

## **AIR CONTROL TECHNOLOGY HELPS REDUCE GREENHOUSE GAS EMISSIONS**

While Providing **Comfort** with an actual **Payback** over time.

*"Canada is warming at an alarming rate" according to recent environmental reports, and to slow the process, every possible cause of greenhouse gas emissions should not be overlooked.*

**A case in point: Do you know that there are millions of 4" to 8" diameter gaping holes in outside walls of homes across Canada and the US allowing passive air to flow in 24/7? Passive air, especially in winter, cools the house which requires extra energy to keep warm. Extra energy produces added greenhouse gases that increases the carbon footprint. This is not critical when we consider one or two houses. But, when we consider homes right across Canada and the US with the same gaping holes, no wonder greenhouse gas emissions are a cause for concern. There is, however, effective air control technology being used today that is Canadian and American Safety Code Certified but, to date, not mandated.**

As I recall, from the mid 1970s to approximately 2010 when high efficiency furnaces became a requirement in Canada, the **Canadian Gas Safety Code, (B149.1)\*** mandated the installation of combustion air ducts 4" to 8" diameter to lead from outside and terminate somewhere close to the furnace. At approximately the same time, the Canadian **Building Safety Code for Houses** mandated residential fresh air supply ducts of the same dimensions to terminate into the return plenum of the forced air heating system. To this very day, these two open air supply ducts, **combustion and replacement fresh air**, installed in homes over a period of approximately 40 years, remain open, wasting energy, increasing greenhouse gas emissions that pollute the environment and causing basements to be uncomfortably cold in the winter.

Some homeowners realized the source of the cold air and took it upon themselves to plug the combustion air duct using insulation or whatever else they could find, not realizing this action created an unsafe condition. **Alberta Safety Regulators** realized the unsafe condition and allowed contractor made passive *air diffuser buckets\*\** and later, **Code Certified Combustion Air Dampers\*** to be installed on the terminating end of the combustion air duct. The *air diffuser buckets\*\** were installed primarily to redirect the cold air away from freezing water pipes on the floor but at the same time allowing fresh air to flow for combustion 24/7. On the other hand, **Code Certified Combustion Air Dampers\***, approved by **Gas Safety Regulators from every Province** in Canada, including the **Canadian Inter-Provincial Gas Advisory Council** and the **American Gas Association**, were installed not only to prevent the unsafe practice of plugging the duct, but also to stop the flow of cold air completely until the furnace fired. **(For a complete Engineer's explanation on the subject, see reverse side).**

The low cost "*passive*" *air buckets\*\**, being electrically wireless and easy to install, greatly outnumbered damper installations whereas the higher priced **Code Certified Combustion Air Dampers\***, by design, **provided comfort while saving both heat and energy.** Regardless of the higher cost of damper installations, thousands of homeowners, realizing the benefits, have chosen and continue to choose **Code Certified Combustion Air Dampers\***, thus providing comfort, saving energy and meeting all Gas/Oil and Propane **Safety Codes**. There are, however, hundreds of thousands of homes left with wide-open air ducts or air buckets, wasting energy, heating the environment and increasing the carbon footprint. Documentation has shown a reduction of **5% to 20%\*\*\*** fuel consumption when using motorized dampers on both the return and combustion air supply, thus generating an actual pay-back over time.

With these beneficial results and the need for the reduction of greenhouse gas emissions worldwide, it only makes sense to **retro-fit** all remaining open and passive air ducts, with **Code Certified Air Control Dampers\***. Mandating this air control technology to help reduce greenhouse gas emissions is a win-win situation for all concerned and most certainly for the environment.

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\* **B149.1-20, 8.3.1; 8.5.5. Canadian Gas Code** ; \*\* Alberta "Standata 85-D1-017R2, pp4"

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