

Efficient air-conditioning upgrades in older apartment buildings

*Owners install vertical
fan-coil units to maximize
comfort, cut costs, and
minimize tenant disruption.*



THE WHALEN COMPANY



1 Template locates center of grille openings



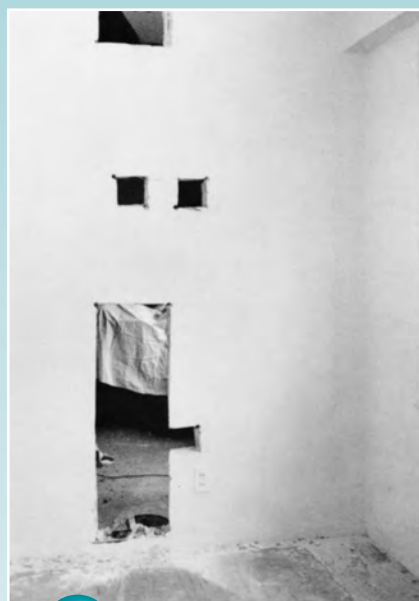
2 Measuring and marking grille width



3 Outlining return air grille opening



7 Cutting wall openings



8 Ready for Whalen unit



9 Tipping unit into place

More and more, owners of apartment complexes are facing a problem quite common with older apartment buildings. Is it time to bring these buildings up to modern standards? How much renovation and modernization will be necessary to keep an acceptable rate of occupancy? In particular, should air conditioning be installed?

Buildings of the 50s were, of course, designed with then-contemporary equipment and features of the period. However, air conditioning was a rarity then. Also, since energy was cheap, there were few energy-conservation concerns; windows were single pane and most often heating systems consisted of recessed hot-water

convectors directly under the windows.

Through the years, energy costs have escalated and other major maintenance problems have worsened. Windows in older buildings are developing water leaks and exterior brick walls show the need for refurbishing. In addition, as new air-conditioned buildings go up, competition for tenants becomes stiffer.

The costs of keeping current in the market

An apartment complex in a prestigious location can get top rental rates if the owner can attract the kind of long-term, high-quality tenant who is able to pay those rates, thus maintaining the owner's return on investment. But as the building

ages, decisions must be made as to the level of maintenance/upgrading needed to hold those tenants. Questions arise. Should the owner absorb those costs or pass them on to tenants in the form of higher rentals? In each case, what does that do to the return on investment? What degree of renovation seems necessary?

Another problem is disruption. It seems that most of the tenants of these buildings are older people, many of them women alone, who are long-term residents. How quickly can such a job be done? How can interruption to tenants' daily routines be held to a minimum?



4

Return grille opening ready to be cut



5

Core-drilling floor



6

Top of unit below visible in core hole



10

Levelling fan-coil unit



11

Joining risers to unit above



12

Electrical connections are completed

Thoughtful decisions

The decision to accomplish a major building renovation, complete with a new HVAC system, requires careful thought. Builders must be convinced such a step will prove affordable and ultimately profitable.

When a building's floor plan is repetitive, with all similar apartments stacked one above another, the choice for the air conditioning might be two-pipe vertical fan-coil units designed and manufactured by The Whalen Company. Such units are relatively easy to install with minimal inconvenience to the tenants—core the floors, stack the units, and conceal them with drywall.

Consideration of tenants

Let us describe a typical makeover as suggested by The Whalen Company. Work moves upward from the first floor. A schedule is given to all tenants so they will know when and what to expect as the work progresses in their residences. With effective coordination of necessary tradesmen, total work time in each apartment can be kept to just a few hours, helping to ensure that start-to-finish intervals are brief and that completion dates are met on schedule.

The first step is to establish in each apartment the exact location for the Whalen units. They are usually installed in the bedrooms on a bedroom/living room wall, with the return air, one cooling outlet, and thermostat located in the living area. Depending

on the apartment layout, some units may be installed in the living room.

Cutting and drilling of interior surfaces

To facilitate the location and cutting of necessary wall openings, the installing contractor may choose to develop some basic templates. A water-cooled core drill is used to drill through concrete floors. The water also helps keep down dust and is picked up by a large shop vac. A worker in the apartment below catches the plug and any water as the coring is finished. The core hole, if large enough, will be used not only to connect the piping from one unit to another but also to accommodate the electrical conduit and a master TV cable.



13 Unit ready for gypsum board



14 Applying "drywall" gypsum board



15 Ready for drywall spackle



16 Wall openings are patched



17 A final coat of paint



Installation completed

Placing, piping, and connecting

After wall openings are cut and floors cored, a vertical fan-coil unit is lifted into position, and the three piping connections are then made to the unit in the apartment directly underneath. Each is carefully plumbed so that the drywall installers will have minimal cutting to do. After the riser piping joints are sweated and the electrical connections made, the remaining space in the core hold is insulated to meet local fire code requirements.

Finished neatly and efficiently

Whalen units are normally finished with just two pieces of drywall, cut to size in

the hallways to keep dirt out of the apartments. Then painters, matching individual apartment colors, move in to finish the job.

The basic but highly effective 2-pipe heating/cooling unit offers simplistic operating characteristics: energy efficient PSC motor, preferred fan cycle control, low maintenance, and no troublesome motorized valves.

Update accomplished

The use of Whalen vertical fan-coil units enables the installation of a heating and cooling system at low cost with quick installation time and minimal disruption to the residents. With the help of this

product, previously outdated buildings are brought up to standard and able to sustain an improved occupancy rate.



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