

UNIVERSITY OF MARYLAND

CASE STUDY



THE PROBLEM

The School of Architecture at the University of Maryland (UMD) needed a solution to improve both comfort and performance. The original 1972 design employed a constant chilled water flow strategy, with variable supply water temperature control from the local chiller to serve the building's air handlers. In the 1990's, the building was connected to a campus chilled water loop via a plate and frame heat exchanger. Even with a constant building supply water temperature and variable frequency drives attempting to match building flow to the actual load, the building still struggled with delta T well below the 12°F design.

THE SOLUTION

At the time, Director of Facilities John Vucci was tasked with finding a solution to restore performance. This was shortly after Paul Skoglund and Flow Control Industries had introduced a new technology to the industry: the pressure independent DeltaPValve. When Vucci and Skoglund met at an International District Energy Conference, Skoglund's confidence in the new DeltaPValve emboldened him to provide two DeltaPValves for free. If the valves provided the desired improvement on two of the building's four air handlers, UMD would purchase the valves and continue the retrofit. If they didn't work, Flow Control's reputation would be on the line.

FAST FACTS

LOCATION

College Park, Maryland

INDUSTRY

Higher education

CAMPUS SIZE

~40,000 students

DELTAPVALVES

400+ installed

CASE STUDY



THE RESULTS

The UMD staff installed both DeltaPValves in the Architecture building and saw an immediate improvement. They could serve the load with less flow, reducing the demand on the central plant. With their buildings expected to last institutionally for up to 50+ years, this initial performance improvement led UMD to standardize on the DeltaPValve going forward. As 75% of the buildings are already 30+ years old, UMD has also found DeltaPValves are an effective solution when upgrading their systems and integrating them into the 12 central cooling plant connections throughout the campus.

Since the initial trial, over 400 additional DeltaPValves have been installed at the University of Maryland, serving labs, classrooms, and student residence halls. Delivering precise control, DeltaPValves have helped UMD to maximize the existing infrastructure and still reduce comfort complaints in a continually growing and changing campus.

"If there's a problem with control, it's not the system -- it's the valve.

We fixed that with DeltaPValves."

- John Vucci, Director of Facilities @ University of Maryland

ABOUT FLOW CONTROL INDUSTRIES, INC

Flow Control Industries, Inc. is a specialty manufacturer of high-performance pressure independent control valves. The DeltaPValve®, FCI's flagship product, was developed by founder and Chairman Paul Skoglund, P.E. over 20 years ago.

Since the release of the first DeltaPValve®, FCI's team of world class engineers has worked to improve its design, efficiency and overall effectiveness. This focus and dedication has propelled the DeltaPValve® to the top of the industry, being the only variable flow hydronic system that GUARANTEES ΔT . DeltaPValves are used in projects all over the world and are consistently saving customers millions of dollars in first costs, operating costs and deferred capital costs.

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