



Made in Germany

Regel-air®



Window ventilation systems

For easy and secure
home ventilation.

www.regel-air.com



Our window vent: A small part with with a great effect

In addition to the functional tasks of a window such as thermal insulation, driving rain resistance and noise insulation, Regel-air® window vents also contribute significantly to energy-efficient and user-independent ventilation, which prevents construction and mould damage.

Regel-air® window vents enhance the value of windows.

Why user-independent ventilation for moisture protection?

The increasingly sealed construction of modern building envelopes means that moisture generated in homes is no longer automatically extracted. In older buildings, moist air was able to escape through unsealed window seams and other leaks. For modern building construction, a healthy indoor climate depends on functional home ventilation with an individually planned ventilation concept.

The Energy Conservation Regulation EnEV requires a minimum air exchange for preserving health and for the supply of heating systems: This means that “user-independent ventilation for moisture protection” must always be guaranteed according to standard DIN 1946-6.

Houses and apartments must be supplied with sufficient fresh air, if possible without the intervention of the people, so that room humidity and wall moisture are regulated automatically and mould is prevented from forming.

Harmful substances and odours are also carried away by this continuous minimum air exchange.



How can Regel-air® achieve user-independent ventilation for moisture protection?

Regel-air® window vents are used as user-independent ventilation for moisture protection. They ventilate houses and apartments completely independently without requiring the people to intervene.

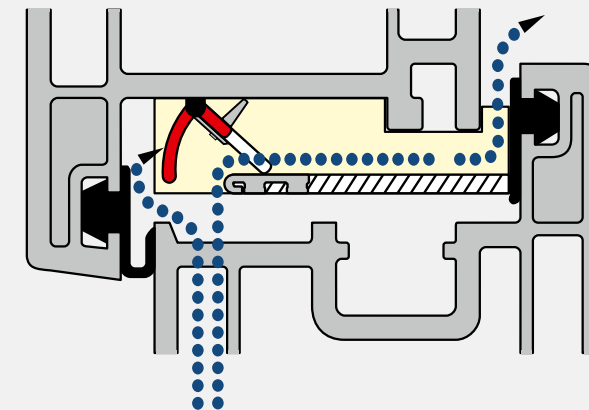
In a ventilation concept which fulfils the requirements of EnEV and DIN 1946-6, an entirely individual plan is created to determine which windows and rooms are equipped with Regel-air® window vents. Home ventilation planned in this manner meets the requirements for user-independent moisture protection ventilation and offers you security for a healthy living environment.

A ventilation concept can be prepared by planners, architects, energy consultants or window specialists.

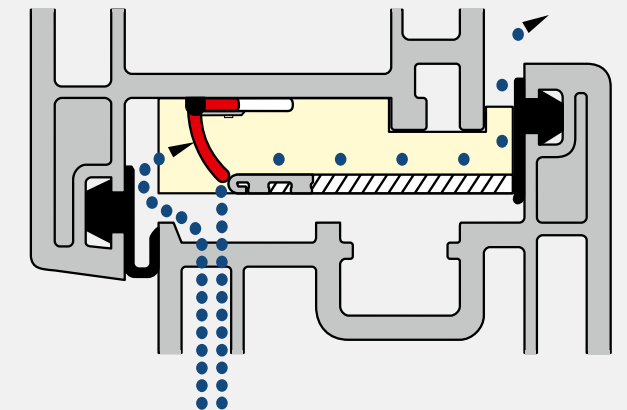
How it works

Air is conducted into the window rebate via a special frame gasket (SFG) and pre-heated before passing through the Regel-air® window vents. A special gasket in the sash frame (SSG) ensures that air is directed through the Regel-air® window vents before entering the room interior, with its flow direction under the ceiling.

In case of higher wind speeds, the ventilation flaps automatically limit the inflowing air to prevent draughts from occurring.



Regel-air® FFL
Flap open



Regel-air® FFL
Flap closed

The function is purely mechanical and does not require any electricity.

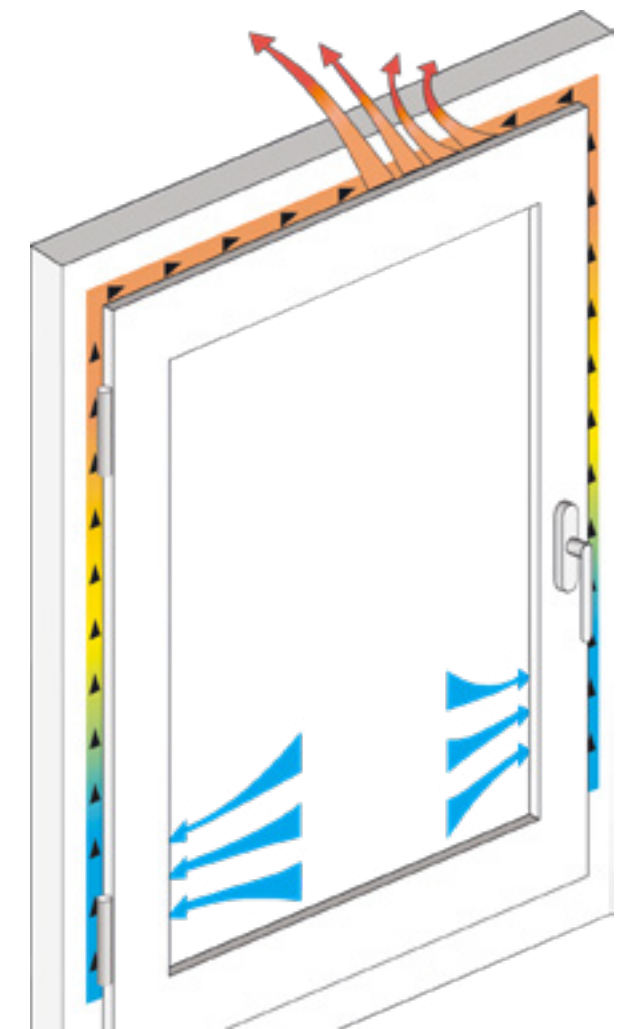
Preheating air in the window rebate

The Regel-air® system uses the window rebate for air supply.

Example: At an outside temperature of -5 °C and an inside temperature of +20 °C, the air in the window rebate has a temperature of more than 10 °C.

Fresh, cool outside air is drawn into the lower vertical area of the frame.

The air is continuously heated in the window rebate and rises up the long window profile to reach the room interior via the Regel-air® system installed at the top of the window.



Regel-air® ventilation systems

There are three different Regel-air® ventilation systems: FFL, PLUS and FORTE.

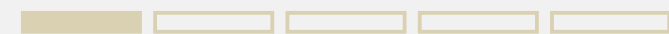
Depending on the planned ventilation requirements, it is possible to achieve low, medium and high airflow volumes. All Regel-air® systems are designed for airflow without milling. By using the ventilation modules, the facade is not modified. The systems are low-maintenance and require no upkeep. All Regel-air® window vents are suitable for factory installation as well as for retrofitting previously installed windows.

These tested systems are resistant to driving rain and can also be used in properties with increased noise insulation requirements up to noise insulation class 4.

- These tested systems are resistant against driving rain
- Usable up to noise insulation class 4
- Operation is purely mechanical
- No electricity required
- Burglary protection on the windows is retained
- 10 year manufacturer guarantee against wear
- On the market for 20 years - Made in Germany
- Germany's best-selling system



FFL - for fine-dosed airflow volumes



The Regel-air® FFL ventilation system is an independently regulated window rebate vent with automatic flow volume restriction intended for fitting in pairs.

It is suitable for all common PVC window systems, as well as for wood and wood-aluminium windows.

The Regel-air® FFL window rebate vent is installed inconspicuously in the upper area of the window where there are no fittings, and is not visible from the inside or outside when the window is closed.

Under increasing wind pressure, the ventilation flaps will close independently. This prevents draughts from occurring. The ventilation flaps open again automatically as soon as the wind pressure falls.

PLUS - for medium airflow volumes

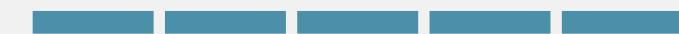


The Regel-air® PLUS ventilation system consists of independently regulated FFL window rebate vents with automatic flow volume restriction as well as a manually adjustable overlap vent (OV) to increase the airflow volume.

While FFL window rebate vents ensure constant minimum air exchange for moisture protection, the OV can be manually opened on the lower casement overlap.

When opened, the overlap vent increase the exchange of air in the building.

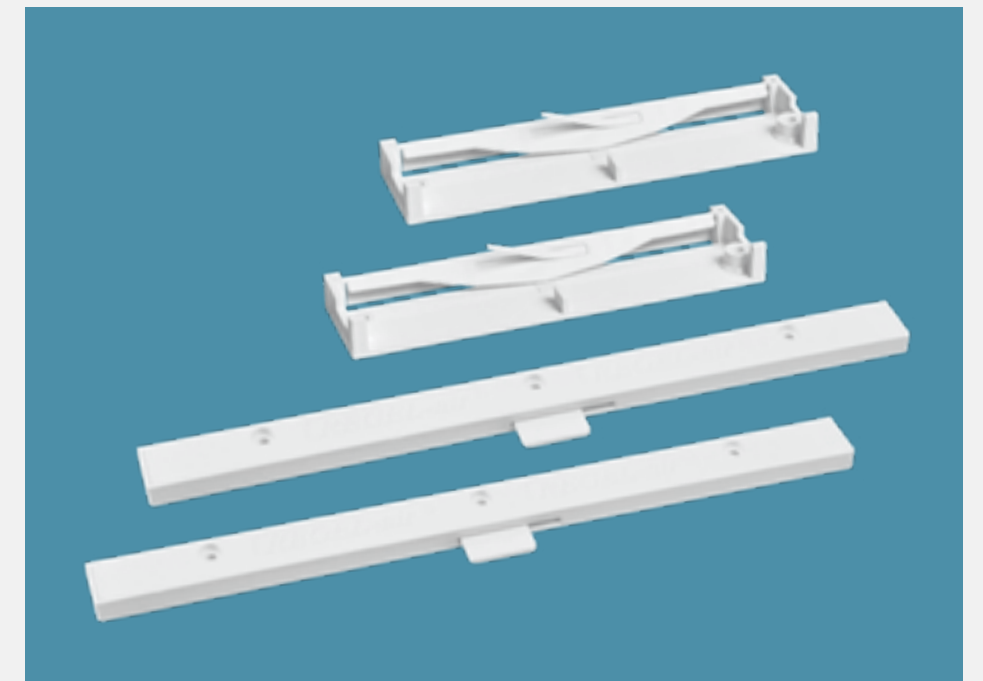
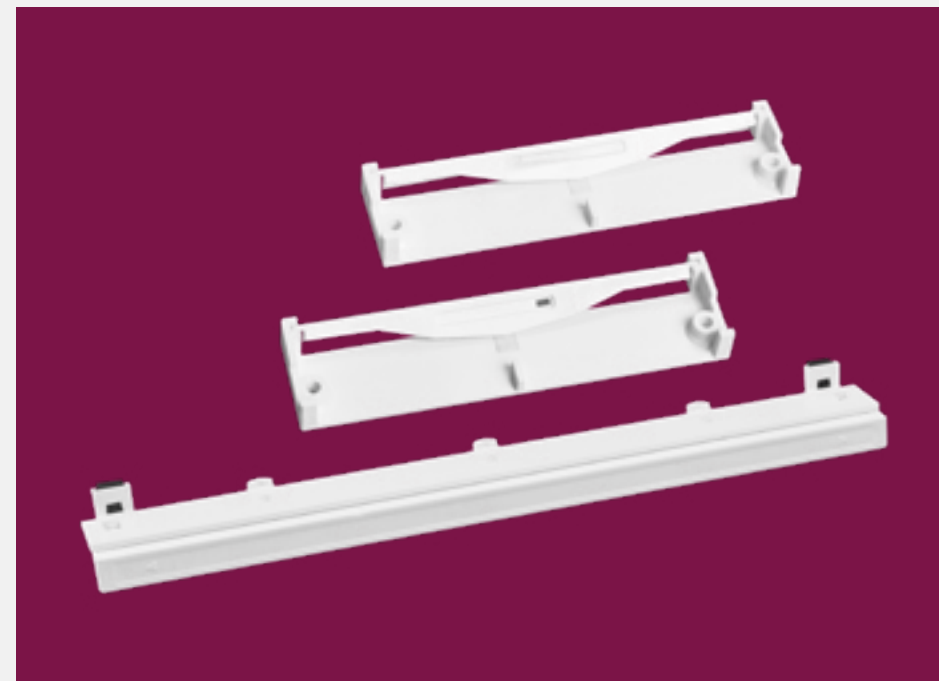
FORTE - for high airflow volumes



The Regel-air® FORTE ventilation system is a combination of two FFL self-regulating window rebate vents and two slide vents (SV).

While FFL rebate vents ensure constant minimum air exchange for moisture protection, the SV installed on the upper casement can be opened manually as needed.

With Regel-air® FORTE, it is possible to transport more than 20 m³/h of air per window casement without opening the window.



Influence of wind and thermal updraft on ventilation

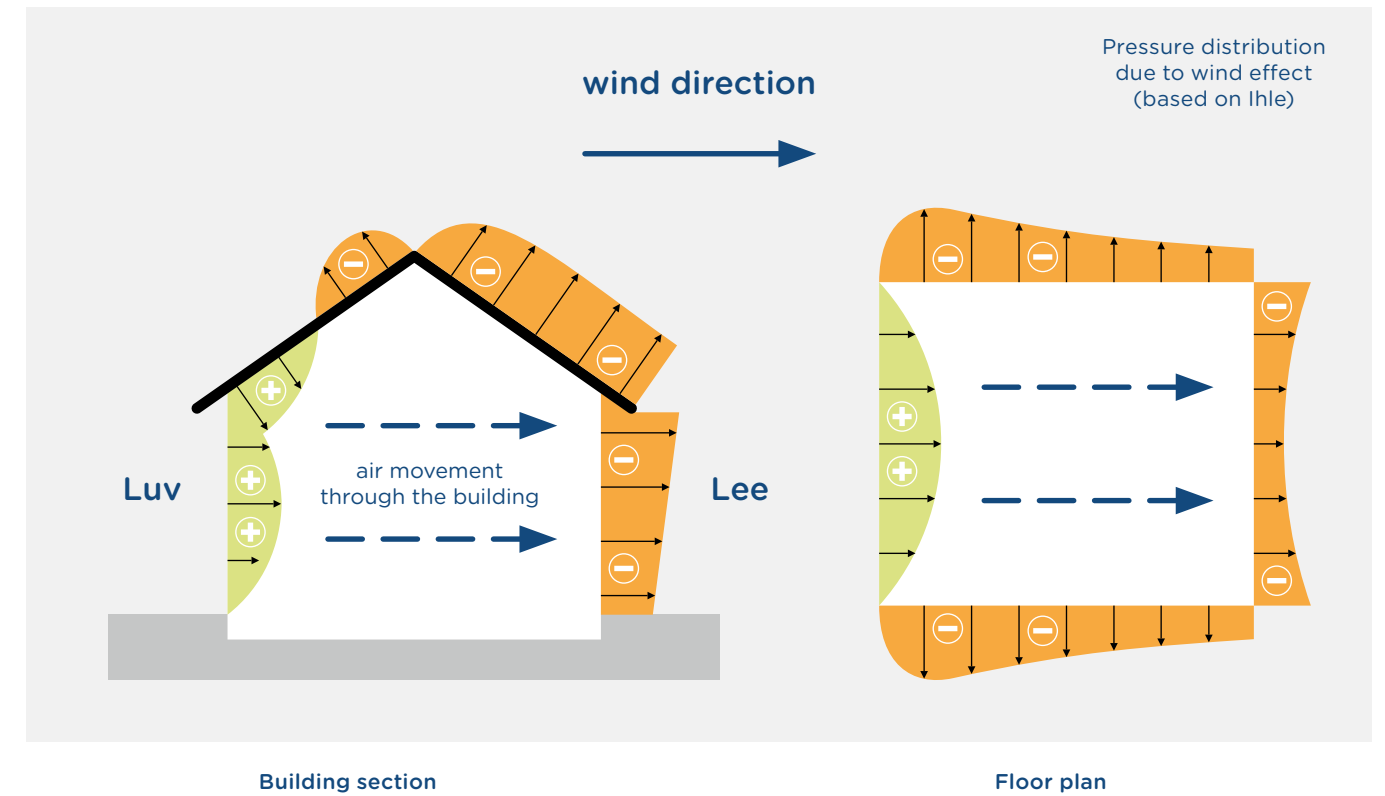
Wind is still the most natural, clean and cost-effective driving force for home ventilation.

Even though wind doesn't always exert a constant level of force, it is a perfect guarantee for continuous ventilation of houses and apartments. Regel-air® window vents are primarily used for transverse ventilation.

This means that air flows into the building on the upwind side (windward side).

Negative pressure is generated on the downwind side (leeward side), ensuring that moist air is carried away.

From the graphic, it can be seen that the negative pressure (pull) is stronger than the positive pressure on the windward side.

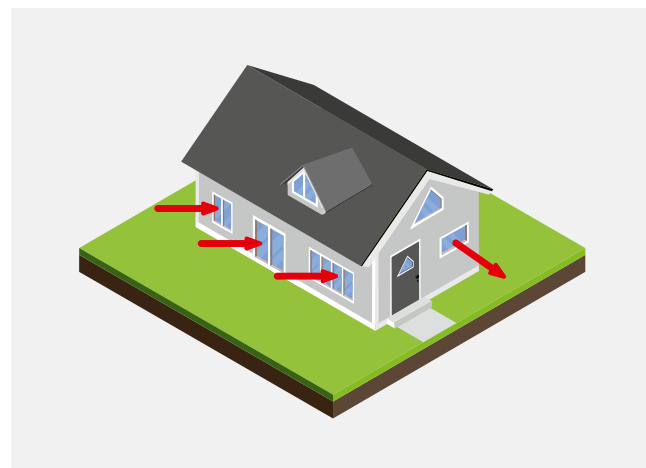


Operation and ranges of application

Cross ventilation

To guarantee airflow in all rooms, it is recommended to equip each window in all rooms with Regel-air®.

The exchange of air through the window vents is influenced by the building location, facade design and wind speed.

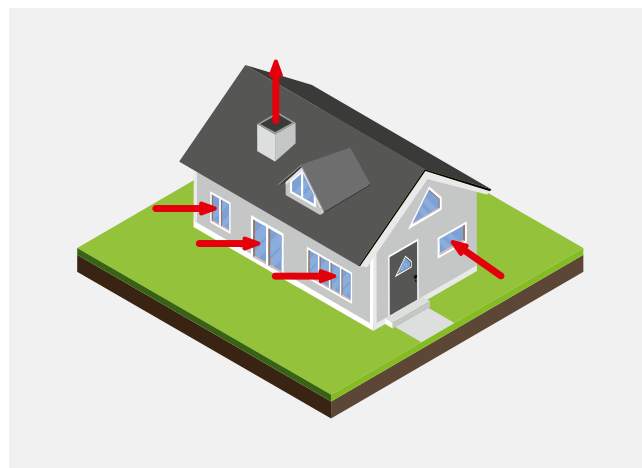


Shaft ventilation

Shaft ventilation is an older form of home ventilation that can still frequently be seen in older buildings. Thermal updraft in the shaft is used to carry away moist air.

This effect creates negative pressure in the home that causes fresh air to flow through the Regel-air® window vents.

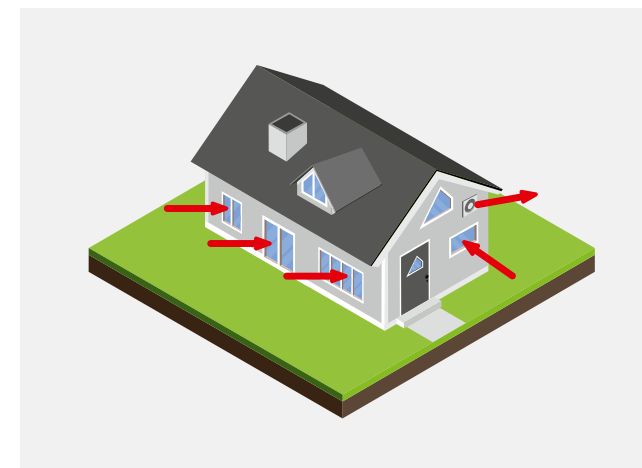
Nowadays, shafts are often used to install a central exhaust air system.



With exhaust air system

Exhaust air systems transport moist air out of buildings. To allow sufficient fresh air to flow into all rooms from the outside, external air apertures are required.

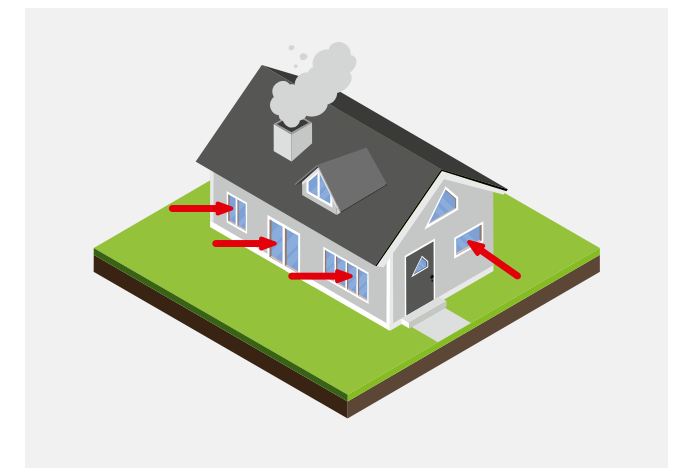
Regel-air® window vents are recognised external air apertures and are very well suited for combination with exhaust air systems. They make it easy to fulfil even the enhanced ventilation levels of DIN 1946-6.



Combustion air supply

The Regel-air® FFL system is a recognised air intake element for combustion air supply. It ensures the necessary air intake and enables perfect combustion.

To determine which Regel-air® window vents you need, speak with your chimney inspector.



Regel-air® window vents
Ventilation without
opening windows.



**The window vent is a quality
product offered by Regel-air®.**

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