An ERV is a type of heat exchanger that pre-heats and pre-cools incoming outdoor air, significantly reducing demand on heating and cooling equipment. ERVs work by transferring heat contained in exhausted (indoor) air to incoming (outdoor) air, or vice versa, depending on the season. This technique conserves energy that would otherwise be lost with traditional ventilation methods.

ERV systems are an ultra-efficient option for balanced, fresh air ventilation. They can be configured in a variety of ways, falling into two broad categories: centralized and decentralized.

Centralized ERV systems serve the entire building. ERV units are typically located on the roof, with ducts exhausting spent air from the building interior and replacing it with fresh air.

decentralized

Decentralized ERV systems serve specific areas of the building, generally floor-by-floor or room-by-room.