Double rotor concept

The innovative solution when air humidity is high

- **Up to 60% less cooling capacity**
- **No additional reheating is required**
- **Ultra-high efficiency**

Hoval

Double rotor concept
The solution in detail.

The most effective solution for cooling and dehumidification in one air conditioning unit

When it comes to air conditioning processes in environments with a high level of humidity, the supply air in buildings must be **cooled and dehumidified**. This can give rise to significant investment and running costs, particularly with regard to cooling.

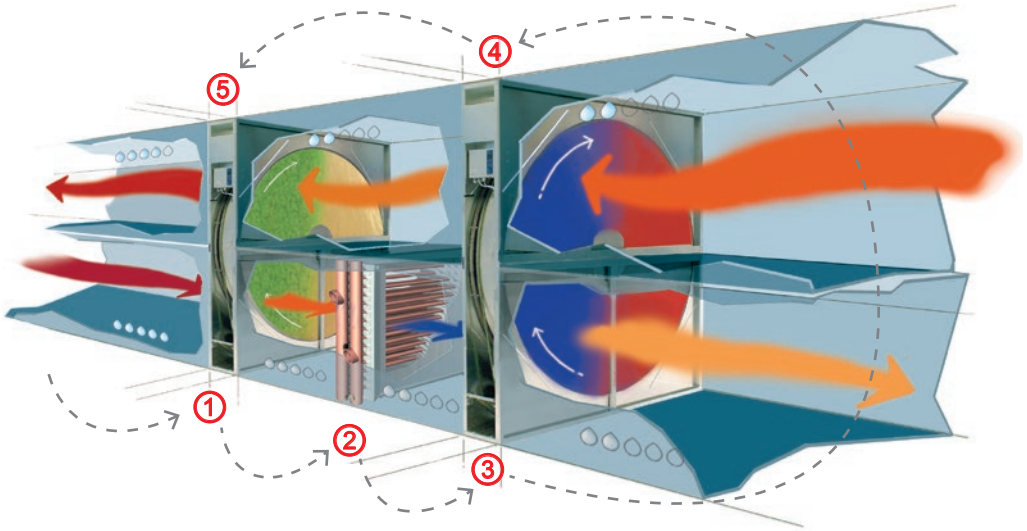
Hoval's clever double rotor concept can bring about significant cooling capacity savings, thereby reducing both investment and running costs.

Up to 60% less cooling capacity
The upstream sorption rotor with humidity transfer reduces the need for machine cooling.

No additional reheating
The supply air is heated via heat transfer from the extract air without using any additional energy.

Cooling and dehumidification
With the double rotor concept, all air conditioning processes are integrated in a single compact unit.

Supply air can be precisely adjusted
The temperature of the supply air can be precisely set via the condensation rotor.



1. Partial dehumidification + cooling of the outdoor air
By using a sorption rotor, the outdoor air is cooled while the humidity is removed at the same time.
This saves up to 60% cooling capacity in the next step (2).

2. Full dehumidification of the outdoor air
The supply air is cooled to the dew point of the required room temperature using a cooler.
This removes the remaining excess humidity from the supply air.

3. Heating of the supply air
The supply air is heated to the desired room temperature via heat transfer using the condensation rotor.
No additional energy supply is required.

4. Cooling of the extract air
The condensation rotor cools the extract air.

5. Greater efficiency of the sorption rotor
The extract air is now significantly cooler than the outside air.
This increases the efficiency of the sorption rotor (1).

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