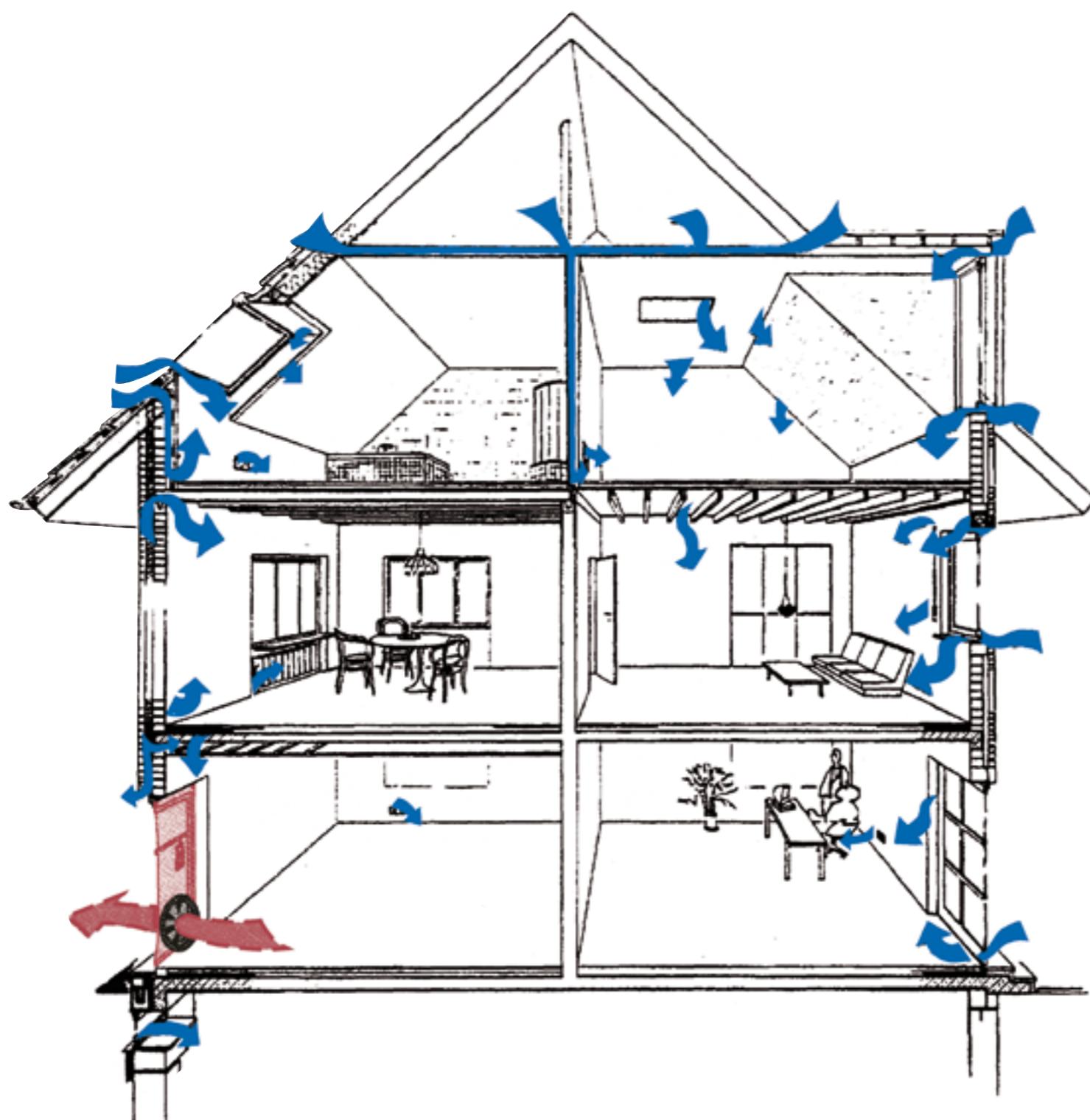


# To know how the wind blows

## Blower Door ensuring airtightness

Increasing energy prices are pushing the need for energy efficient construction and refurbishment. For this purpose an airtight construction is important to ensure that measures such as the installation of modern heating systems or efficient windows are effective. The airtightness is checked via the Blower Door and is enhancing the occupants' thermal comfort (no air infiltration) as well as preventing structural damage.

At first a Blower Door ventilator is built into the front door or into one window of the building. All other exterior doors and windows are closed and all interior doors remain open. Then the ventilator is generating an imperceptible vacuum, of 50 Pascal. Existing leakages are traced by hand and with a wind speed measuring apparatus. The Blower Door is best supplemented by a thermography camera and a smoke generator which makes leaks visible.



### Blower Door built into the front door



### Leakages may appear in the following areas:

- Connections and joints of components
- Pipe and cable openings through the airtight building shell
- Connections to the garret from doors and low windows in the attic floor
- Joints of different building material
- Annexes and oriels
- Reveals
- Skylights, dormers and hatches

### Typical leakages in a building



Inflow of external air through the pushbutton of a toilet tank.



Inflow of external air with 9 m/s at a gable.



Inflow of external air through a power outlet.



Inflow of external air with almost 2.9 m/s at an inner wall of a living room.



Leakages are visualised through smoke.