

Seeking answers for home heating woes

CTV – W5

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To view the two-part video, go to:

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When Bev Craddock moved into a brand new home in Toronto four years ago, one of the things that sold her on the home was the mandatory warranty that came with it.

"I thought it was a smart move on my part to buy a new home," said Craddock.

Unfortunately, after she moved in, she discovered there was big trouble with the heating, ventilation and air conditioning (HVAC) system. "It was freezing on the lower levels and roasting on the top levels," she said.

Photos



CTV's Omar Sachedina investigates new homes with brand new heating systems that deliver a host of headaches instead of actual heat.



Bev Craddock walks with her neighbour Cathy Pascuttini in their Toronto neighbourhood in this undated photo. Both Craddock and Pascuttini went to Tarion for help in getting repairs to their heating systems.



Dara Bowser, a building technologist who designs HVAC systems, inspects the heating system in Bev Craddock's home in this undated photo.



Tarion president Howard Bogach speaks with CTV's W5 in this undated photo.

More Details

- [Bev Craddock's LAT Decision \[PDF\]](#)
- [Decision of Ontario Licence Appeal Tribunal regarding home in Oakville \[PDF\]](#)

Craddock's five-level home had a temperature discrepancy of as much as 17-degrees Celsius from the bottom to the top.

Craddock's home was equipped with what was supposed to be a state-of-the-art heating unit called 'Hi-Velocity Systems', manufactured by an Edmonton company, Energy Saving Products Ltd. (ESP).

According to the company, their system is installed in about 50,000 homes in the Greater Toronto Area alone.

The system uses forced air which picks up heat delivered from a hot water tank or boiler. That heated air is then sent throughout the home through tiny ductwork. ESP claims this results in even temperatures throughout rooms.

According to the company website: "We pressurize our systems and force air movement so no stratification (of temperatures) can develop with in a room. With the continuous movement of air we achieve even temperatures from floor to ceiling."

When Craddock's heating wasn't working properly she turned to her new home warranty program, which in Ontario is run by Tarion

Ontario is one of three provinces to have a mandatory home warranty program, along with BC and Quebec. Currently, the provincial governments of Alberta, Manitoba and Nova Scotia are looking into making new home warranties mandatory but no decisions have been made.

"(They) mostly just ignored me in the beginning," said Craddock, who insists officials at Tarion were of little help.

For example, despite the high-tech HVAC system installed in Craddock's home, the inspector sent by Tarion had no training in HVAC systems.

"She didn't have any tools, she didn't have any instruments," recalled Craddock. "It was June. She said, 'well the heating system appears to be working.'"

Following its investigation, Tarion was prepared to offer the installation of a baseboard heater – one that should have been installed during the original construction.

Craddock dismissed the offer outright, convinced their solution was woefully insufficient. With little help from the builder of her townhome or from the Tarion warranty program, she was forced to hire her own experts to figure out what was wrong with her heating system.

Craddock turned to Dara Bowser, a building technologist, who designs HVAC systems and performs fault investigations when things go wrong.

After investigating Craddock's home, Bowser found that almost everything that could have gone wrong with the HVAC system in her home – from construction through installation, right down to the heating unit itself – had gone wrong.

"You have people who bought the largest investment of their lives and they have heating systems which do not work and they can't get them fixed. How did that happen," Bowser told W5 in an interview.

"If you add the design problems, the equipment performance problems and the workmanship problems together you have a system that just has no hope of keeping rooms warm enough," said Bowser.

When Bowser tested the Hi-Velocity Systems unit at Craddock's house, he found the heat and airflow was underperforming by about 30 per cent compared to the manufacturer's specifications. And he also discovered serious problems with the installation of the system including wiring that did not meet the electrical code and leaky ductwork.

"We measured up to 40 per cent air leakage between the air handler and the vents," said Bowser. "So that means that 40 per cent of the air isn't going where it's supposed to go."

Similar problems

So how widespread is the problem? W5 surveyed developments in the Greater Toronto Area where we heard about complaints and found hundreds of homes that may have had problems with this system.

In Oakville, Ont., W5 found a subdivision with homes that had been equipped with the same 'Hi-Velocity Systems' air handler units. Many of these homes also had trouble with temperature variances.

Zoltan Simo, one of the homeowners, said there were "a lot of people who couldn't get temperatures in bedrooms above 14-degrees Celsius in the wintertime. Unliveable,"

W5 obtained field test reports after complaints about temperature variance in some of these homes. The findings raised questions about the performance of the Hi-Velocity Systems air handler unit.

"The airflow is well below published ratings," said one report.

Another found there is "a shortfall in heating output capacity of up to some 40% compared to the manufacturer's specifications" and "it is likely that this results from a defect in manufacture and/or design of the equipment."

Unfortunately for consumers there is no mandatory standard for heating performance for the so-called combo-units, as there is for older furnaces. Manufacturers are not required to independently prove their heating performance claims. A new standard has been written but it is not yet mandatory or enforceable by government.

It is a potential problem not only in the case of combo-systems but other new heating equipment. These days among the heating buzzwords are air handler, geo-thermal, tankless and, of course, energy efficient.

All these new technologies can leave consumers struggling to understand what they're getting, standards agencies attempting to assess performance claims, and builders and installers trying to stay current on how to design and install these new types of systems.

Family-owned business

The manufacturer of the Hi-Velocity Systems air handler is Energy Saving Products Ltd., of Edmonton. It is a family company which has been in business for nearly 30 years, selling its products in Canada and internationally.

"I know what my system does. If my system is installed and designed properly it's going to perform magnificently and we sell this product all over the world," said ESP representative Tim Prevost, who insisted the number of complaints is small compared to the number of units installed.

"The GTA has always been our largest market. We've probably got close to 50,000 systems installed throughout the GTA," he said. "If there's any problems with our systems not performing we really take that to heart because we have immense pride with our product."

"If there's an issue with the system we want to know about it so that we can be proactive in helping provide solutions to homeowners that are having issues with our system.

ESP insists that in the majority of cases, complaints can be traced to faulty installation. In a letter, the company told W5 that the problems at Craddock's development and with the Oakville subdivision were "two of the worst jobs that we have encountered in over 25 years of selling systems into the GTA" and blamed the problems at Craddock's home on "deficiencies in both the installation and the structure."

"Every single jobsite that I've gone to, that I've had to fly out to in order to check the performance of our system, I'm always able to find something that is either design related or installation related, where they didn't follow the design of our manuals," said Prevost.

The company also said they have their products tested.

Tarion

Craddock's neighbour Cathy Pascuttini has been having the same trouble with the heat in her house – she lives in the same development that ESP said was among the worst jobs the company had encountered.

Like Craddock, Pascuttini also turned to Ontario's new home warranty program, Tarion, for help in getting repairs to her heating system.

After Craddock turned down Tarion's offer of the baseboard heater, Tarion denied her claim, but she fought back and appealed to the Licence Appeal Tribunal (LAT) of Ontario – an independent tribunal – and was awarded \$40,000.

The decision found the equipment was "improperly and poorly installed" and that the air handler "has been unreliable from the beginning."

Pascuttini's claim was also denied by Tarion. She filed a similar appeal of the Tarion decision, and although Craddock was paid out recently, Pascuttini is still undergoing the appeals process.

In an interview with W5, Tarion president Howard Bogach said they have received 319 complaints about heating issues at homes where the Hi-Velocity Systems units have been

installed during the last ten years. On the other hand, he also told W5 that he is aware of one builder who has installed 2,000 of the units without any problem.

"What we're trying to do now is to find out what the actual issues are within the system," said Bogach, "In one case we have one engineer who says it's the apparatus. We have another engineer who says it's the design (of the heating system) and the installation of it. We still don't know."

"I think there are three aspects within it. And it can be the installation, it can be the design and it can be the apparatus. I haven't reached that conclusion that it's strictly the installation."

W5 also attempted to speak to the builder of Pascuttini and Craddocks' units, who declined an interview claiming the matter was before the courts. However, in an email Georgian President Anthony Maida wrote: "the builder was guided by professionals in the design and installation of the HVAC System specifically; the manufacturer of the system, the Systems Designer, and the City of Toronto who approved and inspected the HVAC System in each home."

All of which has left Pascuttini caught in the middle, seeking heat and comfort in her home and frustrated by the seeming inaction.

After W5 became involved there was a glimmer of hope for some resolution when Tarion called to offer a settlement to repair her home. It may also give Tarion a chance to better understand what's going wrong.

"We have made an offer to repair Cathy's system as per the specs she has," said Tarion president Bogach. "In doing the repair with our engineer supervising it, we'll have a better handle on what actually is causing the issue."

"And if you're asking if it took long for us to resolve Craddock, yeah, it did. And maybe we can learn from that and go forward."