

VENTILATION REQUIREMENTS FOR Hz CEILINGS

This ERFA sheet describes how the thermal indoor climate and airflow in the ceiling construction affect the surface of Hz ceilings, and which requirements we set to ensure a durable and attractive result.

New builds

New single-family homes built to current building regulations normally have an airtight building envelope, documented by a blower door test, and a ventilation system with heat recovery. We require the ventilation system to be balanced to a constant negative pressure of 4 Pa in the home all year round. This combination reduces the risk of air flowing through the acoustic ceiling and, with it, soiling of the surface by dust particles from the indoor air.

In these cases, the Hz ceiling can be installed tight to the walls.

Renovation

Many renovation projects do not include replacing the vapor barrier or installing a ventilation system. We offer the following two options so that we can supply the project:

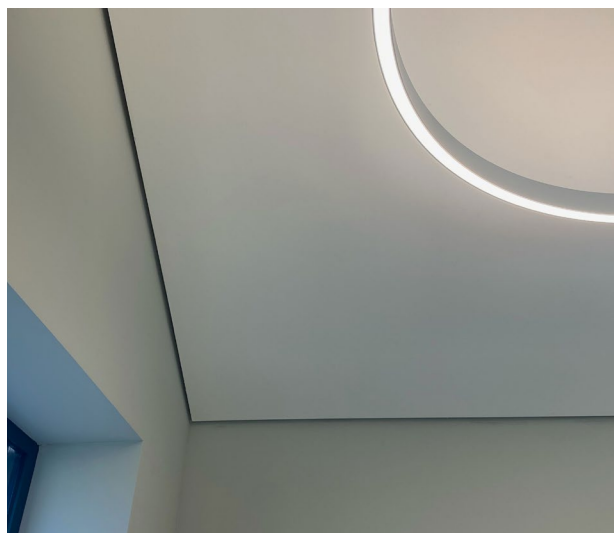
Option 1:

- An approved blower door test documenting the airtightness of the building must be available
- The ventilation system must be balanced to a negative pressure of 4 Pa in the home all year round

If both requirements are met, the Hz ceiling can be installed tight to the walls.

Option 2:

- The Hz ceiling is installed with a 20 mm gap to all walls (see detail drawing 1, page 3)
- or mechanical ventilation is installed with a negative pressure of 4 Pa all year round (see Advice on mechanical ventilation below)



Examples of a 20 mm gap to the wall

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Vaulted ceilings

More and more people choose a vaulted ceiling that follows the roof pitch all the way up to the ridge. A large amount of heat and positive pressure builds up at the ridge and must be ventilated away from the ceiling construction. We are aware that building regulations set no specific requirements for mechanical ventilation in these rooms. Based on our experience, however, we offer the following two options so that we can supply the project:

Option 1:

- Mechanical ventilation with a negative pressure of 4 Pa all year round
- Careful installation and sealing of the vapor barrier at all penetrations (see detail drawing 2, page 3)
- A blower door test documenting airtightness

Option 2:

- Mechanical ventilation is installed with a negative pressure of 4 Pa all year round (see the section Advice on mechanical ventilation)

For both renovation and new builds

Ventilation ducts must be positioned correctly so that they sit flush with the finished level of the acoustic panels.

Ventilation ducts must be fully sealed at all penetrations so that the construction remains airtight (see detail drawing 2, page 3). Inadequate sealing can cause visible joints or changes in the surface.

If the above conditions are not met, or the installations are not carried out correctly and with documented airtightness, Hz Acoustic cannot be held responsible for discoloration, cosmetic defects or functional issues related to the ceiling solution.

Advice on mechanical ventilation

For projects that require mechanical ventilation, it is essential that the system is correctly installed and balanced. We recommend involving a local ventilation specialist, and our [Hz partner installers](#) can advise on the right solution for the specific project.

Consequences

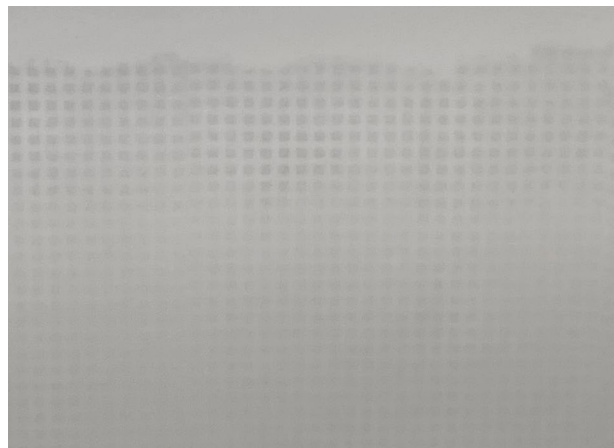
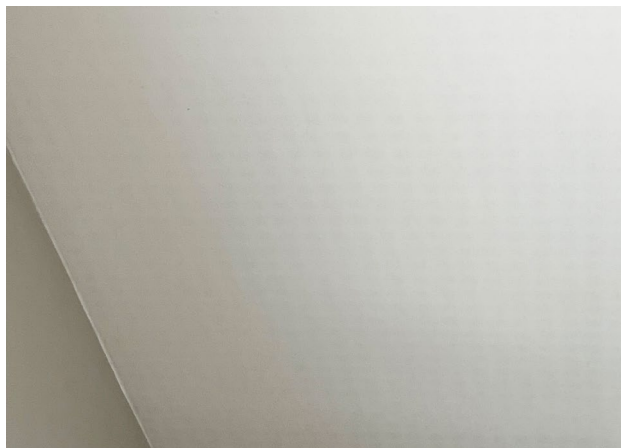
As described, Hz Acoustic Plaster is an open-pore material that is sensitive to airflow through the ceiling construction. Positive pressure in the home or leaks in the vapor barrier will, over time, cause soiling of the surface as dust particles from the indoor air settle in the plaster.

The above requirements for airtightness and ventilation are therefore not arbitrary. They are what allows the ceiling to keep its fine appearance for many years. An airtight ceiling construction, correctly balanced ventilation with a negative pressure of 4 Pa and regular servicing of the system together ensure a lasting result.

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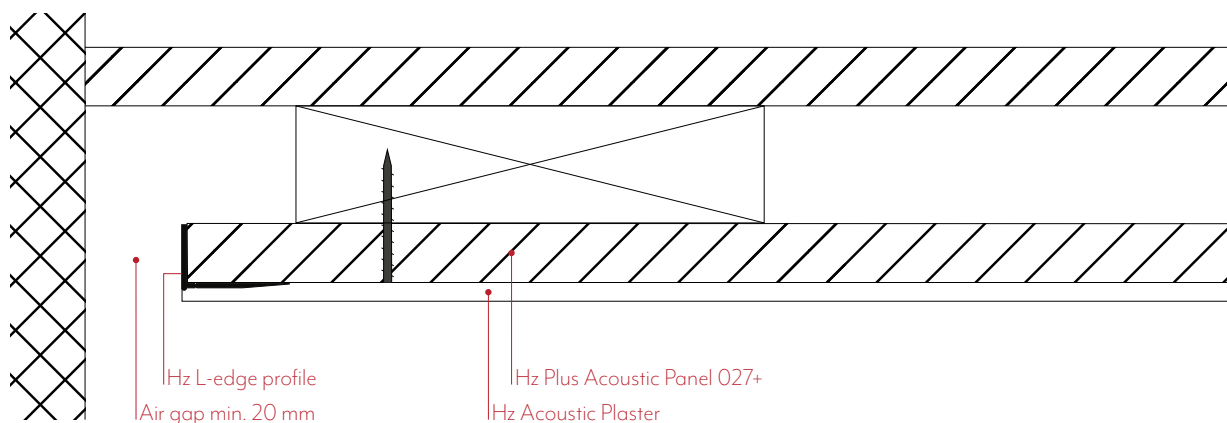
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Examples of surface soiling caused by a leaking vapor barrier

Detail drawings

Detail drawing 1 - Hz Plus with L-edge profile



Detail drawing 2 - Airtight installation of ventilation ducts

