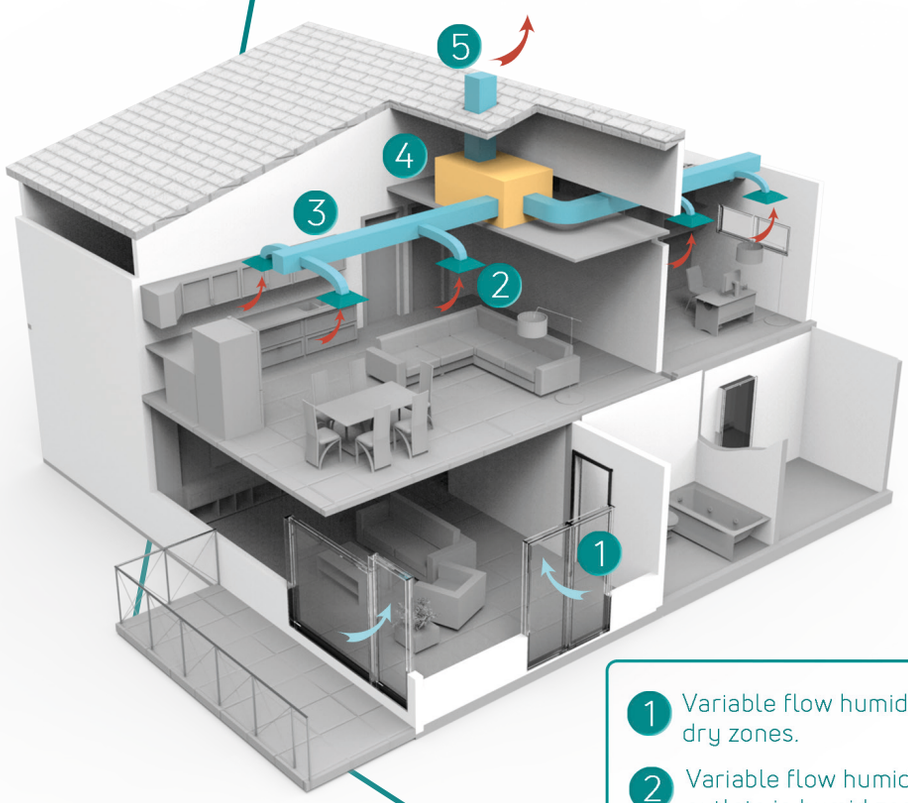
Humidity sensitive mechanical ventilation

In its Basic Interior Air Quality Health Document, **the Spanish Technical Building Code (CTE)** demands that properties have means to guarantee suitable ventilation, providing an exterior air flow and guaranteeing the extraction of contaminated air.

With this code it aims to **guarantee the health, comfort and hygiene** of the people living in the property, as well as preventing the accumulation of humidity, thus **preventing deterioration of the buildings.**

The unusual feature of the **humidity sensitive mechanical ventilation system** comprises the automatic regulation of the air intake and extraction flows depending on the **relative humidity variation** of the interior environment and by detecting the presence of people. Air renovation is permanent, always guaranteeing a minimum ventilation flow.

By adjusting the ventilation levels to the individual needs of each room allows the ventilation flows indicated by legislation to be reduced with the resulting energy saving.



Functioning

The system enables the controlled ventilation of the property, in which the **exterior air intake** is done through humidity sensitive air inlets in the dry zones (living room, dining room, bedrooms) **and the stale air extraction** is done through humidity sensitive extraction outlets located in the humid zones (kitchen, bathrooms, toilets) obtaining air circulation from the dry zones to the humid ones. Air circulation within the property is done through outlet openings in doors or partition walls of the rooms.

1. Variable flow humidity sensitive air inlets in dry zones.
2. Variable flow humidity sensitive extraction outlets in humid zones.
3. Network of extraction pipes hidden in false ceilings, under the roof, etc.
4. Extraction unit.
5. Roof outlet.

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Advantages of the ventilation system

- **Guarantee suitable interior air quality,** constantly renewing the air and eliminating stale air.
- **Eliminate exterior noise** as it is not necessary to open any windows to ventilate.
- **Greater energy savings** by ventilating rooms where necessary; the system allows for a reduction in the global ventilation flow. On the other hand, as it is easier to heat air that is less humid, it also contributes to the **reduction of the energy costs for heating.**
- **Eliminate the risks of condensation**, by adjusting the ventilation flows depending on the ambient humidity in each room, the air inlets and extraction outlets ventilate when and where necessary.

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