

ENTHALPY EXCHANGER

HEAT AND MOISTURE RECOVERY FOR EXCELLENT AIR IN YOUR HOME

In addition to the standard models, the complete Flair range and the Renovent Sky 300 are now available as a ventilation unit complete with integrated enthalpy exchanger (ex works). An enthalpy exchanger recovers thermal energy from both air and moisture; this is what we call heat-recovery ventilation. The result: clean, filtered air in your home at all times without heat being lost, while the right balance of moisture is retained in each season. In winter, the property often needs some extra humidity in the air; less so in summer. Apart from increased comfort in your home, an enthalpy exchanger in the ventilation unit ensures even more energy savings than a standard heat exchanger. The enthalpy exchanger is also available as an extra: a standard heat exchanger can easily be swapped for an enthalpy exchanger, like for like. A ventilation unit with enthalpy exchanger gives you more control over the humidity in your home.

WHY AN ENTHALPY EXCHANGER?

Ventilation means that a lot of dry air enters your home in winter. Under normal circumstances, moisture is removed along with the foul air. With an enthalpy exchanger, the moisture produced indoors that is created by washing, showering, cooking and breathing is not fully removed from the atmosphere; part of it is transferred to the clean air entering the dwelling. This helps prevent the air in your home from becoming excessively dry.

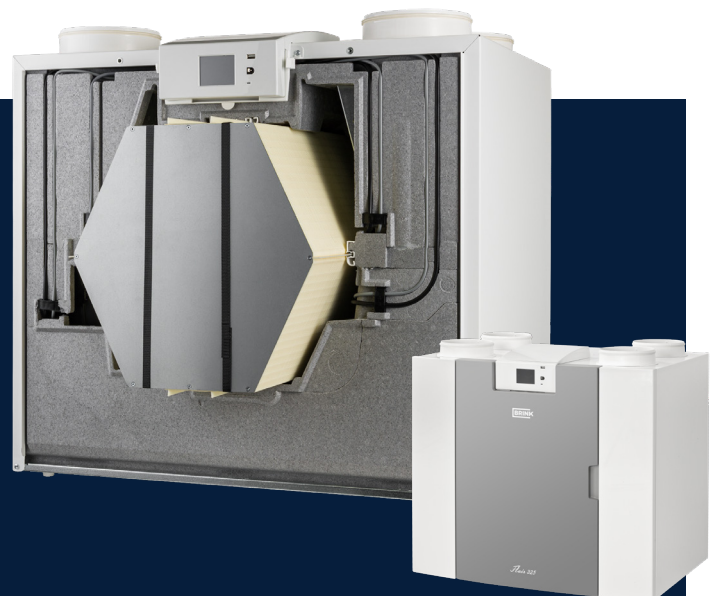
Particularly dry air indoors may imperceptibly cause, or aggravate, health problems. Low air humidity in your home may also create the conditions for respiratory complaints or a dry cough. Not just people, but also animals, plants and wooden floors, artworks and musical instruments may suffer due to dry air indoors. So it is very important not to entirely expel moisture produced indoors by cooking, washing and showering,

for instance. An enthalpy exchanger ensures that a substantial portion of the moisture present is transferred to the filtered air that enters your home. This helps achieve the moisture balance in the air. In the summer months, if the outdoor temperature rises to levels that would be uncomfortable indoors, an enthalpy exchanger ensures that the relative humidity indoors does not rise too high. Heat and moist outdoor air are prevented from entering.

PREVENT EXCESSIVELY DRY AIR IN YOUR HOME **WITH AN ENTHALPY EXCHANGER**

THE BENEFITS AT A GLANCE

- Heat and moisture recovery in a single exchanger
- Increased comfort, plus even more energy savings (25%)
- On average increased humidity of 3 - 5% in your home
- No need to drain condensation
- Integrated in the unit or available as an extra

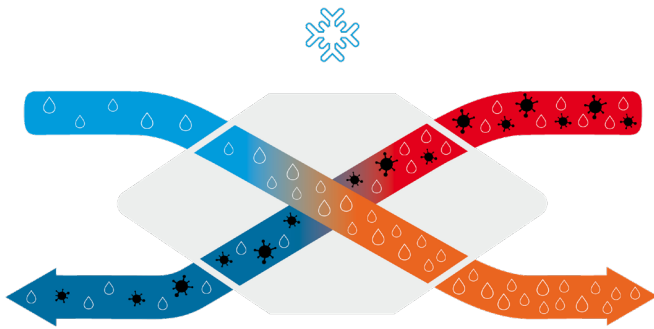


HOW DOES AN ENTHALPY EXCHANGER WORK?

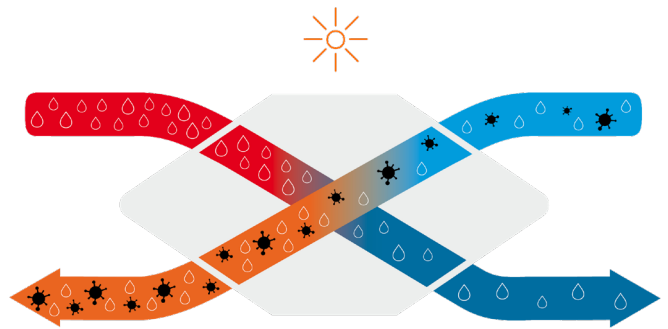
A standard heat exchanger in the unit absorbs the heat from the stale extracted air and uses it to heat the filtered intake air without the air flows being mixed. A specially-developed membrane in the enthalpy exchanger means that the flows of both intake and extracted air are segregated, but it can also transfer moisture between the air streams. Depending on the

amount of moisture in the indoor and outdoor air, up to 60% of the moisture can be transferred.

With the enthalpy exchanger, the relative humidity averages between 3 and 5% higher than with a standard heat exchanger when outdoor conditions are cold and dry.



Working principle of enthalpy exchanger in winter.



Working principle of enthalpy exchanger in summer.

PARTICULARLY SUITED TO EXISTING PROPERTIES (RENOVATION)

Although the ventilation units with enthalpy exchanger are suitable for new-build properties, they are certainly also an option for existing properties. A great advantage of using a ventilation unit with enthalpy exchanger is that no condensation is created. This means that there is no need for a condensation

drain. Perfect for renovation of existing properties, in which the Renovent Sky is often used above a false ceiling due to its compact dimensions. But it is particularly suitable to be used with a Flair unit, where the use of a pipe network for a condensation drain would otherwise be complex and costly.



Flair 225 with enthalpy exchanger, in use in an existing dwelling



Compact Renovent Sky with enthalpy exchanger, fitted above a false ceiling



COMPLETE WITH INTEGRATED ENTHALPY EXCHANGER, OR AS AN EXTRA

In addition to the standard models, all units in the Flair range and the Renovent Sky 300 are available complete with integrated enthalpy exchanger. The enthalpy exchanger is also available as an extra. The standard heat exchanger can easily be replaced and swapped for the enthalpy exchanger without making any changes to the unit's settings. For the Renovent Sky 150/200, the model with an integrated enthalpy exchanger is available from mid-2025.



SIMPLY REPLACE THE CURRENT HEAT EXCHANGER **WITH AN ENTHALPY EXCHANGER**

Technical data for ventilation units with enthalpy exchanger

Type	Flair 225	Flair 325	Flair 400	Flair 450	Flair 600	Renovent Sky 300
EN-13141-7 temperature ratio with enthalpy exchanger	81,5%	82,3%	80,5%	76,9%	74,0%	80,8%