

# **Commercial** Modular Utility Solutions

Office buildings, retail spaces, multi-tenant buildings, airports, defense facilities, research facilities, stadiums, arenas, casinos, hotels...Systecon has experience providing solutions to satisfy the unique needs of all these various building types and more. Ice storage, chilled water storage and other shared central systems can be implemented to handle diverse loads and Systecon's VariPrime® pumping and controls can provide temperature control while lowering operating costs. Plus, Systecon's performance testing means you can use guaranteed efficiencies as a specification item, secure equal bids and then witness test the system to ensure performance prior to shipping and installation.

## Proven Success Modular Boiler Plant

**Challenges** - Site accessibility and space constraints that come with an existing, multi-story building in an urban setting. Time constraints for installation due to costs and regulations associated with procuring the necessary large equipment.

**Systecon Solutions** - A custom designed system that combined the boiler plant and chilled water in one space to occupy the smallest footprint possible. Outdoor application with enclosure for rooftop location. The factory-built, modular system allowed for a scheduled delivery date and quick installation which was completed over a weekend.

## Hot Water System

Total Flow: 288 GPM Total Capacity: 2,886 MBH output Fluid: Water

Cooling Water System Total Flow: 2,100 GPM Fluid: Water

**Mechanical** - Chillers, pumps, pipe, strainers, valves, flex connector, air separator, expansion tank, make-up water, side stream mechanical filtration, (chemical treatment equipment provided and installed by others)

**BAS Interface** - Protocol: BACnet Type: MSTP **Boiler Interface** - Protocol: BACnet Type: RTU



Madison Realty, New York, NY

Outdoor application with enclosure - rooftop installation



## Modular Condenser Water System

**Challenges** – Very limited space to house all the needed system equipment.

**Systecon Solutions** – The project team worked with Systecon on previous projects and sought to work with us on this job because of our design capabilities and ability to provide customized solutions. We were able to design a system to fit all necessary equipment in the available area and still provide space for serviceability and maintenance.

**Mechanical** - Pumps, pipe, strainers, valves, plate & frame heat exchanger, mechanical filtration, make-up water (office), chemical treatment (office), air separator (retail), expansion tank (retail), chemical shot feeder (retail), glycol feeder (retail)

### Controls -

Controller w/HMI, VFDs, fused disconnect. Wire to Water Efficiency, tower sequencing by Systecon.

BAS Interface - Protocol: BACnet Type: MSTP

#### Office

Total Flow: 2,550 GPM Fluid: Water

Non-Witnessed flow test by Systecon Inc.

Guaranteed performance

	GPM	Max kW
25%	638	9.2
50%	1275	18
75%	1912	34.4
100%	2550	73.8

Tenant Total Flow: 600 GPM1 Fluid: Water

Non-Witnessed certified pump performance test by pump mfr.

Guaranteed performance

	GPM	Max kW
25%	150	1.99
<b>50%</b>	300	3.79
75%	450	7.10
100%	600	15.25



4747 Bethesda, Bethesda, MD Mixed-use building - Office/Retail/Tenant

**Indoor application** 



Retail Total Flow: 225 GPM Fluid: 25% Ethylene Glycol

Non-Witnessed certified pump performance test by pump mfr.

Guaranteed performance

	GPM	Max kW
25%	56	0.79
<b>50%</b>	113	1.51
75%	169	2.82
100%	225	6.06

