

# ICC Confirms Unico Ductwork Meets Codes

## Unico instrumental in establishing criteria for small-duct code

Code officials will now find it much easier to approve The Unico System in both homes and businesses thanks to changes in International Code Council provisions. The manufacturer of small-duct, high-velocity HVAC systems worked with the ICC to modify the code to accommodate Unico's design methodologies and circular duct work.

Unico has received confirmation from ICC Evaluation Service Inc. that its duct work complies with the provisions of the 2006 International Mechanical Code®, Chapter 6, Duct Systems; the 2006 International Residential Code®, Chapter 16, Duct Systems; and the 2006 Uniform Mechanical Code™, Chapter 6, Duct Systems. Unico is the first company to have its products evaluated against the LC-1001 Plumbing, Mechanical and Fuel Gas Listing Criteria for Small-Duct, High-Velocity Air Distribution Systems.

"This confirmation from the ICC is very important because it provides justification for code officials to approve use of The Unico System," said Craig Messmer, director of engineering. "We've been pushing for a revision of the code for the last several years because the earlier code did not accommodate round ducts or our unique design."

Messmer explained that two questions frequently arose when The Unico System was specified. First, Unico's duct work is different than traditional duct work and requires a different method of calculating duct design. However, some codes require duct work to be designed in a way that is not appropriate for Unico's duct work. After reviewing Unico's methodologies, the ICC has stated that Unico's design is correct and allowable.

Second, many states require a certain R-value, or measure of thermal resistance, in duct work. A higher R-value means there is thicker insulation and less heat leakage. However, the previous code only took flatwalled ducts into account when specifying R-values, and the equation works differently when comparing a square duct to a round duct. If the round duct is large, the difference is not great; but for small ducts, the standard equations grossly underestimate the thermal resistance. Unico worked with the ICC to develop a table that would compare R-values in large round ducts versus R-values in small round ducts. For example, if the code requires R8, the Unico duct equivalent is R6.

"If we had to insulate to R8 in our ducts, we would have to increase the size of the duct casing, reducing the benefits of Unico as a small-duct system," explained Messmer. "This code modification is really important to contractors who want to put in a smaller duct that still meets performance and code requirements."

The Unico System is a small-duct, high-velocity central heating and air conditioning system manufactured by Unico, Inc. Ideal for custom home, historic preservation and commercial applications, the Unico System takes less than one-fourth the space of a traditional HVAC system and can deliver up to 12 tons of air conditioning in the same space as a 3-ton traditional system. Quieter and less visible than other systems, the Unico System provides superior indoor comfort that is energy-efficient and environmentally friendly. For more information, visit [www.unicosystem.com](http://www.unicosystem.com).