



Small-Duct Comfort Done Right in the Colorado Rockies

Custom Home Owners Upgrade HVAC with Unico

The town of Bow Mar, an affluent suburb south of Denver, was incorporated in 1958 after the post-WWII building boom. Most of the three hundred homes that make up Bow Mar were constructed in the late 1940s and 50s, and are mid-century modern single-story houses built in the prairie-style popularized by famed architect Frank Lloyd Wright. The area derives its name from two nearby bodies of water, Bowles Lake and Marston Lake. With expansive, sprawling lots, wide streets and lake views, it's an idyllic place to live.

In 2007, a retired couple from Littleton purchased one of the original ranch houses on the shores of Bowles Lake. They considered Bow Mar the perfect neighborhood to spend their golden years and indulge their passion for restoring and collecting vintage sports cars. But, charming as the original construction was,

it lacked the appointments and amenities of modern living. Like many in this prosperous community, the owners decided to replace the original home with a new, custom-designed residence. Luckily, one of their sons happens to be an architect.

Reflecting the prairie-style of the original residences, the son designed a single-story, custom ranch home with an exterior of native flagstone. The most unique aspect of the home's design is the inclusion of three barrel-vault roofs which seamlessly extend to create exterior portico overhangs and eaves. However, the curved slat-wood ceilings presented a challenge for incorporating central HVAC. While the main heat source is underfloor hydronic radiant heating, dropping ceilings or building soffits to conceal ducting for conventional A/C and supplemental forced-air heat was out of

The Unico System®



The barrel vault ceilings of this custom home would not allow for the inclusion of conventional HVAC without major alterations for ductwork concealments.



Unico supply tubing is concealed within the stainless-steel exhaust ducts embedded in the open, flagstone fireplace.

the question, so the designers and builders opted to include a small duct system when the new home was built in 2008.

Strategy:

Unfortunately, the small-duct system chosen by the builders was an off-brand product. While the flexible ducting allowed for the supply runs to be cleverly hidden in the flagstone support columns and central, open-air fireplace, the original system was noisy and inefficient. The owners loved the aesthetic of small-duct HVAC, but were unhappy with its performance.

Enter Unico Preferred Contractor Mike McCollum and his team of experts at Southwest Heating & Cooling. Mike knew the type of system was the right way to go – the builders had simply chosen the wrong small-duct product. Mike and his team proposed upgrading to The Unico System, and specifically recommended Unico's ECM (electronically commutated motor) air handler model. The ECM includes Unico's patented S.M.A.R.T. board technology, which allows for programmable airflow control while dramatically reducing the power needed to operate the air handler. The Unico ECM is highly energy efficient and much quieter than conventional fans/blowers.

Of the seven high-efficiency boilers contained in the house, one is paired with The Unico System ECM and a Unico hot water coil to provide supplemental heat for the radiant floor system also tied to this boiler. While radiant floor systems are an excellent form of heating, The Unico System's on-demand heat is perfect for those chilly "shoulder" months when immediate heat is needed for temporary stretches; firing up the boiler and radiant floor system would be slow and inefficient.

To eliminate the noise associated with the original small-duct system, Mike's team increased the number of supply runs and outlets, better balancing the airflow and reducing noise-generating pressure.

Results:

"The owners are thrilled with the upgrade to The Unico System," says Mike. "They're especially pleased they didn't have to sacrifice the aesthetics associated with the open design of their home, and they are satisfied with the quietness and efficiency of the new system." In a house with so many boilers – three of which are dedicated to outdoor driveway and patio snow melt systems – the new efficiency provided by The Unico System is quite noticeable and a welcome addition.

"When it comes to small-duct technology," adds Mike, "picking the industry leader is a must. Like the Rocky Mountains, The Unico System towers over the rest."

Benefits:

- Flexible design and installation
- Quiet operation
- Even, draft-free temperatures
- Discrete supply runs and room outlets
- Energy-efficiency

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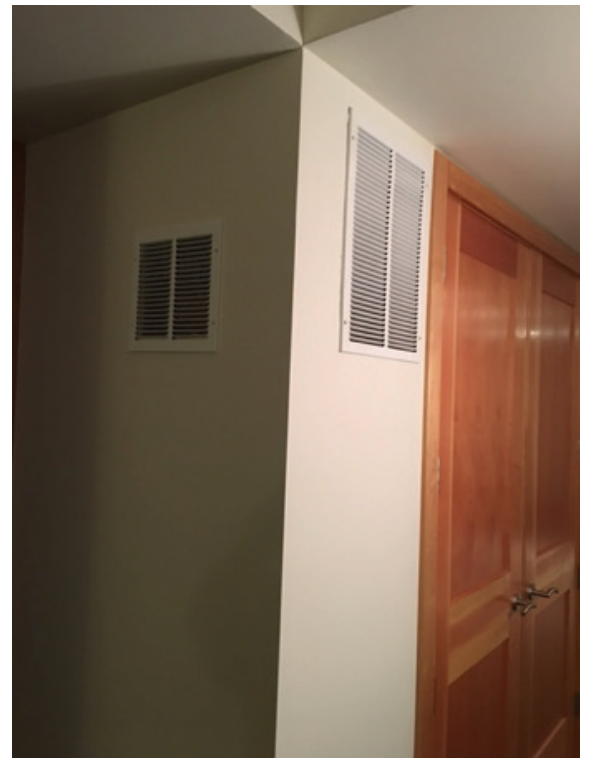
Can you find
The Unico System
outlets in this
picture of the
open kitchen
area?



Unico System slotted outlets
are concealed within the home's
cabinet and bookcase framing.



Unico supply tubing snakes
through the cavities of the
flagstone pillar, terminating in
unseen outlet holes in the top.



The Unico System return air ducts and
grilles are tucked away in the corner of a
storage closet.

iSERIES

The Unico System®

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Unico, Inc. is the leader in small duct heating and cooling systems and other high-end HVAC systems. The company manufactures all of its products in St. Louis, Missouri, with over 125,000 square feet of modern manufacturing space. The company is well known for extensive use in older, architecturally unique homes and buildings as well as elite, high-end custom homes. The company is family owned and operated and their products are available throughout the United States and Canada, and in over 28 countries around the world.



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