

This contractor thrives on controversy



David Debien, president of Central City Air, thrives on controversial system problems.

From taking on the Texas Public Utility Commission and Houston Lighting and Power, to sizing coils without automatically reverting to ARI ratings, this contractor makes a specialty of swimming against the current. You may not agree with him, but David Debien has some strong opinions on the future of hvac systems.

BY GENE CHURCH SCHULZ

HOUSTON — David Debien, president of Central City Air, thrives on controversy stemming from his unconventional approach to solving air conditioning problems.

Controversial? Debien took on the Texas Public Utility Commission over Houston Lighting and Power's rebate program, arguing that their standard was based on average weather conditions nationwide, rather than the unique combination of heat and humidity that characterize Houston.

Instead of accepting the coil-sizing standards of the industry, Debien sizes coils based on sensible heat ratio, rather than ARI ratings. For him, that's the key to humidity removal.

Problem-solving is Debien's forte; humidity control and IAQ are recurring themes.

A caller may say, "I've had five different hvac companies out here, and nobody can solve the problem."

"That's when I come to attention; my blood and adrenaline flow," says Debien. "I want to get in there and find the answer."

"If I have to walk away from a problem, I feel dissatisfied."

Houstonians hear him on Tom Tynan's Saturday radio program. Tynan responds to callers' queries about home repair. Debien fields complaints about a/c and humidity problems.

During radio segments, Debien hears all kinds of complaints and gains valuable troubleshooting experience.

"That's how people hear about truth in air conditioning. We're doing a job today for a customer who put in a new a/c system several years ago. The installing contractor convinced the owner that the house, not the a/c, caused high humidity."

The equipment was not taking the humidity out correctly, Debien says, because it was sized based on general conditions rather than specific conditions in Houston.

"We resized the coil to remove the excess humidity. We solved the problems, but damage to the house had been extensive."

Repairs, including new sheetrock, were costly.

Humidity problems cause extensive damage. Debien recalls a three-year-old waterfront house on Tiki Island near Galveston. There's not a lot of heat load there, but plenty of humidity.

Mold had saturated every garment in a winter storage closet. Shoes had turned green. A leather coat was crumbling.

Other evidence included warped floors and rotting windows; heat pumps were removing dry heat, not wet heat.

The solution: Replace heat pumps with a straight-heat, straight-cooling system. A down-sized cooling coil removes heat aggressively.

RESIDENTIAL FOCUS: CLEANEST AIR POSSIBLE

Central City's focus on residential applications is a system that delivers the cleanest air possible. Debien says he feels manufacturers defeat the purpose with matched systems designed to certain SEER levels — in Houston, at least.

"Those SEER levels are impossible here because we don't live in the environment they were designed for."

An article in *The Journal of the American Medical Association* noted that people are living longer and attributed part of that longevity to better a/c and heating systems. "However, we're regressing by going after the wrong focus."

At a party six years ago, he smelled mold in the house. He arranged to see the owner the next day.

"Are you comfortable in this house," Debien inquired.

"I've never been comfortable here." The owner was sweating when the thermostat was set at 68°F.

"Has anyone in the family been ill?"

"My wife has been in the hos-

pital twice with pneumonia." When Debien opened the a/c system, he found about 1/2 in. of mold growing on the duct system. "It was unbelievable."

No wonder he's controversial — Debien tells the truth. "Would you snort this up your nose like a drug? That's what you're doing."

When he pointed out that comfort is 76°, the owner was amazed. The family moved out for two weeks because of the wife's allergies. Central City decontaminated the house, pulled up carpet, and sanded and refinished hardwood floors.

The entire a/c system was replaced; the coils were down-sized. "Now the owner keeps his house at 77°. His utility bill dropped by about 50%, and his wife hasn't been in the hospital since."

Another customer who called after Debien resized the coil was elated that she was off heavy medication for hives. Her doctor also called. Without mold and mildew, some health problems are reversed.

To a doctor, Debien posed this theory: "Say yes or no; 70% of the people you see have serious allergy problems. Medication you prescribe enables them to go home and live in the environment that caused the problem."

The doctor's response: "I'd have to agree. We're pretty sure factors such as the dog, cat, carpet, cleaning fluid and a/c system contribute to the environment that makes them sick."

Debien is empathetic. As a diabetic for 31 years, he knows what it is to be ill.

LEARNING CURVE

"Here's a problem that ate my lunch. We put in a great system for this customer. Everything worked beautifully, except that he had a humidity problem. The humidity wasn't high, but the grilles were sweating on the ceiling of the second floor.

"He kept the house at 70° year-round; the utility bill was no issue. We went out there and changed the coil, trying to get

more humidity out of the house. The problem didn't go away.

"Later we went out, changed the coil again for even more aggressive humidity removal. Problem still didn't go away, so we changed to less-aggressive humidity removal. Problem didn't go away. Four coil changes didn't solve the problem.

"Out of frustration, I called Retrotek, the blower door people, to test the house. That test showed four to five times the maximum leakage his house should have."

The a/c was pulling in outdoor air, and humidity was rising to the second floor and causing the grille to sweat.

It took almost a year to solve the problem. The solution included over-compensating with more fresh air. "It was frustrating; it was challenging; he [the owner] threatened to sue."

EQUIPMENT PREFERENCES

Debien likes belt-driven compressors, sealed-combustion furnaces, balanced-port expansion valves, split cooling coils, and thermal pane windows.

He's excited about a niche product, "Ultra-Aire" by Therma-Stor, which corrects humidity problems at 70° with high humidity, and no load on the house.

Debien admits he's spent about \$100,000 making all the mistakes before things began to fall into place. Even so, he shares with Texas contractors.

For Central City, already working a staff of 25, plans include manufacturing two problem solvers of Debien's own design:

1. User-friendly dampers that are air-tight and allow customers to adjust airflow;

2. Cooling coils for two-speed operations; the fan runs on low or high; the compressor runs low

or high. The new coil runs low and high, giving a more balanced approach to comfort in low-speed applications.

"We're negotiating now to come out with a complete line of coils nationally that will solve humidity problems here and in Georgia, Nashville, California, Oregon, and other places," Debien says.

He calls the air conditioning system a life-support breathing apparatus. His vision of the future includes the technology that will make the apparatus a reality.

He's looking now to control humidity down to 50%. "At that level dust mites die; other problems are reduced." Keeping humidity around 49% to 50% rh creates a much healthier environment.

Debien is pleased that ASHRAE's new standards address humidity more aggressively than ever. "They found out it's the leading cause of Sick Building Syndrome and contributes to many viruses.

"I try to stay ahead of the crowd," Debien adds. "That's why the coil; that's why the combustion furnaces; that's why the thermal pane windows. In everything I do, I look for solutions.

"The solution is always cheaper in the long run."

Note: Central City will be setting up a website and video soon to promote dehumidification. Watch these pages for more information.