



## **CERV™ with Build Equinox Geo-Boost™ Technology**

The CERV™ is unsurpassed for actively maintaining a healthy indoor environment in an energy efficient manner. Now, the CERV's cold weather operation can be turbo-charged with our Geo-Boost™ heat exchanger technology. Unlike HRVs and ERVs, the CERV never needs "frost protection". In fact the CERV thrives on frosting as it converts energy from moisture into heat for your home.

With our new Geo-Boost™ technology, as outdoor temperatures drop in the winter, energy collected with a soil heat exchanger can warm outdoor air boosting the CERV's heating capacity. The colder it gets, the greater the boost. In addition to the boosting the CERV's capacity, the Geo-Boost also increases the CERV's efficiency for additional performance enhancement. During the summer Geo-Boost pre-cools, clean, fresh air in a manner that also augments the CERV's energy capacity and performance.

The figure below shows how the CERV with Geo-Boost compares with a standalone CERV. Also shown is the performance of a 90% efficient HRV with a soil heat exchanger. Soil heat exchange loops do not provide any significant boost in energy performance to HRVs and ERVs. A soil heat exchanger only displaces energy some of the exchange energy of an HRV or ERV. With or without a soil heat exchanger, HRVs and ERVs continue to deliver less than comfortable air to a house throughout winter and summer.

The CERV's advanced, wireless control system seamlessly interacts with our Geo-Boost controller. Locate the soil circulation pump wherever it is most convenient. The circulation pump is simply plugged into the Geo-Boost control box. The Geo-Boost control box is plugged into a 120 volt receptacle. And, that's it. We design and manufacture our controls, so there is no confusion or third party finger pointing as is common with other ventilation manufacturers' hodge-podge of sensors, controllers, and actuators.

As the CERV and Geo-Boost controller talk to each other, they determine when conditions are favorable for operating the soil loop pump. As seen in the figure below, when outdoor air temperature increases above the soil pipe loop temperature, the CERV operates more efficiently without soil loop circulation. During summertime when the outdoor air periodically cools below the soil temperature, the CERV and Geo-Boost controller determine when soil pump operation is beneficial. This conserves geothermal energy and increases overall system performance.

The CERV is the first fresh air system with "demand control ventilation" that supplies heated air to a home during the winter and cool, dehumidified air during the summer. The CERV actively monitors the

health of your home's air, and controls carbon dioxide and volatile organic compound pollutants. No more guesswork, no more worrying about the quality of the air your family is breathing.

Contact us to learn more about our technologies to help you achieve a healthy, comfortable and sustainable lifestyle.

Build Equinox is a 100% solar powered company located in Urbana Illinois. We engineer and manufacture our products at our Urbana facility....visit us and see for yourself!

