Siemens **Demand Flow®**

Unlock unparalleled efficiency in your chilled water system

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At Siemens, we're committed to transforming your buildings into smarter, more efficient spaces without sacrificing comfort or performance. Demand Flow® is our **intelligent, powerful, proven** solution for optimizing your chilled water systems holistically, helping you achieve significant energy savings, enhanced operational efficiency, and extended equipment life.

In its more than 650 successful global installations, Demand Flow delivers remarkable results in all types of buildings, including commercial offices, hospitals, data centers, and universities.

Maximize the performance of your chilled water system

Demand Flow is Siemens' patented and proven chiller plant system optimization technology. It optimizes all energy-consuming components controlled by system algorithms. It uses Siemens Variable Pressure Curve Logic (VPCL) enabled by variable speed drives on all chilled water pumps, condenser water pumps, and cooling tower fans to optimize system operation and achieve maximum energy savings without sacrificing building comfort.

Demand Flow can be retrofitted on any BACnet-compatible building automation system without disrupting day-to-day business, requiring automation equipment upgrades or other significant changes to the existing system.

Key benefits of Demand Flow chilled water optimization

With Demand Flow, achieving operational efficiency while maintaining comfort and reliability is within your reach.

Significant energy savings

Demand Flow chilled water optimization offers an impressive reduction in energy consumption—typically between 20% and 50%. By employing advanced variable speed pumping for chilled water and condenser water pumps and operating variable speed cooling tower fans.

Demand Flow optimizes your entire system without the need for expensive chiller drive options. The result is a measurable total system performance as low as 0.33 kW/ton, allowing for considerable cost savings on energy bills.

Enhanced equipment life and reliability

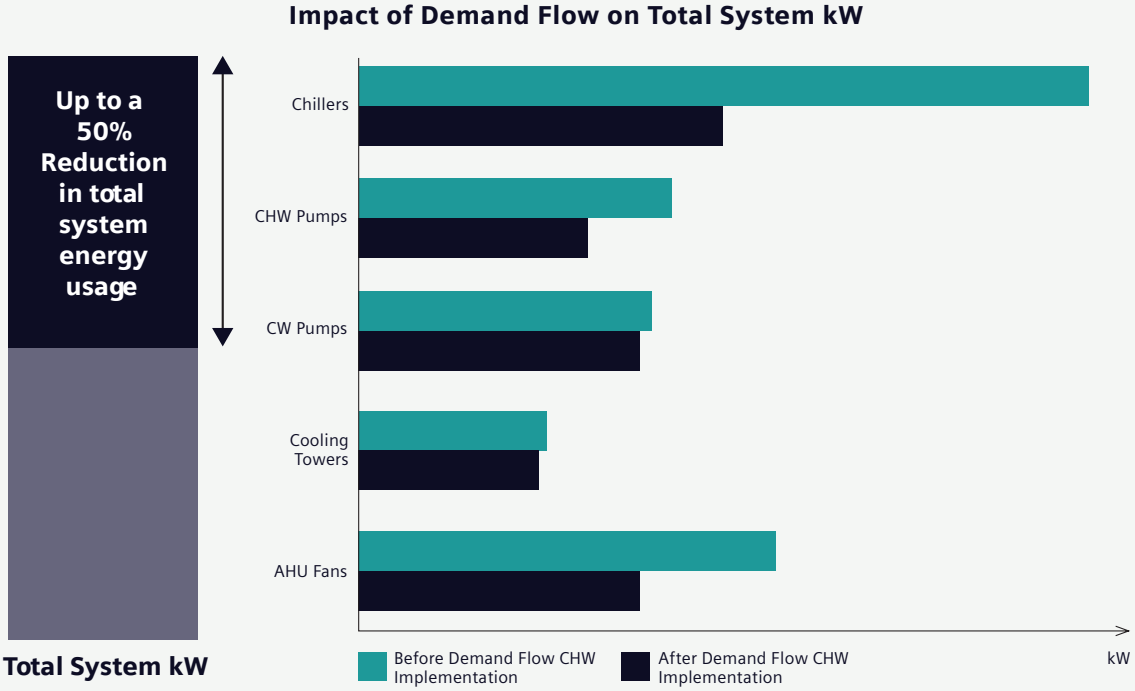
Our patented technology reduces wear and tear on your equipment, extending its useful life. Demand Flow minimizes runtime, reduces chiller start/stops, and simplifies system operations, leading to improved equipment uptime and reliability.

Optimized sequencing of chillers, pumps, and fans helps ensure that your system operates efficiently year-round, regardless of the load, reducing maintenance requirements and the risk of unexpected downtime and catastrophic equipment failure.

Improved occupant comfort

Maintaining a comfortable indoor environment is crucial for occupant satisfaction and productivity. Demand Flow helps you achieve this by solving common issues like "Low Delta-T Syndrome," which often leads to reduced cooling capacity.

Demand Flow enhances temperature and humidity control by delivering colder chilled water year-round, contributing to a more productive and comfortable indoor climate. This combination improves occupant satisfaction and supports your energy and sustainability goals.



Overcoming operational shortcomings

Your chillers can account for more than 50% of your facility's electricity use; worse, a poorly maintained chiller may consume 30% more energy than necessary.

In fact, many chilled water systems in commercial buildings operate far below their peak efficiency, often due to flawed system design, deferred maintenance, and inefficient operations. These issues not only waste energy but also reduce equipment life and comfort. Demand Flow® addresses these challenges head-on by optimizing system performance without requiring new equipment investments.

Overdriven chillers	Deferred maintenance	Changing weather trends
It is common for chillers to be overdriven by increasing the rate of chilled water flow in an attempt to overcome flawed system design and poor maintenance practices.	Facilities departments frequently ignore or defer equipment maintenance while also overlooking the importance of system sub-components and their effect on overall performance and life expectancy.	Globally, we face increasingly unpredictable weather patterns, creating further stress on your cooling and heating systems and ratcheting electricity peak charges. Overworked systems can fail unexpectedly, causing potentially significant business interruption and downtime.

The hidden costs of productivity and performance

Buildings that are not reliably comfortable or have poor indoor air quality can directly affect employee productivity. Optimizing comfort systems can help improve each occupant's productivity by as much as $1,000 per year while still achieving energy-saving objectives.

Why choose Demand Flow?

Proven Results: With decades of experience and hundreds of installations globally, Siemens Demand Flow® is a reliable, field-tested solution for improving chilled water system performance.

No Hidden Costs: Because Siemens owns this technology, there are no additional licensing fees—just consistent, predictable savings.

Holistic Approach: Demand Flow optimizes the entire system, including chillers, pumps, cooling towers, and air-handling units, ensuring comprehensive energy savings without shifting energy use between subsystems.

Cloud-based Digital Twin: Demand Flow goes beyond traditional rules-based analytics by automatically evaluating actual system performance with a bespoke Digital Twin of your chilled water system. This approach provides greater actionable insights leading to optimal performance.

Persistent Efficiency Gains: With Demand Flow Smart Services, our energy experts regularly monitor system performance compared to the Digital Twin using advanced analytic tools. We can quickly identify and resolve operational issues that might otherwise reduce your ROI.

BAS Agnostic: Demand Flow works with your existing BACnet-capable Building Automation System, regardless of the equipment provider.

Improved Central Plant Resiliency: Demand Flow helps your organization deal with hotter summers by ensuring your system delivers that maximum cooling available, potentially delaying or avoiding expensive capital upgrades for new capacity.

Meet the entire **Demand Flow technology family**

Demand Flow®

Optimize your entire HVAC operation. Create your central plant digital twin, upgrade chilled water system equipment, and deploy optimized PPCL sequences.

Demand Flow® Refresh

Refresh your existing Demand Flow optimization project, including the creation of your digital twin, upgraded sequencing, and calibration of sensors as needed.

Demand Flow® Smart Services

Periodically run your digital twin simulation to assess and analyze current performance and identify additional energy efficiency improvements.

Demand Flow® Ready

Planning a new construction or retrofit project? Save money by preparing for an upcoming Demand Flow project with the addition of high-grade sensors for chillers and other central plant equipment up front, avoiding expensive rework.

Based on our decades of experience with hundreds of optimization programs around the globe, Demand Flow often delivers sufficient savings to offset implementation costs in about three years, and annual energy savings between 20% and 50% are typically achieved.

Take the next step today

Your journey to smarter, more efficient building operations starts with Demand Flow. Transform your facility's chilled water system, reduce energy consumption, improve comfort, and extend the life of your equipment—all with a solution that pays for itself in just a few years.

Contact us today to learn how Demand Flow can optimize your building's performance. Learn more at **usa.siemens.com/demandflow**.

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