

# POWER LOFT DATA CENTER MANASSAS, VIRGINIA

## KEY PARAMETERS

- Type of Facility – New Construction
- Function – Data Center
- Area – 2-story, 225,000 sf
- Project Completed – 2010

**Challenge:** Energy efficiency and highest indoor air quality. Power Loft specializes in the development and ownership of high-density, high-security data centers to accommodate the latest in IT equipment while allowing tenants the ability to take advantage of industry-leading energy efficiencies. The data center design places power and chiller plants on the lower level, delivering cold air through the ceiling into a 4-foot-high under-floor plenum on the upper level. Hot air exiting the top of the server pods is returned to the lower floor through channels along the side of the building. Louvers on the side of the building façade allow fresh air cooling for part of the year. Indoor and outdoor air must be free of any ultrafine particle contaminants.



**Solution:** Dynamic V8 Air Cleaning Systems (no pre-filters) were installed in the air handling units (pictured above).

**Results:** Dynamic delivered on air quality. Filtration levels have exceeded MERV 15, rivaling that of HEPA filters.

The air cleaners also delivered on fan energy savings which helped contribute to the facility's LEED Silver Certification. The center's energy efficient design enables it to handle three times

the computing power of a typical legacy data center, while using about 30% less energy. The center was also recognized as winner of the 2009 Northern Virginia Technology Council Green Award, designed to honor area companies for their work towards carbon footprint abatement, energy efficiencies, and renewable power use, among other criteria.



Mechanical system features include eight 1800 ton chillers with cooling towers, air handlers supplying 2,700,000 CFM and water and air side economization. For more information, visit [http://www.youtube.com/watch?v=Vijl1p0Xn34&feature=player\\_embedded](http://www.youtube.com/watch?v=Vijl1p0Xn34&feature=player_embedded)

## TEAM

- Owner – Power Loft LLC
- Architects – Owings & Merrill
- Engineers – EYP Mission Critical Systems
- General Contractor – Clark Construction
- Facility Manager – Mike Sproesser

## MECHANICAL SYSTEMS

- HVAC – Trane

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