEY!

Quattro DC drives consume the lowest energy possible, saving as much as 25 percent over DC-SCR drives and as much as 45 percent over Motor Generator sets. Today, the Milwaukee CityCenter 735 elevators are able to achieve 38 percent daily energy savings!

Magnetek's Energy Savings Calculator was used to estimate the potential energy savings of installing Quattro® DC drives at the property and the projected savings were 99 percent accurate when compared with actual measured results.

Visit www.ElevatorDrives.com to explore Magnetek's Energy Savings Calculator.



www.elevatordrives.com

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