



Heat Recovery & Ventilations Systems (HRVS)

A Heat Recovery and Ventilation (HRV) system is a mechanical ventilation system that supplies fresh air into a building while recovering heat from the stale, outgoing air. It's designed to improve indoor air quality and energy efficiency without wasting the heat you've already paid to generate. When integrated with hydronic heating systems, HRV units help maintain a comfortable, healthy, and energy-efficient environment.

Key Features

- Provides continuous fresh air.
- Reduces heat loss from ventilation.
- Improves indoor air quality (removes CO₂, VOCs, allergens).
- Reduces condensation and moisture build-up.
- Quiet and automated operation.

Considerations

- Works best in well-sealed buildings where natural air leakage is minimal.
- Installation cost – requires ducting, units, and controls; easier and more cost-effective to install in new builds than retrofits.
- High recovery efficiency lowers heating/cooling loads, but actual savings depend on system design and usage.
- Should be designed to work seamlessly with heating, cooling, and control systems.
- Filters, fans, and heat exchangers need periodic cleaning or replacement.

Applications

- Passive houses and energy-efficient buildings.
- Homes with tight building envelopes.
- Structures using radiant or underfloor heating
- Allergy-sensitive households needing clean, filtered air.

