
Number	B-AD9
Indicator name	Ventilation equipment
Area	A
Indicator definition	The indicator is determined as a point score depending on the installed type of ventilation (ventilation equipment) of the building. The score is constructed on the basis of a combination of the efficiency of a given type of equipment and its energy intensity (impact on the production of CO2 emissions).
Indicator unit	Point score
Key words	Ventilation, overheating, indoor environment, microclimate
Reason for tracking and usability	The ventilation system with recuperation ensures a constant exchange of air in the living rooms in the building, it sucks out degraded air from the kitchen, sanitary facilities, wardrobe, etc. and at the same time saves energy all year round. There is no need to open windows in summer, as it provides a permanent supply of fresh air. In the case of existing buildings, the additional installation is relatively complicated, due to the extensive intervention in the building as long as it is inhabited. For new buildings, it is ideal if it also has pre-cooling of the supply air in the summer (we know the solution for the new building Petržalské Dvory). During the significant renovation of apartment buildings in Slovakia in Bratislava, e.g. apartment house of Pavel Horov to the A0 standard, where the so-called inverters, it is a ventilation unit installed in the facade, which solves one space-room). The ventilation system has the benefit of reducing interior overheating.
Completeness, representativeness, validity	The indicator provides only a highly indicative assessment of the technology used in the building. Determining the predominant type is subjective. The specific technology, product, parameters are not taken into account. The indicator does not take into account the energy source of the ventilation. If cooling is provided exclusively from renewable energy sources, the assessment is not appropriate.

Description of data processing

The first step specifies the prevailing ventilation technologies:

- 1) Without ventilation system, i.e. it is a natural ventilation through windows and infiltration.
- 2) Without ventilation system, only with extraction of the kitchen and hygienic areas (bathroom, toilet).
- 3) Ventilation system with recuperation: supply of fresh air to living rooms, extraction of degraded air from the kitchen and hygienic areas (bathroom, toilet).
- 4) Ventilation system with recuperation and summer bypass. This bypass allows the house to be cooled by cooler outside air at night during the summer months. If the bypass is activated, the exhaust hot air does not pass through the heat exchanger and the heat is not transferred to the fresh cold air coming from outside. The cold air can therefore be used to cool the house. The bypass is activated mostly automatically, depending on the indoor and outdoor temperature.
- 5) Ventilation system with recuperation and with the use of passive cooling: supply of fresh air to living rooms, extraction of degraded air from the kitchen and hygienic areas (bathroom, toilet). Passive cooling is based on the use of the cooling medium in natural temperatures - groundwater, ground heat / ground cold, air intake through the ground heat exchanger, without additional reduction of the cooling medium temperature.
- 6) Ventilation system with recuperation and with the use of active cooling: supply of fresh air to the living rooms, extraction of degraded air from the kitchen and hygienic areas (bathroom, toilet). Active cooling is based on the use of a cooling medium, the temperature of which is additionally reduced by the cooling system. In the second step, the score of the respective type is deducted from the evaluation table. Rating table: Technology; (Adaptation-Mitigation Points), Total result - No cooling system (1; 5): 3 points - Ventilation system with recuperation (3; 1): 2 points - Ventilation system with recuperation and using passive cooling (2; 3): 2,5 points - Passive cooling (via low-temperature circuits in the design (2; 1): 1,5 points - Ventilation system with recuperation and using active cooling (5; 1): 1 point

Data source

Own owner/administrator data, project documentation TSB (technical security of the building)

Tracking frequency

One time, at a change

Urban influence

The city/city district/municipality can directly invest in the technical security of buildings owned by it, or support these measures on the buildings of other owners financially or otherwise.

Presentation method

The results will be presented in a uniform KLIMASKEN framework on a five-point scale according to the sum of points from the evaluation table

Responsibility

Owner, building manager
