

PUBLIC STORAGE SELF-STORAGE FACILITY BRONX, NEW YORK

KEY PARAMETERS

- Type of Facility – Existing Building (EB)
- Function – Storage / Warehouse
- Area – 12-story, 410,036 sf
- Project Completed – 2013

Challenge: Energy efficiency, sustainability, and low ongoing maintenance costs. Public Storage owns and operates over 2,200 self-storage facilities around the world representing 143 million rentable square feet. The Bronx facility, serving the metropolitan New York City area, is the company's largest facility with over 4,000 conditioned units.



The cost of electricity represents the company's single largest utility expenditure. As such, the company embraces sustainable practices that minimize electrical consumption including use of efficient on-demand lighting, energy efficient HVAC systems, and high performance building envelopes.



Solution: Dynamic V8 Air Cleaning Systems were used in conjunction with Variable Refrigerant Volume (VRV) split systems.

Results: Designers determined that the low static pressure resistance of the Dynamic V8 would cut ongoing HVAC fan energy costs by 1/3 while MERV 13-15+ filtration would protect the building's contents from the potentially harmful ultrafine

airborne contaminants inherent in urban environments. The Dynamic AirQ™ air quality analysis tool further indicated that energy cost savings could be almost doubled by reducing outdoor ventilation air within ASHRAE guidelines.

With typical filter service intervals of several years, the Dynamic V8 far surpassed HVAC maintenance objectives -- conventional filters with MERV 13 performance would require costly service every few months.



Also of paramount importance to building owners were mechanical system space considerations. The combination of Dynamic V8s with VRV systems allowed designers to reduce HVAC system footprints, thereby increasing the amount of rentable floor space.

TEAM

- Owner – Public Storage
- Architects – TAO Architecture + Design
- Engineers – Summit Engineers, Inc.
- Facility Management – Public Storage

MECHANICAL SYSTEMS

- HVAC – Daikin

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