Siemens Demand Flow™ is a patent-pending, proven variable pressure curve technology that optimizes central chilled water systems to reduce a plant’s total energy consumption by 20%-50%.

Powerful solution
Our proven technology is specifically designed for centrifugal and screw-type chilled water systems. Through a growing number of implementations across the United States, Demand Flow has been improving central plant performance, yielding energy savings as high as 50% with measured total plant performance as low as 0.33 kw/ton. Demand Flow is chiller agnostic; it is not brand specific to any one chiller manufacturer and can be implemented without voiding equipment warranties.

Proven results
Demand Flow offers a holistic approach for optimizing an entire chilled water system, including potential air-side savings. Our system:

• Increases the deliverable tonnage of the chilled water plant
• Simplifies plant operations without sacrificing occupant comfort in favor of energy savings
• Allows the central chilled water plant to more accurately maintain optimal differential system pressure

The Demand Flow Controller’s specialized algorithms can deliver chilled water system efficiencies to any existing building automation system.

Savings areas
Demand Flow typically achieves savings in five major areas of a chilled water system:

• Cooling towers
• Condenser pumps
• Chillers
• Chilled water pumps
• Air handling units

The Demand Flow algorithms also assure that energy is not shifted from one plant sub-system to another, as in some other energy conservation routines. Demand Flow measures and verifies the total chilled water plant energy usage, including each subsystem, to provide an accurate report of total energy usage before and after implementation.

Uncompromised performance
Safety and comfort are not sacrificed in achieving Demand Flow energy savings. The hierarchy of operational benefits related to Demand Flow is:

1) Safety of personnel and equipment
2) Comfort of occupants
3) Energy savings

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Variable Pressure Curve Technology
Demand Flow manages your chiller plant with specialized control algorithms. These algorithms require the conversion of constant speed condenser pumps, chilled water pumps, and cooling tower fans to variable speed through the installation of Variable Frequency Drives (VFDs). The VFDs allow the Demand Flow algorithms to maintain optimal differential system pressure, reduce excessive pumping energy, reduce equipment runtime and increase system deliverable tonnage on systems suffering from a diminished refrigeration effect. Demand Flow does not require costly VFDs on chiller compressor motors.

The Demand Flow Controller automatically optimizes all plant functions. Typically, system access to Demand Flow is available through a unique Graphical User Interface (GUI). Siemens Web-Based EMC software enables chiller plant system performance monitoring from anywhere in the world via the Internet. EMC is responsible for data accumulation, reporting energy profiles, and detailing equipment operating parameters.

Demand Flow is an elegantly simple but powerful solution to optimize your chilled water plant performance.

Demand Flow. Powerful Solution. Proven Results.