

## INDUSTRY

Governmental / Health Care - Education Sector

## PROJECT NAME

Drexel University - Equus - Tower Health  
College of Medicine

## OWNER

Equus Capital Partners

## LOCATION

50 Innovation Way, Wyomissing, PA, 19610, USA

## CONSULTING ENGINEER

AKF Engineers

## CONTRACTOR

Worth & Company, Inc



Modern medical education technology is integrated throughout the College of Medicine campus at Tower Health, fostering collaboration with its well-designed lecture halls, classrooms, and communal spaces across multiple stories.

## PROJECT SUMMARY

Situated at 50 Innovation Way, Wyomissing, PA, Drexel University College of Medicine at Tower Health was constructed in 2021 by Equus Capital. This cutting-edge, 178,000-square-foot, six-story academic building serves as a regional campus accommodating over 1,100 medical students.

Local sales representative, Energy Transfer Solutions (ETS), in collaboration with AKF Engineers, spearheaded the design of a sizable custom rooftop air handling unit with a total capacity of 210,000 CFM for the new campus. The unit included a service vestibule designated for housing electrical equipment and piping specialties. The fan motors are outfitted with Ingénia's most efficient EC technology, complemented by their advanced touch-screen airflow monitoring system.

## TECHNICAL CHALLENGES

Thorough coordination with 3D models proved crucial for prefabricating all pipe supports and floor reinforcements, and for designing space for major mechanical equipment prior to unit installation. Planning guaranteed that field installation wouldn't disrupt other equipment.

The airflow tunnels were linked through a shared vestibule, extending into a larger plenum designated as a mechanical room by the customer. Field testing of both tunnels was performed at the factory.

The supply fan arrays were configured with 30 supply fans and 16 return fans per air tunnel, ensuring minimal cabinet size while optimizing airflow redundancy.

## SOLUTIONS OFFERED BY INGÉNIA

We conceptualized, engineered, and delivered Ingénia's top-tier AHU, featuring a lightweight, corrosion-resistant aluminum construction cabinet with exceptional Indoor Air Quality (I.A.Q.) features.

## SOLUTIONS OFFERED BY INGÉNIA

The contractor handled the installation of mechanical equipment, piping, and electrical accessories in the field. We ensured precise sizing and fabrication of the unit piping based on our 3D models and Revit drawings. Ingénia's virtual modeling technology expedited design coordination, significantly reducing time and effort required for field equipment installation in the service vestibule and mechanical compartment.

Experienced field technicians conducted the assembly of the unit and executed field leakage testing witnessed by the customer, surpassing the specified requirement of 1% leakage at 10" w.g. pressure. The resulting leakage was below 0.5% of the design airflow.

The unit was equipped with large EC fan arrays, comprising a total of 60 supply fans and 32 return fans, controlled by Ingénia's Fan Array Touch Screen Control Panels with BAS communication. These panels facilitate effortless monitoring and adjustments of fan control settings, while also displaying system status and airflow, and detecting and advising on any system faults.

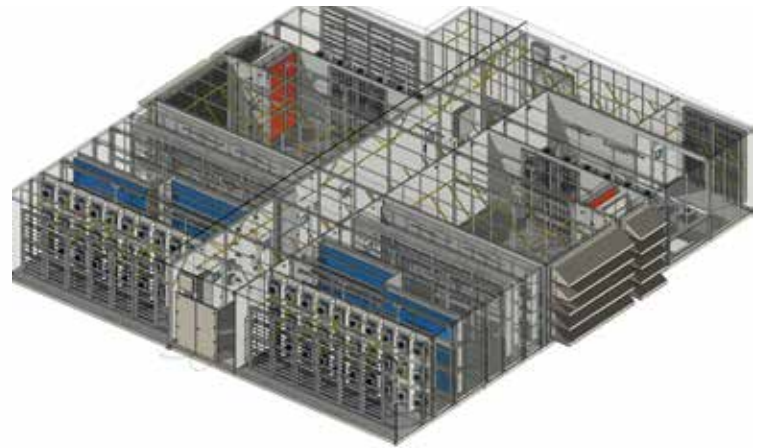
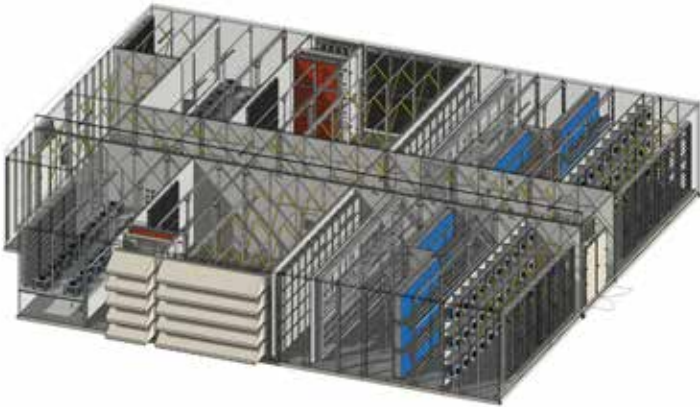
Additionally, Ingénia's team designed and fabricated custom exterior Z-brackets to facilitate the field installation of screen walls on all four sides of the units, enhancing the building's architectural design as per the customer's request.

## CONCLUSION

In conclusion, Ingénia's comprehensive solutions provide a complete approach to addressing the complexities of HVAC system design and installation. By integrating innovative design features, meticulous planning, advanced technology, and a commitment to quality assurance, Ingénia has not only delivered a top-tier Air Handling Unit (AHU) but also streamlined the installation process, ensured superior performance, and enhanced the overall functionality of the system.

The successful completion of field leakage testing, the integration of advanced control systems, and the delivery of custom solutions tailored to the customer's needs all underscore Ingénia's dedication to delivering exceptional products and services that exceed expectations, contributing to the efficiency and sustainability of building infrastructure.

## RENDERINGS



## FINAL RESULTS

