



# Energy Recovery Cores – FAQ

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## **What is the difference between ERVs and HRVs?**

ERV cores recover both sensible (heat) energy and latent (humidity) energy and are recommended in hot/humid and cold/dry climate zones like North America's Northeast and South. ERVs create comfortable spaces with no need for a condensate drain, and have great energy savings in humid climates and lower temperatures for when defrost is required. HRVs are typically used in moderate climate zones like the West Coast and only have sensible (heat) recovery and no latent (humidity) recovery. HRVs have the advantage of higher sensible effectiveness, but require a drain pan and defrost strategy in colder climate zones.

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## **What is the typical lifespan of an ERV core?**

When used and maintained in accordance to the product manual, the exchanger is expected to have a lifetime exceeding 10 years. Since 2010, over 100,000 ERV cores have been installed in commercial and residential applications.

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## **Why do counter-flow cores have a higher efficiency than cross-flow cores?**

There is a higher heat and humidity transfer ratio when OA and RA streams are parallel and opposite (counter-flow core) vs. perpendicular (cross-flow core)

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## **How do cores transfer humidity but not gas and contaminants?**

The chemistry of the thin, but dense polymer layer allows the water vapor to pass through but does not allow contaminants, air, or water to cross over.

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## **How can enthalpy cores be used for higher airflow applications?**

A stacked core array with multiple smaller cores and manifolds serves larger airflows and an aspect ratio similar to a wheel but with no moving parts or virus crossover.

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## **What is the core membrane made of?**

Enthalpy exchangers are made of a polymer membrane that consists of a robust and porous substrate and water vapour selective polymer film.



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## What are the benefits of using a polymer membrane core vs. an enthalpy wheel or paper core?

A polymer membrane core offers significant benefits over other options on the market including:

- No gas crossover with <0.5% EATR (certified to AHRI 1060)
- Low maintenance with no moving parts
- High sensible and latent effectiveness
- Flexibility allowing for low-profile ventilation equipment
- AHRI certification
- Water washable
- Hygienic with no mold or bacteria growth (tested to ISO 846 A&C) or virus cross-over (tested to ASTM F-1671)
- UL 723 flame certified

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## Do cores need to be washed?

It is not necessary to wash the core if the filters are regularly maintained. If there is a drain pan on the unit, the core can be washed in place with a low-pressure hose.

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## How long is the warranty on an Oxygen8 core?

Oxygen8's standard core warranty is 5 years, with an optional 10 year extended warranty.

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## Can cores be replaced?

Yes, please contact Oxygen8 for instructions.

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## Where are Oxygen8's cores manufactured?

ERV cores are made in Vancouver, BC (Cross-flow cores by Core.Life, Counter-flow cores are manufactured in-house). HRV cores are manufactured in Europe.