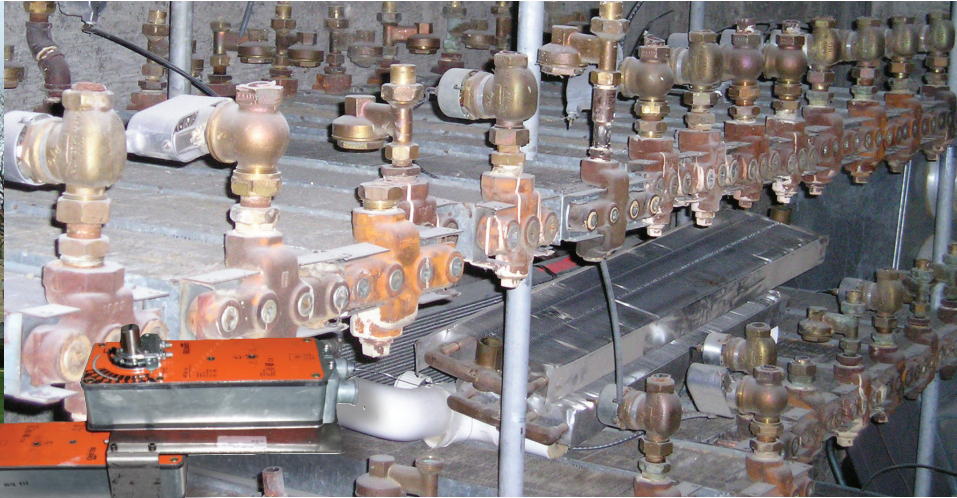


Belimo Puts the FIT in RetroFIT with Space-Saving Solutions for Assisi Heights Renovation



Those seeking comfort will find it at Assisi Heights in Rochester, Minnesota. Indoor air comfort that is, now that a comprehensive renovation of the facilities HVAC mechanical system is complete. For many years, that wasn't the case.

Until recently, the Sisters of St. Francis of Rochester, along with others who lived, worked, and taught at the historical convent, did so without air conditioning and a very outdated steam heating system. Control only existed in so far as the outdated, inefficient pneumatic actuators throughout the steam system, many of which were in disrepair. An opportunity to change all this came about in 2004 when the Mayo Clinic agreed to fund many state-of-the-art improvements at Assisi Heights in exchange for use of some classroom and education space at the facility.

Central to this laundry list of improvements was the renovation of the Sisters' residence and adjacent office and educational spaces. Control Services of Minnesota, Inc. was selected to provide and install a new Direct Digital Control system as well as rework the entire control system for the steam and new chilled water system that served these areas. Belimo AirControls, who has a long standing relationship with the Mayo Clinic, was chosen to provide valves and actuators for the new fan coils, VAVs and AHUs to be installed at Assisi.

Making It Fit

Space can be a challenge in any retrofit, especially in an older, historical building like Assisi Heights. Built in 1952 to resemble the famed Basilica of St. Francis of Assisi in Italy, the facility is a structural fortress with thick walls throughout and no vertical risers to accommodate a modern piping or control system. As a result 110 fan coil units had to be installed in the very limited space above the ceiling in the hallway of the sister's residence. Although compact in size, these units had the capability of full-size AHUs. Internal components included steam radiation valves, hot water reheat valves, and chilled water valves. With all this jammed into one 2' X 2' casing, there was no room for bulky valves or actuators. Belimo's VS and VSS Series ball valves with dual mounted on/off spring return actuators was an important space-saving strategy.

These stainless steel ball valves, designed especially for tight spaces, provide on/off (or modulating) control of hot water, chilled water and saturated steam. Because of their size, the Belimo valves allowed Control Services of Minnesota to complete installation while minimizing any structural alteration to the historical home of the Sisters of St. Francis.

"We had a very small footprint to work with," remarked Brian Ulrich, project manager for Control Services of Minnesota. "The radiation housing would not fit any other valve."

There were other advantages to using Belimo for the project—diversity of the system being one of them. Multiple outputs were required for full communication between the various valve actuators and the Andover DDC system. Control Services used 2-10 VDC, floating point and on/off control, all of which Belimo could readily provide.

While the overall renovation was challenging, selecting the valves and actuators for the project was not, said Ulrich.

"Belimo has always had a retrofit solution," added Ulrich, whose firm has been using Belimo valves and actuators for over 18 years.

Now rid of the outdated, inefficient pneumatic control system and enjoying comfortable spaces year round, the residents at Assisi Clinic can better focus on community outreach and healthcare ministries for which the Sisters of Saint Francis of Rochester are legendary.

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