case study



Empty Nesters Select Ductless HVAC Upgrade for Historic Home

In 1989, John Birmingham, Audrey Bromberger and their children moved into their home located in La Grange Park, Illinois, a suburb of Chicago. Twenty-five years later, their children no longer lived at home and the couple's sights were set on retirement. In 2013, they began updating their 5-bedroom, 3,600-square-foot space to appeal to potential homebuyers. The 1910 farmstyle construction didn't have air conditioning so one of the first updates to address was the cooling and heating system.

▶ Challenge

Select an energy-efficient HVAC system that offers zone control and immediate comfort while preserving valuable living space in a 1910 home.

The home presented unique design challenges for the project team apart from its old structure and outdated comfort system. The homeowners had converted the walk-up attic into a master suite and removed the garage in order to install a swimming pool for the family. "Every inch of the home was converted into living space," explained HVAC Contractor Greg Sutor, Sutor Heating & Cooling, Inc., Oak Park, Illinois.

John and Audrey promptly ruled out traditional HVAC solutions. Space was incredibly valuable, especially for storage, and they felt that a ducted system would impact the home's bright, open floor plan. "The only other option was to drop ceilings and put in ductwork, which we didn't want to do because then you'd lose part of the charm of the house," Audrey said. The homeowners had first noticed ductless systems from Mitsubishi Electric US Cooling & Heating Division (Mitsubishi Electric) when they were vacationing in Europe. "They were all over the place and I just thought, 'Why don't they have them in the States?" John researched the technology online and found Mitsubishi Electric's Dealer Locator website, which put him in touch with Sutor.



"Many times, there is an option to install some kind of conventional system," Sutor said. After assessing the job and taking the homeowners' needs into consideration, it was obvious to Sutor that the Mitsubishi Electric system was really the only viable option. "All other systems would have required significant remodeling and structural alterations."

The installation ended ahead of schedule, taking just three days to complete. The team installed two outdoor units, one on each side of the home, for a more efficient design. The Mitsubishi Electric systems' top, front and side panels offer easy access and installation flexibility and allowed the outdoor units to be installed discreetly under the porch and within rose bushes.

Solution

The Mitsubishi Electric ductless system provides conditioned air right at startup, quiet operation and the ability to condition rooms individually.

"Just two units were needed to condition the whole first floor and just one for the whole third floor," Sutor said. Indoor units were installed in the living room, dining room and each of the four bedrooms to give the homeowners complete control over the entire space. The zone control feature of the Mitsubishi Electric systems allows John and Audrey to turn off the indoor units in unoccupied bedrooms or areas for efficiency and quickly turn them on when family visits. "Mom is staying with us now and she likes it warmer. It's summertime so we like it colder. The ability to individually control the rooms is not only very energy efficient but very convenient," Audrey said.

La Grange Park Home

Project Location: La Grange Park, Illinois Completion Date: August 2013 Project Team

Homeowners:

John Birmingham, Audrey Bromberger

HVAC Contractor: Sutor Heating & Cooling, Inc. Oak Park, Illinois

Mitsubishi Electric Equipment Installed

(2) MXZ-4B36NA Outdoor Units
(2) MSZ-GE06NA Indoor Units
(2) MSZ-GE09NA Indoor Units
(2) MSZ-GE12NA Indoor Units
(1) MSZ-GE24NA Indoor Unit

John and Audrey also reap the benefits of the system during the bitter-cold, Midwest winters. The couple woke up one September morning and it was 54 degrees Fahrenheit downstairs. "We turned on the [Mitsubishi Electric] units and the house warmed up really quite quickly – much more quickly than turning on the furnace," Audrey said.

Perhaps the most appreciated feature for the homeowners, however, is the system's quiet operation. John and Audrey often spend the evenings sitting outside on their porch, where one of the outdoor units runs beneath them. "We can't hear a thing!" John touted.