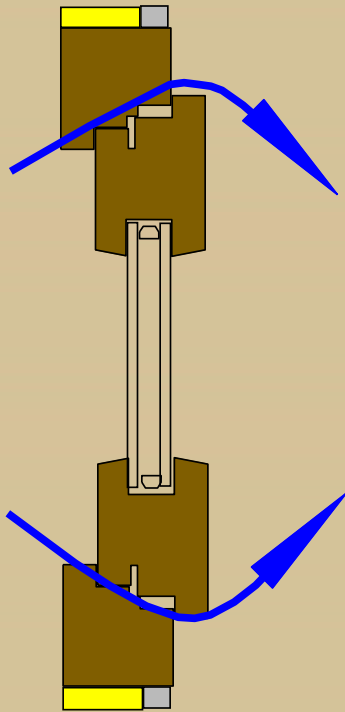


Testing of air permeability through window and door joints

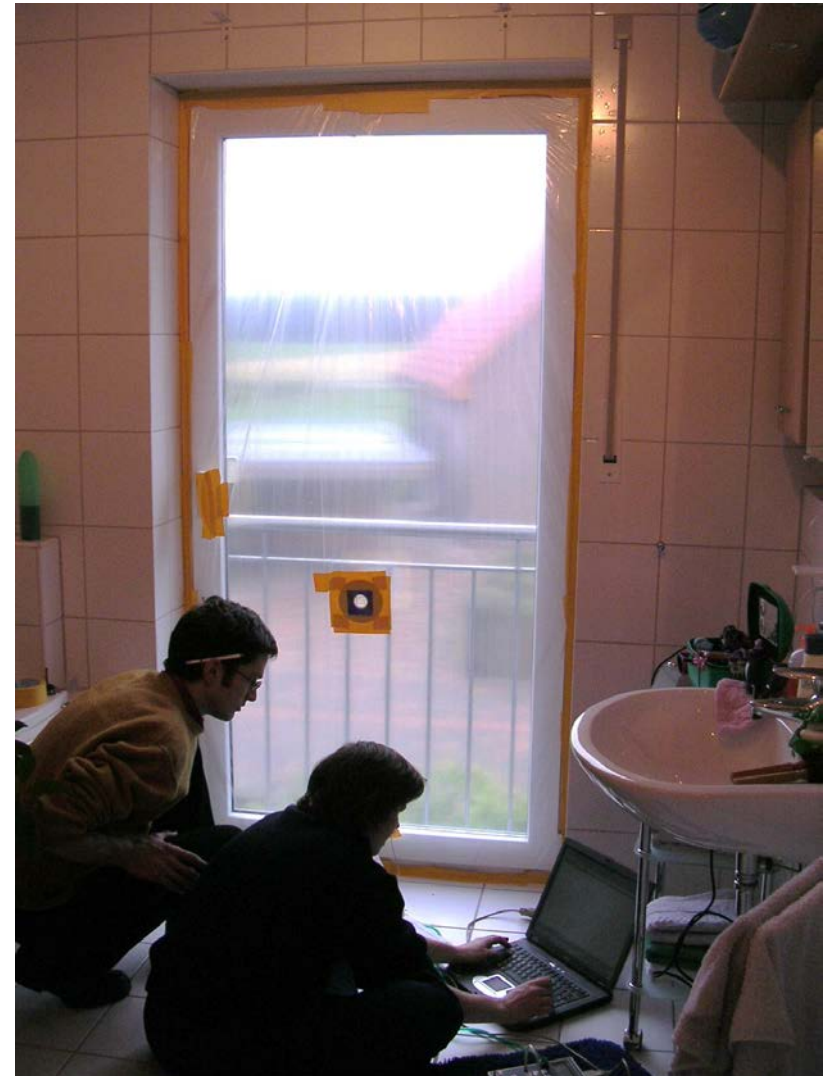


Source: pixabay.com

Application

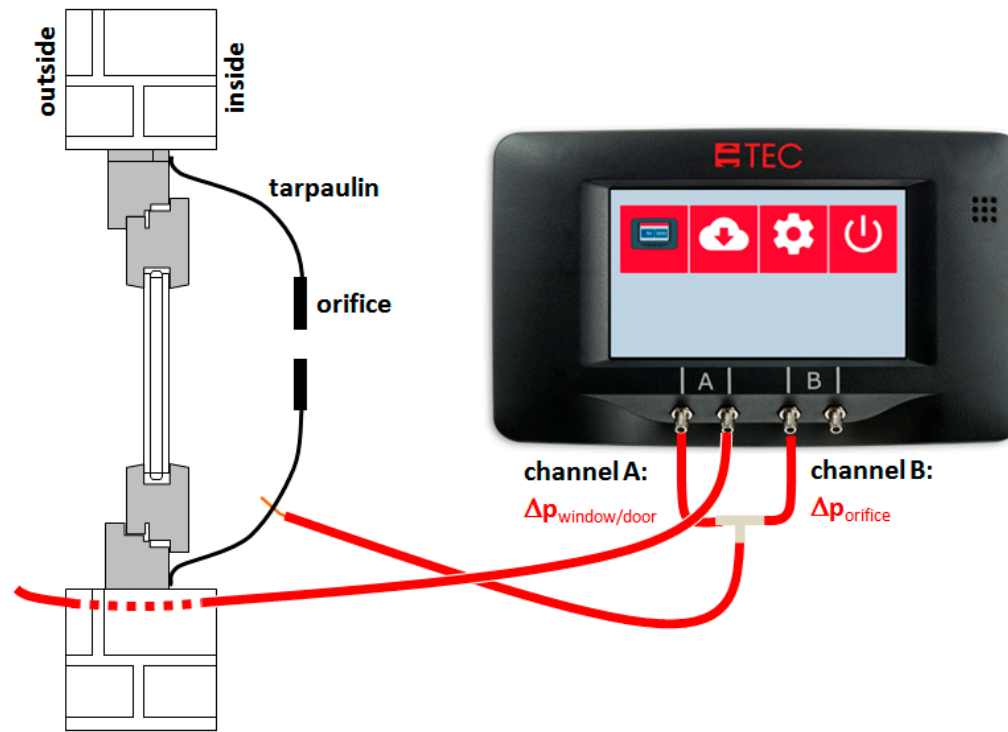
The air permeability of window and door joints is usually determined in the laboratory.

But sometimes it is necessary to carry out the test in an existing building, such as a single family house or an apartment.

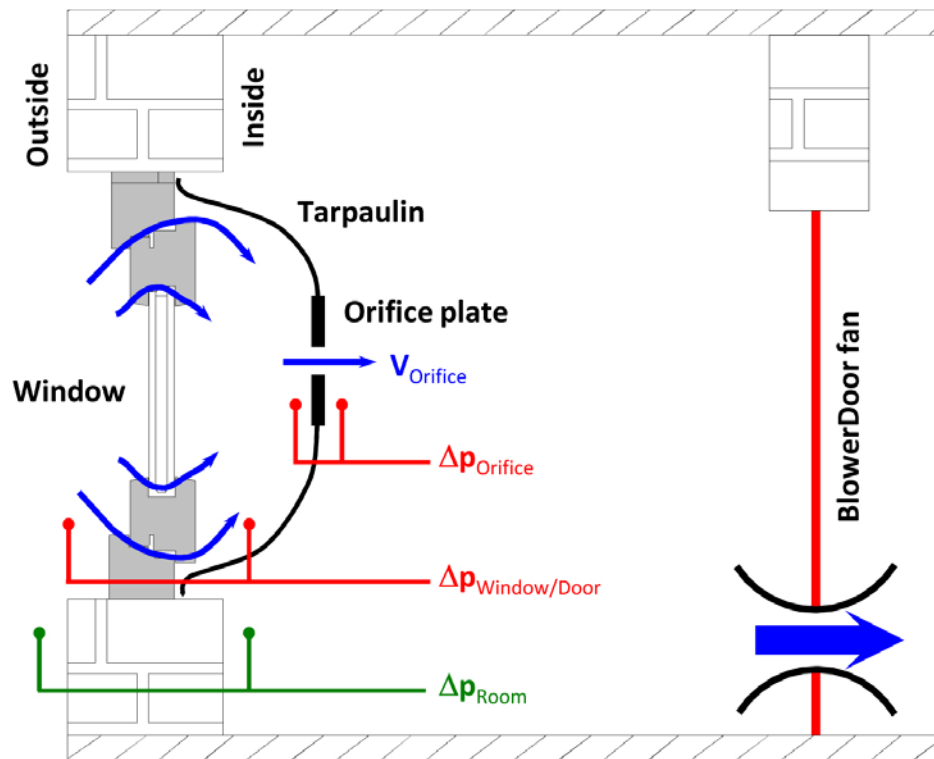


Window and Door Measurement System (a-Wert)

With the Window and Door Measurement System, the airflow through the window or door joints can be determined directly "on site".



Measuring principle



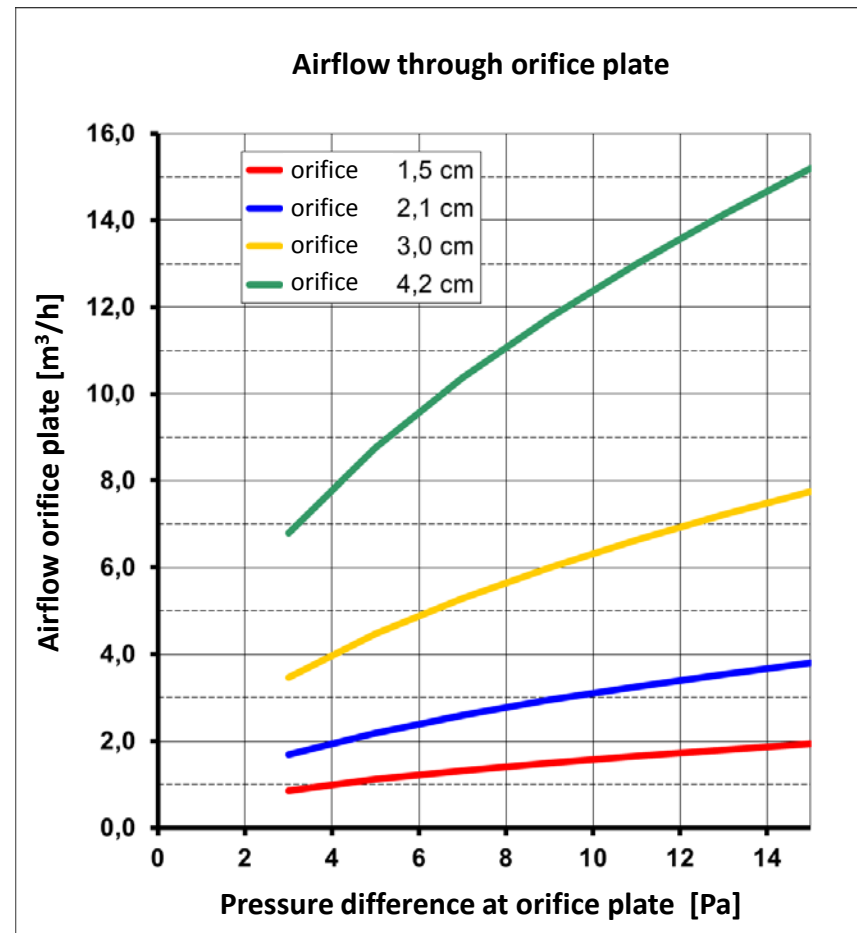
On the window frame a tarpaulin with an orifice plate is applied.

With the BlowerDoor Standard measuring system or alternatively BlowerDoor MiniFan, a pressure difference is generated which continues in the space between the window and the tarpaulin. The tarpaulin slowly curves inwards. As soon as the air space is filled and the tarpaulin is stretched, the measurement begins.

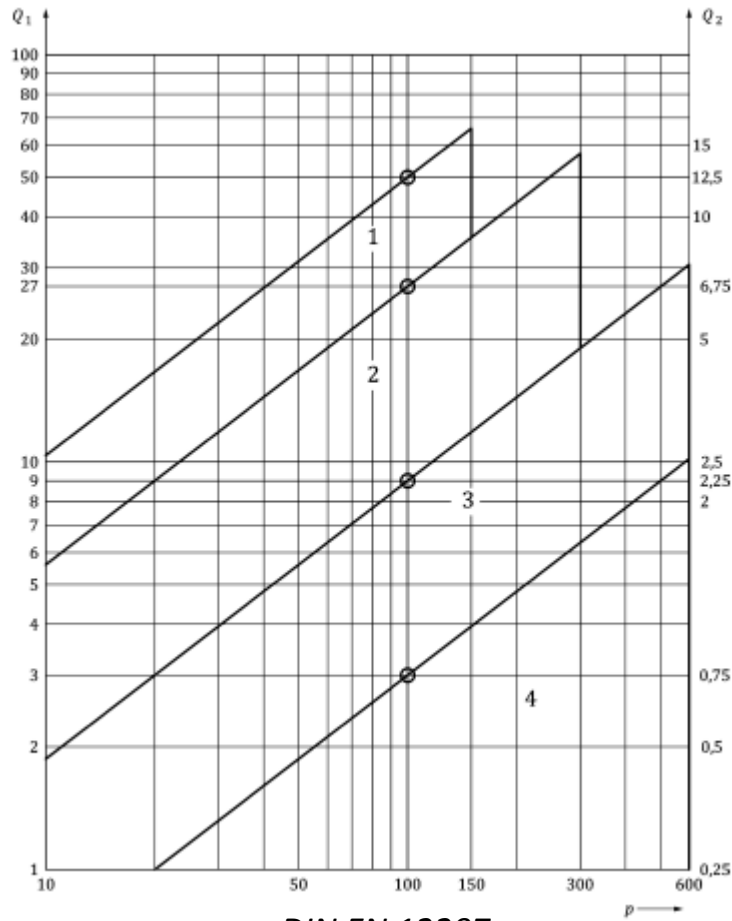
Measuring of the airflow with orifice plate

The airflow that penetrates through the window joints is measured at the orifice plate.

The size of the opening depends on the size of the airflow.



Evaluation and division into window classes



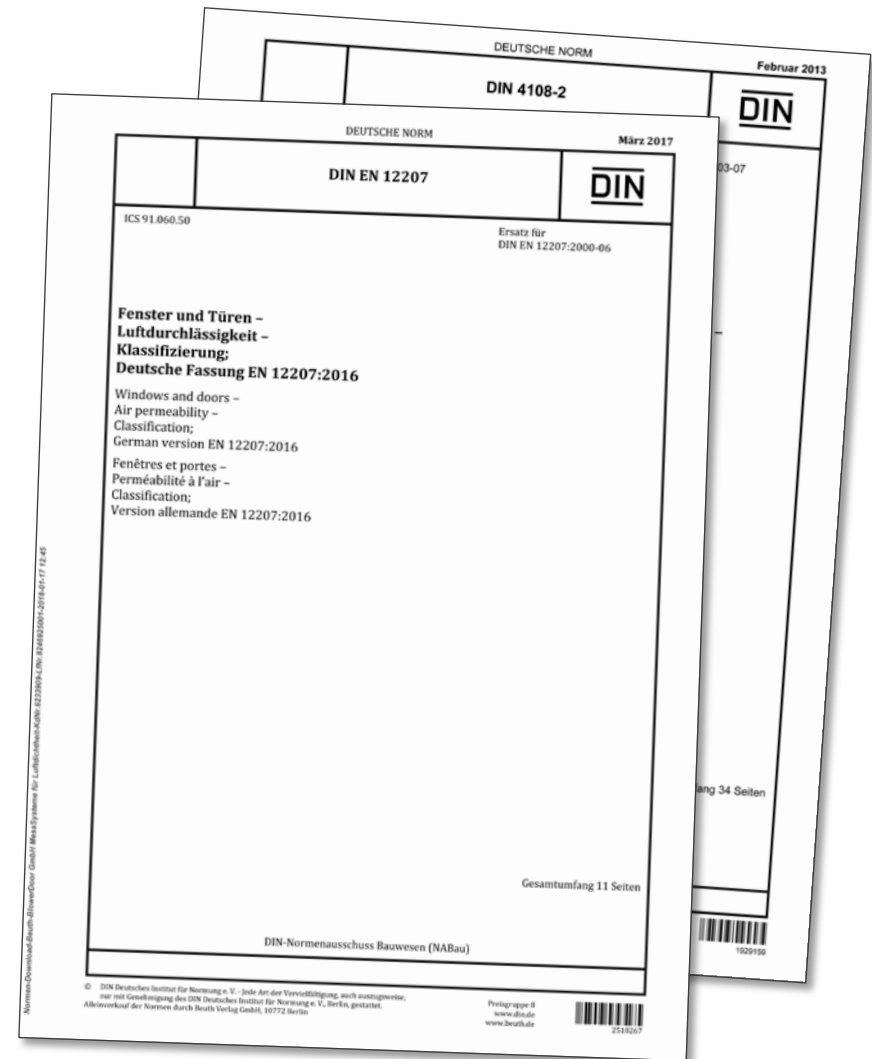
DIN EN 12207

Upper limit values of classes for windows and doors

On the basis of the results, the window can be assigned to a class according to DIN EN 12207 and then compared with the requirements of standards or ordinances.

Literature

- DIN EN 12207-1:2000-06 defines "classes" in which the windows can be classified as a function of joint permeability.
- DIN 4108-2 (2013) defines requirements for the tightness of external windows, french doors and roof windows



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