
Lunos™
CANADA
LUNOS
Introducing Lunos
Breathe Fresh. Save Energy. No Ducts.
Canada's most advanced decentralized HRV systems for homes, retrofits, and multi-unit buildings.

What We’re Covering

Introduction to Lunos and decentralized ventilation

How LUNOS differs from traditional ducted HRVs

Why the National Building Code created a challenge

Why we engaged NRC / CCMC and the process

Where the process stands today

Real world applications

Decentralized Ventilation
The LUNOS Approach

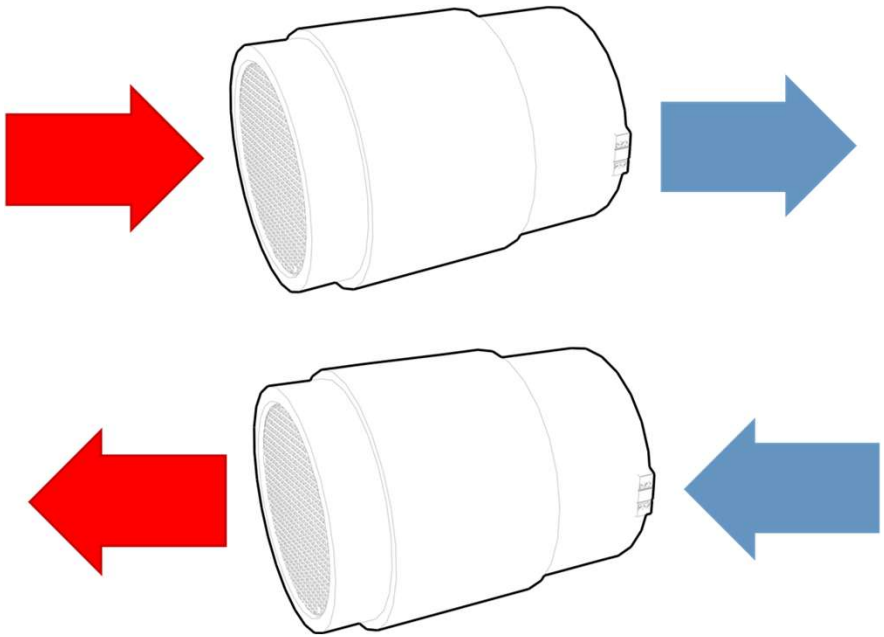
- Decentralized, compact, through-wall HRV
- Continuous and balanced heat recovery ventilation without the need for ducts
- Single Pass Regenerative System
- Up to 90.6% heat recovery efficiency
- Up to Merv 13
- Works in pairs
- Very low power consumption 12v
- Simple design- No ductwork
- Over 10,000 units in operation in Canada
- CSA Approved
- German based 56 years in the ventilation business

The LUNOS and the CCMC Evaluation Pathway

Decentralized Ventilation
How it Works

- Continual operating, decentralized, ventilation system with built-in regenerative heat exchange core,
- Operated and wired in groups of 2 or 4,
- Fans provide continuous ventilation without the need for ductwork,
- Installed in pairs directly through exterior walls,
- Fan reverses, charging incoming air is through stored heat.

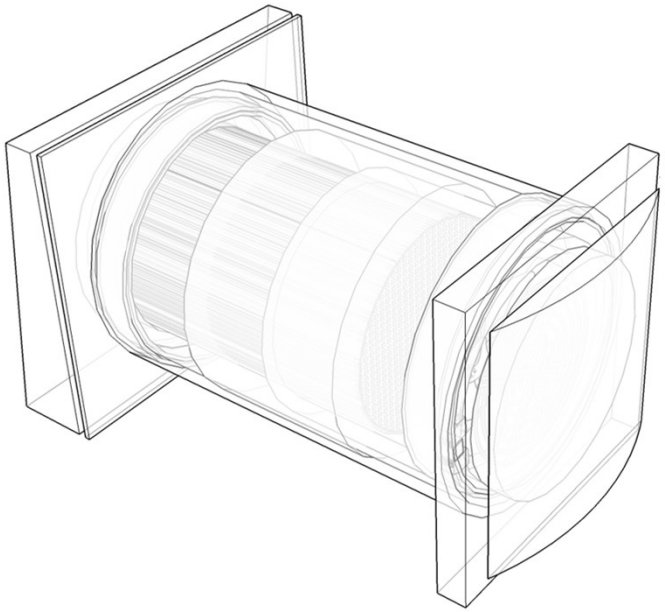
Fans reverse every 70 seconds regenerative ceramic core is charged (heat stored)

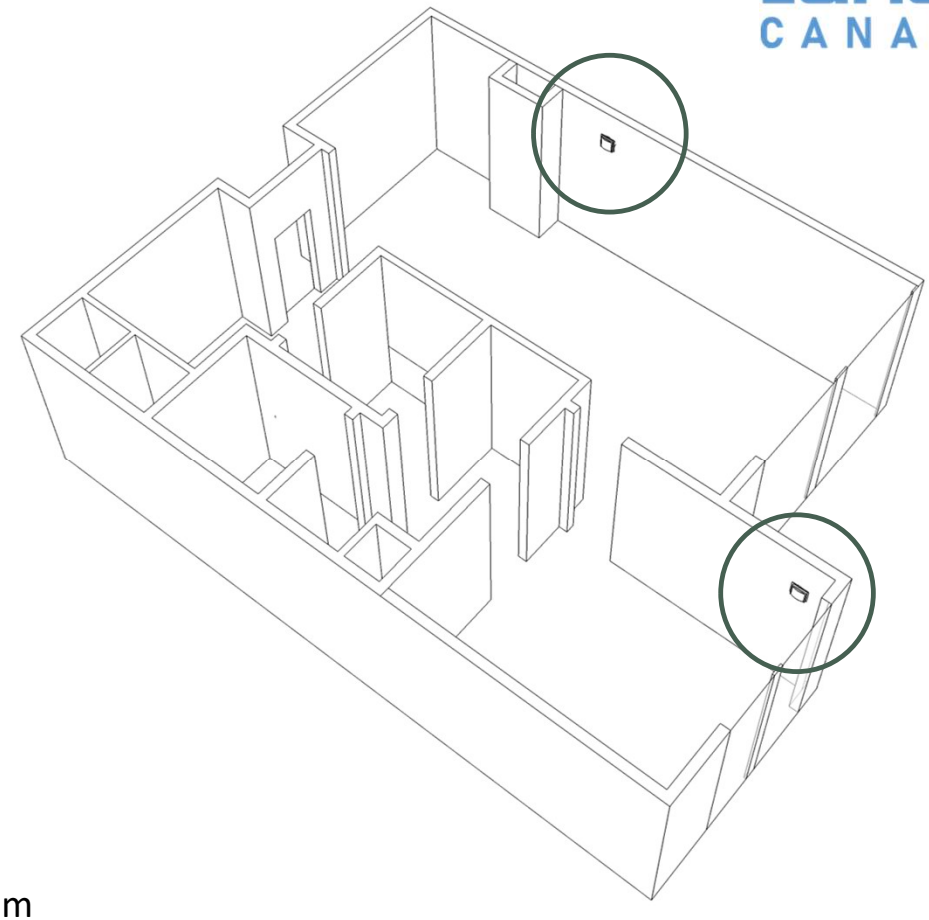


discharged (heat transferred) every 70 seconds,

The LUNOS and the CCMC Evaluation Pathway

One Bedroom Installation





- Pair of Lunos e2 required ~ 700 sq.ft.
- Installed on exterior walls
- Do not have to be installed in the same room

Decentralized vs Centralized

To understand why this became relevant under the Code, it helps to compare the mechanical assumptions behind decentralized and centralized systems.

Decentralized through-wall systems:	**Centralized HRV systems:**
● Operate continuously ● Do not rely on duct distribution ● Are installed directly within the building envelope ● Operate in paired regenerative mode at the room or suite level	● Operate continuously ● Distribute air through duct networks ● Are tested and rated as single mechanical units ● Typically serve entire dwelling/building

Why This Became a Code Problem

- NBC ventilation requirements are long-standing
- Cold-climate performance has always been required, although haphazardly applied
- CSA C439 is structured around ducted HRVs
- LUNOS does not fail the intent — it challenged the framework

Why and How We Engaged NRC / CCMC

- Avoid reliance on local alternate solutions
- Establish consistency for AHJs and inspectors
- Align decentralized systems with NBC intent

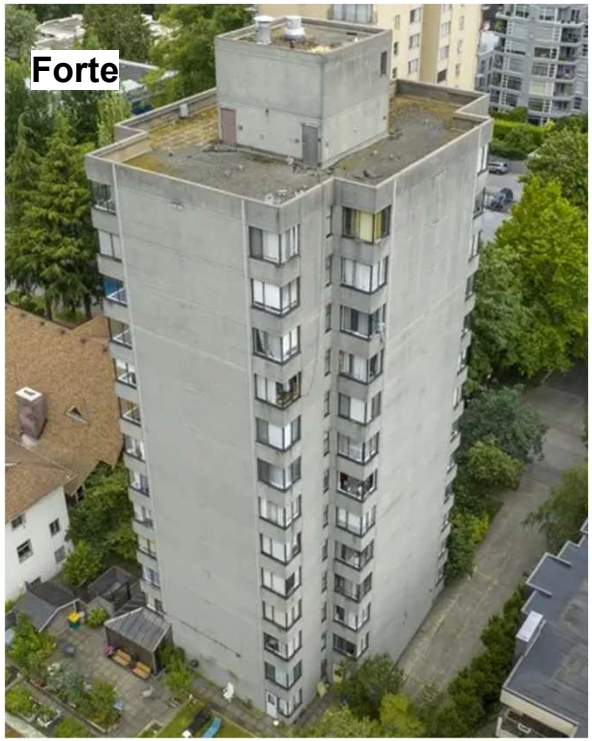
FORTIS BC™

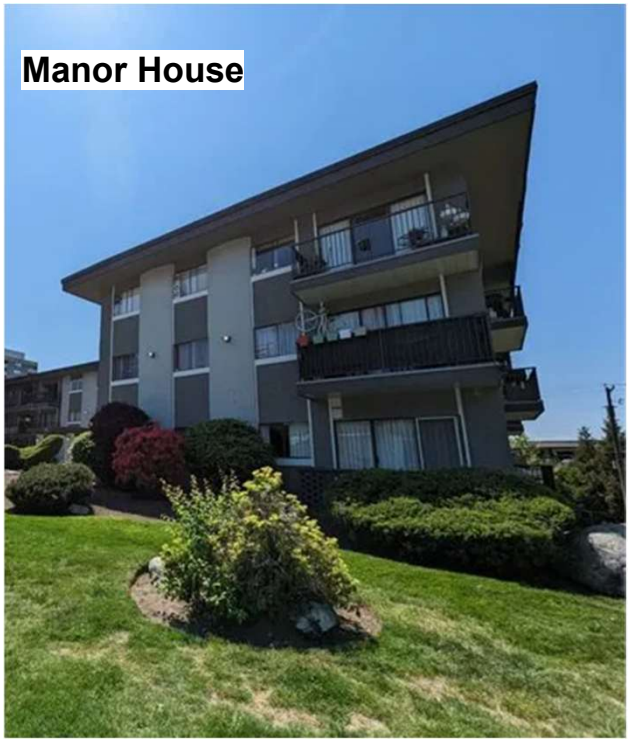
BC HOUSING

RDH BUILDING SCIENCE

Deep Energy Retrofit Pilot Program

Vancouver, BC





LISTER REDEVELOPMENT

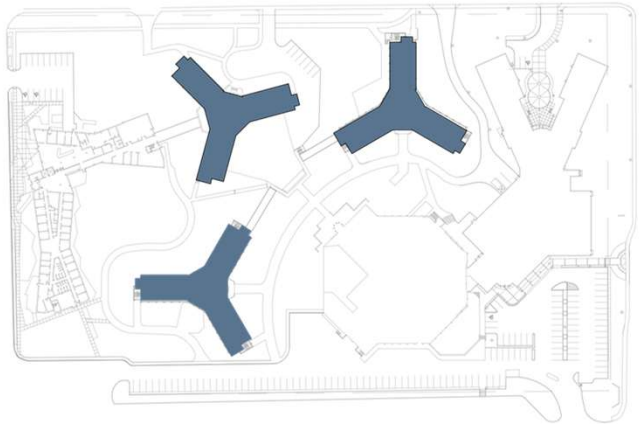
UNIVERSITY OF ALBERTA

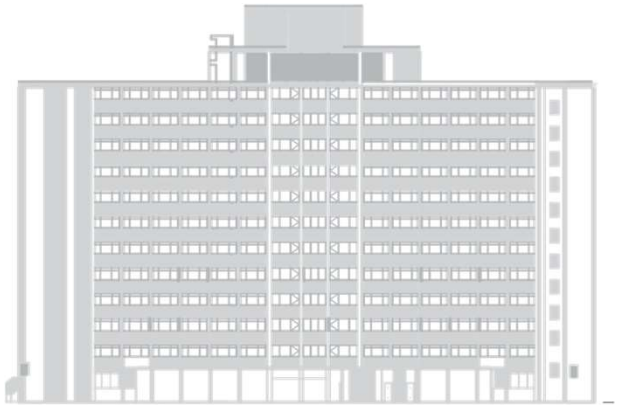
University of Alberta
Edmonton, Alberta
1000 + Rooms

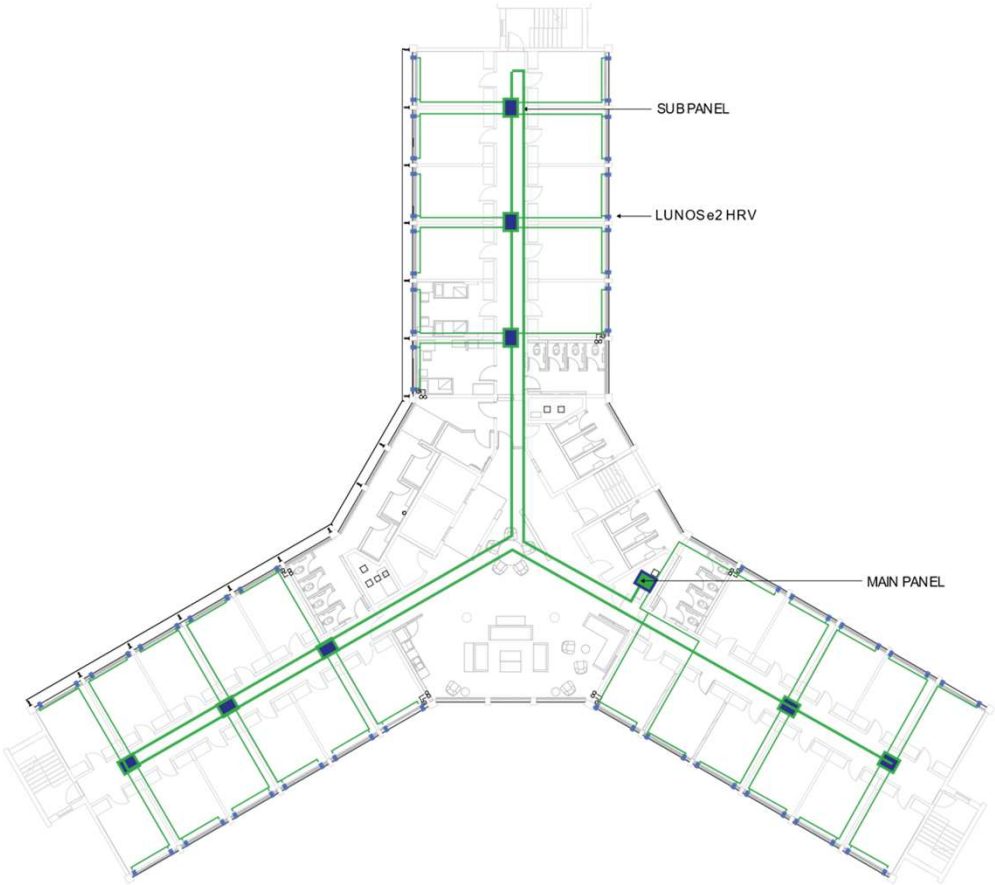
Lunos e2 + control solution by Loxone
Lister Centre Complex redevelopment project consists of the modernization of the Kelsey, Mackenzie and Henday Hall which includes the modernization of suites, and common spaces in the tower (such as common areas, study, kitchen, gym).

MACKENZIE HALL – 1 of 3 BUILDINGS

LISTER REDEVELOPEMENT







LISTER REDEVELOPMENT

UNIVERSITY OF ALBERTA

LUNOS CANADA

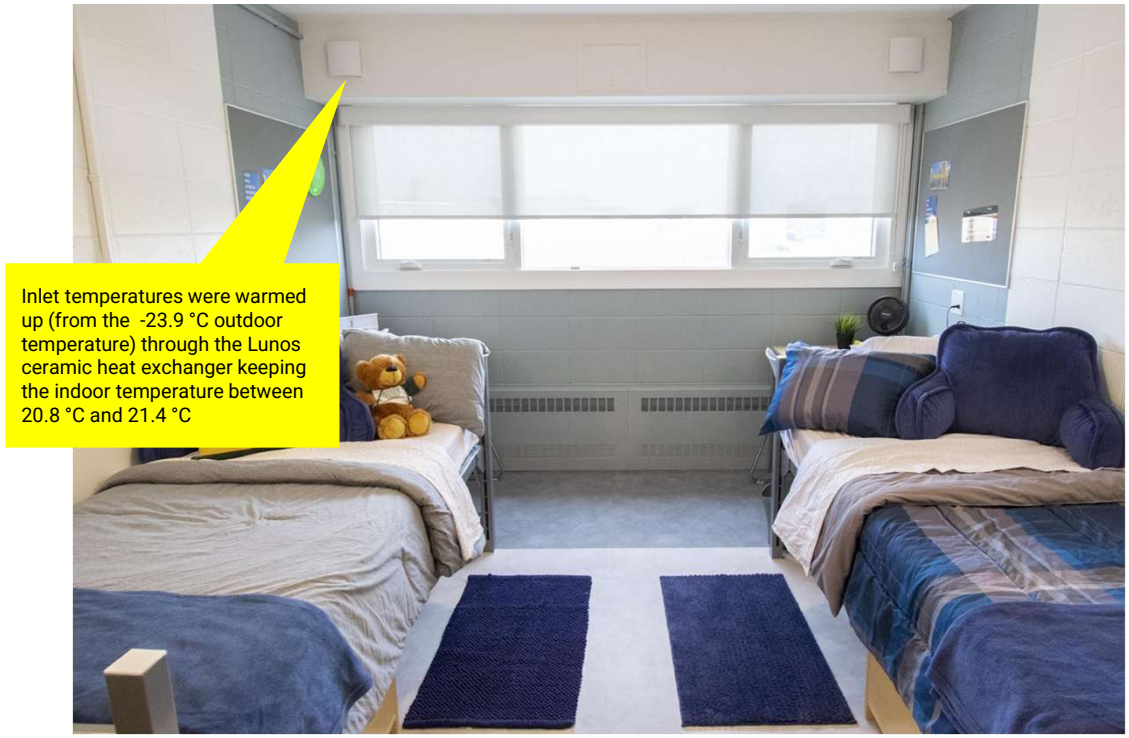
LISTER REDEVELOPMENT

COMMISSIONING AND BALANCING

UNIVERSITY OF ALBERTA

Cold weather commissioning was done this February to prove the efficacy of the Lunos HRV and Lyric Control System. The outdoor air temperature on Feb 20th 2022 varied between a minimum of -23.9 °C and maximum of -15.9 °C, with an average outdoor air temperature of **-19.9°C *.**

The Devices were operating at maximum efficacy during tests. All tests were run at low speed.



Room 109 - During the Beta test defrost cycle, where the fan speeds on the ERV's was at a medium speed for the times described, the **indoor air temperature in the room varied between 20.8 °C and 21.4 °C**

**note that this is based on Government of Canada Daily Historical Climate data*

For more information, please email:

Aleks Cvijic: aleks@lunoscanada.com

Ian Richardson: ian@lunoscanada.com