



For Immediate Release

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NEW STUDY DISPELS MYTH THAT LEAKS IN INTERIOR DUCTWORK

DO NOT CONTRIBUTE TO HOME ENERGY LOSS

Study Shows That Sealing Ducts Located In Conditioned Space Saved Up to 16% of Energy and Reduced Overall Home Envelope Leakage By More Than 11%.

CENTERVILLE, OH –February 26, 2018 – Comfort Institute today released finding from a new study that indicates leaks in ductwork located in conditioned space can have a significant impact on energy savings. The study, conducted by Comfort Institute in combination with the Greater Cincinnati Energy Alliance (GCEA), showed that the amount of conditioned air seeping through the building envelope and escaping to the outside of the home was reduced by an average of 11.4% after the ducts were effectively sealed. Energy modeling conducted by the Greater Cincinnati Energy Alliance showed an average total heating and cooling cost of \$2,010 per year, with \$202 per year in savings or a 10% reduction in energy costs.



The aerosol sealant locates and seals leaks throughout the air distribution system.

“We now have some initial data which contradicts the common opinion that duct sealing only saves energy if the leaky ducts are located in unconditioned spaces,” said Rob McCracken, Director of Operations for GCEA. “We can begin to see that, based on individual home situations, homes with duct systems located inside the house can see a reduction in energy consumption between 5 percent to 15 percent.”

“There is an erroneous belief among many building professionals that leaks within ductwork located inside the home, have little effect on overall energy use,” said Comfort Institute co-founder Brendan Reid. “Earlier studies only addressed the impact of sealing duct leaks which were readily accessible for hand sealing – those in unfinished basements. What those studies neglected to evaluate was the impact of sealing the hidden, inaccessible duct leaks – which routinely do leak to outside.”

In the joint study, 11 Cincinnati-area homes with duct systems located inside the thermal boundary had their ducts sealed using Aeroseal, a highly effective aerosol-based patented duct sealing technology. Duct sealing was the only procedure conducted in these homes. Multiple tests, including blower door tests administered before and after the duct sealing processes were completed, were used to determine the amount of conditioned air escaping through the building envelope. Blower door tests before & after the duct sealing measured whole house CFM50 leakage reductions, averaging 11.4% or 347 CFM50.

According to Reid, in one home, where aerosealing the ductwork reduced overall building envelope leakage by 10%, an analysis showed the duct sealing resulted in a 16% reduction in heating and cooling costs.

“The results of this study show that duct leakage not only impacts the air being distributed within the duct system itself, but also contributes to air leakage through the building envelope – and all of that can have a significant impact on a homeowner’s monthly energy bills,” said Reid.

In the study, two story homes showed greater reductions in envelope leakage than single story homes, presumably due to the great amount of openings in the thermal envelope. This data confirms that ducts “inside the house” are often connected to outside.



Sealing leaks from the inside: the aerosol sealant can fill holes as large as 5/8 of an inch across.

For more information or a white paper on the Comfort Institute study visit www.comfortinstitute.org. For more information on aeroseal duct sealing technology visit www.aeroseal.com.

About Greater Cincinnati Energy Alliance: The Greater Cincinnati Energy Alliance is a nonprofit organization with a mission to facilitate investment in energy efficiency and renewable energy projects for the purpose of reducing carbon emissions. **Visit:** www.greatercea.org for more information.

About Comfort Institute: Comfort Institute Inc. (CI) is an international indoor comfort research, training and consumer protection organization based in Centerville, Ohio with trainers and offices located throughout the United States and Canada. Visit www.comfortinstitute.org for more information.