

Tenant Comfort and Confirmed 20% Lower HVAC Maintenance Costs— A Developer's Dream

Almost No Comfort Complaints to Follow Up with Therma-Fuser™ VAV

GREENSBORO, North Carolina—Koury Corporation's Vice President of Facilities Management, Gene Greer, wanted to keep Koury's tenants comfortable and also reduce service calls. When he first tried Therma-Fuser™ VAV diffusers he found that they were the comfort solution. After using them in several buildings he also found that they drastically reduce service calls. Now his data for the last three years confirms lower HVAC maintenance costs of more than 20% for a building with Therma-Fuser VAV over a similar building with part constant volume and part VAV box systems.

Koury Corporation, Greensboro, NC, is a locally owned real estate development and management company. They began developing commercial real estate in 1960 and now own and manage more than 1,300,000 square feet of office and industrial properties in the Greensboro area. They are a full integrated real estate construction and management organization with over 1400 employees in architectural, engineering, construction, and facilities management. Koury has both office

and industrial properties. Tenants include names like Bellsouth, AT&T Wireless, Coca-Cola, Dover Elevator, Dun & Bradstreet and Serta.

Gene Greer, Vice President of Koury Corporation, joined Koury in 1973 and was promoted to operations manager for the Four Seasons Mall in 1977. In 1982 he became a Vice President of Koury Corporation and in 1988, he started a new division, Facilities Management. The Facilities Management Division is responsible for the maintenance of all Koury properties with the primary goal of reducing operating costs. Methods for lower costs include group purchasing for all buildings and writing new building specifications to simplify maintenance by standardizing on the same products in every property.

“With Therma-Fuser diffusers, we can keep all of our tenants happy and give them individual control.”

SOLVING THE TENANT COMFORT PROBLEM

During 1990, Koury was having problems in a 90,000 sq. ft. office building with a major tenant. One thermostat controlled a VAV box for five offices and as a result only one person was comfortable at time. “I read about Therma-Fuser diffusers and decided to try them in one area”, Gene says. “They worked, and I was convinced that Therma-Fuser VAV is the comfort solution.”

Comfortable tenants are important to the goal of low operating costs. When tenants are not comfortable the maintenance staff must spend time resolving their complaints. Therma-Fuser diffusers provide comfort because each is a zone of temperature control with a built in thermostat and damper to vary incoming air flow. Comfort is further enhanced by the even temperature distribution and room air movement due to the almost constant discharge velocity of the Therma-Fuser diffusers. Maintenance for repair and recalibration is also eliminated due to the durability and dependability of the aerospace wax motor thermostat/actuator.

When Gene decided to use Therma-Fuser VAV in other buildings, he still had to convince Koury's engineers and contractors. They had no experience with Therma-Fuser diffusers and a typical claim was “They do not work.” However, Gene knew they worked because he had tried them. Next was the claim that Therma-Fuser diffusers

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GRANDOVER OFFICE BUILDING—20% lower maintenance costs with all Therma-Fuser VAV.



cost much more than standard air diffusers. However, when an actual first cost comparison was made it was clear that the installed cost of Therma-Fuser VAV was comparable to conventional VAV. Gene says, "I had to be very persistent with our engineers and contractors to get Therma-Fuser diffusers installed." The result is that eight Class A office buildings with a total of 443,465 sq. ft. are now conditioned with over 1000 Therma-Fuser diffusers.

Gene was delighted when the model EF Interoperable Therma-Fuser diffuser was introduced in 2000. It ties in with his building management system and allows his maintenance staff to monitor and reset the temperature without going into the room. He started using model EF Therma-Fuser diffusers right away and now has almost 200 installed in two buildings, totaling 77,964 sq. ft. Gene says, "With Therma-Fuser diffusers we can keep all of our tenants happy and give them individual control. And with the new EF units, a happy tenant is a phone call away!"

REDUCING COMPLAINTS LOWERS HVAC MAINTENANCE

According to Gene, Koury's major complaints have always been comfort with the HVAC and roof leaks. Therma-Fuser VAV hasn't resolved any roof leaks but it has reduced HVAC



Gene Greer, V.P., of Koury Corporation

"In three years we have had a grand total of three calls regarding Therma-Fuser diffusers."

complaints. "In two years we have had a grand total of three calls regarding Therma-Fuser diffusers", Gene says, "Other systems? Let's not talk about them."

Actual data taken over the past three years shows over 20% lower HVAC maintenance costs for a Therma-Fuser VAV building compared to a building with part constant volume and part VAV boxes. Gene collected and compared data from two Greensboro office buildings which are almost the

same size. The Brookhollow Plaza building has 91,000 sq. ft. on 4 1/2 floors with air distribution that is part constant volume and part VAV boxes. The 84,000 sq. ft. 3 floor Grandover Office Building is an all Therma-Fuser VAV building. Table A compares costs per square foot for both HVAC maintenance and electricity.

HVAC maintenance costs for the Grandover Office Building with Therma-Fuser VAV were 26% lower in 2002, 21% lower in 2003 and 22% in 2004. Electric utility costs for the same all Therma-Fuser VAV building were also lower in each year.

Even though the lower operating costs of Therma-Fuser VAV are impressive, Gene emphasizes that the comfort they provide is still most important. He says "We all have to make money. That is the name of the game. But if we do not have tenants, low operating cost won't help!"

Table A

Comparative Analysis

<i>Brookhollow Plaza</i> Part CAV and part VAV	<i>Grandover Office Building</i> All Therma-Fuser VAV
HVAV Maint Cost	HVAV Maint Cost
2002 - \$0.42/sf	2002 - \$0.31/sf
2003 - \$0.43/sf	2003 - \$0.34/sf
2004 - \$0.45/sf	2004 - \$0.35/sf
Total Elect. Cost	Total Elect. Cost
2002 - \$ 1.97/sf	2002 - \$1.06/sf
2003 - \$1.95/sf	2003 - \$1.03/sf
2004 - \$2.04/sf	2004 - \$1.06/sf



BROOK HOLLOW PLAZA—Part CAV and part VAV.



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