Trebor International Ltd

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Willis H. Carrier (November 26, 1876 – October 7, 1950) was an American engineer, inventor, and is known as the man who invented modern air conditioning. Carrier's igloo in the 1939 New York World's Fair gave visitors a glimpse into the future of air conditioning. Before it became popular, near the end of the 30s, World War II began. During the post-war economic boom of the 1950s, air conditioning began its tremendous growth in popularity in both the Canada and the USA. The company (Carrier Equipment) pioneered the design and manufacture of refrigeration machines to cool large spaces. By increasing industrial production in the summer months, air conditioning revolutionized American life.

Constant volume CVU/RTU (Constant Volume Units/Roof Top Units) units and the AC in Heat Pumps perform four basic functions, control temperature, control humidity, control air circulation, and air filtration. Today's units are very similar to those introduced by Carrier. They are selected, versus other alternatives, in the majority of applications because of the capital cost considerations for projects. The CVU/RTU/Heat Pump's do not have a sophisticated control system and in common terms, it is either on or off. In the typical application of CVU/RTU/Heat Pump's, the compressor is the major consumer of energy in the thousands of Watts (kW). Utilities charge for the kW per hours (kWh) consumed. The CVU/RTU/Heat Pump design results in over extended compressor run times resulting in larger than necessary (kWh) charges.

I have witnessed meter readings before and after the installation of the **AircoSaver**TH and the completed empirical data analysis. On these applications, the **AircoSaver**TH showed reductions of 20 to 35% in consumption (kWh) and hourly peak demand (Kw). Without exception the total energy consumption and peak demand of the compressor has been reduced and by extension, utility charges reduced accordingly.

The AircoSaverTH controls the compressor in 2 ways.

- By monitoring the evaporator saturation point, the compressor will be turned "off" for a minimum period of 3 minutes.
 Based upon current weather conditions and the actual CVU/RTU/Heat Pump unit, this time off might be extended, but in
 NO CASE will it be reduced due to the built in anti-short cycling technology designed to protect the compressor. The
 space that is being cooled will not experience any approachable effect. When the maximum evaporator saturation point
 has passed, the compressor will be turned "on" providing normal operations.
- 2. It is the reduction of the compressor run time that will result in a reduction of utility charges.

The Airco Saver has no detrimental effect on: 1.) control temperature; 2.) control humidity; 3.) control air circulation and ventilation; 4.) air filtration, 5) compressor life. The reduction of compressor "run" time is the major contributor to the reduction of energy consumption in the CVU. For these reasons, we have been encouraging our clients to consider the implementation of the **AircoSaver**TH.

I am a licensed professional engineer in Canada (Ontario, Quebec, Saskatchewan) and the United States (Maryland, Massachusetts, Michigan). I have completed the design and construction projects in Europe, Mexico, Puerto Rico, Canada and the United States. My practice began in 1966 and still continues. Projects have included residential, multifamily dwellings, petro chemical, educational, health care, research, military, commercial, institutional, food /beverage, research and industrial facilities. Assignments have also included design, construction and facilities engineering. I have extensively lectured on the Community College and University levels. I have also published several articles on electrical design, and construction management for national publications.

Trebor hopes that this letter will assist in your energy conservation endeavours, and reduce the amount of your electrical utility invoices in the future.

Regards

Rollie L. Robert, P.E. P.Eng.

President and CEO

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