



POWERING INDUSTRIAL DECARBONIZATION WITH THE WORLD'S LARGEST OIL-FREE MAGNETIC BEARING CHILLERS

LOCATION:
EASTMAN BUSINESS PARK (EBP),
ROCHESTER, NY, USA

SALES PARTNER:
H&V SALES GROUP

The Eastman Business Park (EBP) is one of North America's largest industrial research and manufacturing campuses, spanning more than 1,200 acres and over 16 million square feet. Home to nearly 110 companies and more than 6,000 employees, the campus depends on a highly reliable district utility network to support advanced manufacturing, energy storage, and photonics technologies.

RED-Rochester, LLC owns and operates the park's extensive utility infrastructure, managing 16 separate utility services, including its critical district cooling system.



CHALLENGE:

HIGH CAPACITY, HIGHER DEMANDS

As EBP continued to attract new industrial tenants and expand its manufacturing capabilities, RED-Rochester needed to modernize and grow its district cooling infrastructure while advancing its long-term decarbonization strategy.

The solution required:

- Extremely large-capacity chillers capable of supporting dynamic industrial cooling loads.
- Industry-leading energy efficiency to reduce operating costs and carbon emissions.
- High reliability with built-in redundancy to ensure uninterrupted cooling for critical manufacturing operations.
- Customized equipment designs that could integrate into an existing utility plant with minimal disruption.

Conventional chiller manufacturers could not meet the required cooling capacity in a single machine, resulting in larger footprints, more complex installations, and higher lifecycle costs.

SOLUTION:

Smartd partnered with RED-Rochester through a multi-phase modernization program, delivering progressively larger oil-free magnetic bearing water-cooled chillers as the district cooling network expanded.

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2019
SMARTD ULTRA WATER-COOLED CHILLER 2000 TR

Where competing manufacturers were capped at roughly 1,000 TR per machine, Smartd delivered a single 2,000 TR unit. This eliminated the need for a second machine, thus reducing floor space, piping requirements, and installation costs.

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2020
SMARTD ULTRA WATER-COOLED CHILLER 3200 TR

Building on proven performance, Smartd was awarded the next phase without competitive bidding, expanding capacity and reinforcing long-term trust.

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2024
SMARTD ULTRA WATER-COOLED CHILLER 3600 TR

A custom-engineered, water-cooled chiller with multiple independent Danfoss Turbocor compressors providing built-in redundancy and uninterrupted cooling.

THE WORLD'S LARGEST MAGNETIC BEARING CHILLER

- **World-leading capacity:** Delivered the world's largest oil-free magnetic bearing chiller at 3,600 TR to support the growing EBP campus.
- **Superior reliability:** Purpose-built with multiple independent Danfoss Turbocor compressors, the system delivers continuous operation through built-in redundancy, ensuring maximum up time for mission-critical manufacturing. Its customized retrofit design improves equipment accessibility and simplifies maintenance, reducing service effort while enhancing long-term operational performance.
- **Customized for performance:** Working closely with RED-Rochester and H&V Sales Group, the equipment layout was personalized to simplify installation and maintenance. The final design featured an optimized footprint, accessible service valves, bottom-fed electrical conduits, and elevated steel rail supports that improve technician access and reduce maintenance time.

BENEFITS:

