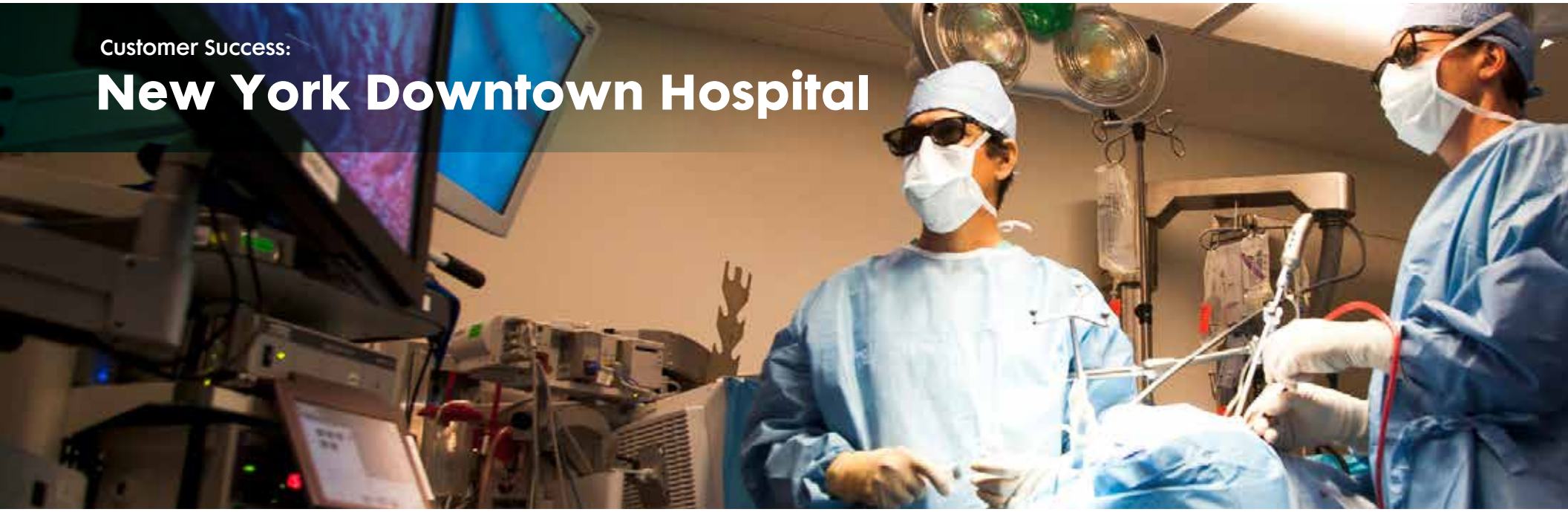
United Electric Power
Electrical/Plumbing Supplies & Services
a Power-Flo Technologies company

NEW YORK DOWNTOWN HOSPITAL

Customer Success:

New York Downtown Hospital



"Their design-build expertise saved us thousands of dollars"

Joe Botta
Facilities Director
New York Downtown Hospital

OBJECTIVES

- Replace aging BAC towers
- No service disruptions during project
- Deliver energy and maintenance cost savings

SOLUTION

- Custom-designed system retrofit
- In-place installation without dismantling existing towers
- Variable frequency drives with custom fabricated controls

RESULT

- Huge cost savings on entire project
- No service disruptions or street closures
- BMS integration yields tremendous energy cost savings

Hailed as one of America's best hospitals, New York Downtown Hospital (NYDH)* is the closest acute care hospital to the 600,000 people who live and work in downtown New York City.

With the only emergency department in lower Manhattan, NYDH treats more than 32,000 emergency patients and provides over 5,000 ambulance trips every year. Annually the hospital hosts 146,000 outpatient visits, 10,000 inpatients, and 2,400 new births.

NYDH is a busy, vital, 24x7 nonstop operation.

When the hospital's aging BAC towers needed to be replaced in the middle of peak cooling season, Facilities Director Joe Botta called on United Electric Power (UEP), a Power-Flo Technologies company.

* Following a 2013 merger, New York Downtown Hospital was renamed New York-Presbyterian/Lower Manhattan Hospital.

An Impossible Job?

NYDH had three BAC towers situated atop a 15-story building. Over twenty years old, they had 75 HP high speed and 25 HP low speed motors that were failing with increased frequency.

The towers were installed back to back, leaving no room for proper servicing of the louvers, which were rotting and fouling the pump intake. The central unit could not be serviced at all due to its 12-foot louvers.

Replacing all three units would require closing streets and a construction crane to lift new units to the roof. The cost would be very high, but there seemed to be no alternative.

A Creative Design

"That's when we asked UEP to take on the challenge," said Joe Botta, Facilities Director at NYDH. "They came in with a fresh approach that not only worked, but also saved us thousands of dollars."

"We designed a way to rebuild the towers in place," said Jerry DiCunzolo, CEO of UEP. "We replaced all the louvers, swapped out the high-speed and low-speed motors with a single variable frequency drive (VFD), and supplied new shafts as well as main fan and inverter duty motors."

UEP developed a custom former that recreated the shape of the louvers in 4-foot lengths, which solved the service access problem. UEP's UL-certified shop fabricated new controls, which fit into the existing back-plate.

Old parts were rigged down from the roof and new equipment installed, with two units operating at all times.

UEP fitted the VFDs with communication cards that enable NYDH's Siemens building management system to modulate the speed of the fans.

The towers are now controlled by demand and operate at the lowest settings needed to satisfy building requirements, which means far lower energy costs for NYDH.

Success and Savings

"We installed the new system without interrupting service," said DiCunzolo. "The alternative approach required significant downtime and scheduling problems.

"Our louver design enabled us to install the new system without completely dismantling the old one. We delivered additional savings by retrofitting the enclosures in our fabrication shop. The VFDs we installed are energy efficient and easy to maintain.

"This project shows what is special about UEP. We take on difficult challenges. We manage entire projects, and our solutions save both time and money over alternative approaches."

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