



DOUG TARRY

## The Best New Demo Project

### THE OPTIMUM HOME WITH THE OPTIMIZED HVAC SYSTEM

Doug Tarry Homes recently opened our latest model home, the Edenbrook, during the first week of October. Today, as an industry, builders open new model home centres all the time, and while we are always proud to show off our newest creations, there are the rare exceptions when something truly revolutionary is presented to the marketplace.

Such is the case with this Discovery Home built as part of our commitment to the Union Gas Optimum Home Program. Through the Optimum Home Program, we have been able to work closely with a number of building science experts and consultants to help us address some critical next steps in the construction of high-performance homes. In this particular home we are demonstrating two new technological features that will have a significant impact on the building code and how homes are built in the future.

The first is the pilot project we are conducting with Dettson Industries on right sized furnaces. The F280 guidelines, that mechanical designers use to size their equipment, do not properly account for the tighter homes that the current Ontario Building Code and energy programs such as Energy Star are requiring of builders. This, combined with furnace manufacturers not recognizing the need for smaller HVAC equipment, is leading to performance issues in our homes. Issues such as temperature differences and comfort complaints.

An updated F280 will be an alternative option under the new 2012 OBC, starting in January. Using the new F280 will see furnace size requirements drop significantly. Doug Tarry Homes has been working on this sizing issue for several years. What we have found is that under the old F280 a furnace might be sized at 45,000 or even 60,000 BTU's of heat output, but might only need to be 28-30,000 BTU's on the coldest day of the year. The challenge with the new sizing requirements that we should be using is that there are no furnaces available that perform between 12-30,000 BTU's, which is what we need. Regrettably manufacturers seem to be fairly ambivalent to our needs.

This is where Dettson Industries comes into the picture. This Canadian owned furnace manufacturer, based in Quebec, has recognized that there is a need for right sized furnaces. I was put in touch with Marc Chenier from Dettson through our involvement in the Union Gas Optimum Home Program. Back in March I had the opportunity to visit the test lab near Montreal and check

out the product they were planning to manufacture.

What I was most impressed about was not only the willingness of the Dettson engineers to listen to our performance concerns but that they understood the need for smaller, right sized, high performance furnaces. After some very positive conversations we agreed to provide Dettson industries with two homes to test their right sized furnaces in.

On October 3rd we had the privilege of unveiling the new Dettson Chinook prototype furnace. The Chinook is fully modulating with an ECM motor and has a BTU output range between 12,000 to 30,000 BTU's, which matches our homes needs. It is currently available for viewing in our Discovery Home in St. Thomas, where we are testing the prototype over the next twelve months. Dettson is projecting that the BTU Chinook will be available in the market by February. Builders who are constructing MURBS will be interested to know that Dettson is also working on a 15,000 BTU furnace they hope to bring to market in the spring.

Of course none of the *right sizing of furnaces project* would have been possible without the understanding and support of our former Chief Building Official, Leon Bach, who understands the performance issues and permitted us to design the system to the new F280 Standard as an alternative compliance solution even though the new Standard does not become an option until January 2014. We are very appreciative of Leon's support and the other building officials involved with our Discovery Home that helped to make this project a reality.

The other pilot project featured in our Discovery Home is a new basement wall system that we call the Optimum Basement Wall. I've previously written about our journey to a better basement wall and our work with ROXUL. My next article will focus on the Optimum Basement Wall.

DOUG TARRY JR., IS THE DIRECTOR OF MARKETING AT  
DOUG TARRY HOMES IN ST. THOMAS, ONTARIO.

