

Mechanical Contractor Sees Profits in Forming Cutting Edge Technology Niches.

Direct digital control, fabric duct, and environmental control rooms helps make Cincinnati Air a sought-after design/build firm.

CINCINNATI, OH. Offering cutting edge HVAC technology combined with innovative ideas has kept Cincinnati Air Conditioning clients coming back with more projects in the lucrative, but competitive field of design/build.

With nearly 70 percent of its business derived from projects it designs and builds, the 66-year-old Cincinnati-based HVAC mechanical contractor continually hunts for technology and ideas that “make us better than the next guy,” said President, Mark Radtke.

For example, in the last five years Cincinnati Air has become a direct digital controls (ddc) Metasys dealer of Johnson Controls, Milwaukee, WI, formed its Thermolinear divi-

sion of controlled environmental room construction, and developed a niche of fabric duct as an alternative to sheet metal duct. It's fabric duct that Radtke sees as one of the company's next big growth niches. In just two years, Cincinnati Air has used fabric duct on more than a dozen projects.

In the next five years, Radtke expects over 100 projects will have fabric ductwork installed. “With every project we bid now, we look into the possibility of using fabric duct,” Radtke said. “Obviously a lot of clients never heard of fabric duct so it adds to the perception that we're on the cutting edge of state-of-the-art HVAC design.”

For Cincinnati Air, fabric duct means less outsourcing to sheet metal fabricators and makes Radtke's corporate decision of postponing an estimated \$2 million investment for its own sheet metal shop looks more attractive today. Since fabric duct is delivered to the job site via United Parcel Service, Radtke bypasses fabricators and adds to his profit margin while still outbidding competitors' higher metal duct material and installation prices. Aside from increased profits and lower project costs, using fabric duct typically increases the project's aesthetics while providing a superior IAQ through more evenly distributed airflow, according to Radtke. “After using fabric duct on several projects, I'm convinced



it's much more functional than sheet metal duct with registers," Radtke said. Radtke wasn't an easy sell on fabric duct however. For several years he resisted recommendations of DuctSox—leading, Dubuque, IA-based manufacturer of U.S.-made fabric air dispersion—from trusted friend and manufacturer's representative, Jeff Johnson, Virginia Air, Cincinnati, until industrial design/build project challenges for The Andrew Jergens Co., Cincinnati, offered no air distribution feasibility other than fabric duct.

The HVAC retrofit of the cosmetic company's 40,000-square-foot high-speed packaging area in Jergens' 100-year-old Cincinnati factory presented a challenge of low 11-foot ceiling clearances. Because it can be easily removed by sections in just minutes to relocate heavy machinery, fabric duct was virtually the only cost-effective solution Radtke could offer his client.

Plant management was equally concerned with the HVAC system's aesthetics. Radtke specified a premium model, DuctSox's red Sedona, with the addition of the subliminal message of "Quality & Safety" factory-silkscreened in gray letters on the fabric. The 600 linear feet of 28-inch-diameter duct is double-hung from a two-row cable system that prevents wrinkling in large diameter duct. Besides providing even distribution of heating and air conditioning with its linear vents, Sedona fabric duct is also well-suited for the project's air stream humidity injection used to maintain relative humidity levels critical to packaging quality control.

Another reason Jergens retrofitted the HVAC systems was because the 10 tons of existing metal duct had become too costly to clean periodically. Now Jergens' in-house maintenance staff plans to disassemble the duct yearly for laundering. "Ductsox's cleanliness in feel and appearance just fit perfectly with this plant, which now looks as clean as a hospital operating room," added Matt Seiler, Cincinnati Air's CAD (computer aided design) and design engineer.

The Jergens projects prompted Radtke's consideration of DuctSox for the auto dealership Lexus Rivercenter, Covington, KY, which is a newly-constructed 30,000-square-foot project the auto manufacturer is developing as a Lexus corporate prototype. In Lexus' case, it was aesthetics that helped sell the idea of fabric duct.

Over 200 linear feet of black Tuftex—DuctSox's premium fabric—ductwork hangs in about 15,000 square feet of open-architecture truss ceiling space in the service, service write up, and customer pick-up areas. Adding to the streamlined look is DuctSox's new Sonic Vent linear diffusion, which surpasses the aesthetics of metal duct/register systems. "Lexus wanted a high tech, streamlined look, which is what their cars are all about," said

Radtke. "Add that to the Lexus logo that was silk screened in gold on the duct about a dozen times throughout the facility and you've got a very dynamic look."

Besides aesthetics, IAQ was an important factor in choosing linear mesh vents because they distribute air conditioning and heating more evenly and gently than metal duct/register systems, according to Radtke.



Another industrial client, Keebler Baking CO—division of Kellogg, Cincinnati, presented a different reason for using fabric duct. The HVAC retrofit of a 20,000-square-foot cookie production area inside the 200,000-square-foot plant could ill-afford production shut down of its 24-hour/7-day operations. "Putting up metal duct would have taken weeks to install," said Radtke. "However we installed the fabric duct and the suspension system that hangs it all in one Saturday with little interruption to production."

Additionally, Keebler's management especially liked DuctSox's Microbe X model of fabric duct because it inhibits microbial growth and meets strict mandatory Food & Drug Administration (FDA) regulations. Keebler's in-house maintenance staff plans to annually disassemble the white duct from its cable suspension system and launder it to further maintain ultimate plant hygiene. "The FDA requires a metal like aluminum or stainless steel that's easier to clean, so that would have raised the materials price considerably," Radtke said.

Currently Cincinnati has a flourish of fabric duct projects on the drawing board including the Cincinnati Police Historical Museum, a Mazda dealership showroom and service department, a printing plant and many more applications. "We're definitely ramping up on the concept of fabric duct," Radtke said.

"It's funny that we haven't seen much fabric duct on plan-and-spec work, but that's due to the conservative nature of the consulting engineer community," Radtke said. "It's a shame because their customers are missing the boat. When engineers and contractors both realize that they're losing projects to competition that's using fabric duct, they'll jump on the bandwagon." ■

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