



VENTIROCK - VENTILATED FAÇADE SYSTEM.

IS IT:

Product

Technology

Equipment

APPLICABLE FOR:

Restoration

Rehabilitation

New Construction

APPLICABLE ON:

1. Foundations and underground structures

2. Vertical structures

3. Horizontal structures and vertical connections

4. Roof and terraces

5. Façade and building envelope

6. Finishes and completion elements

7. Integrated services

8. General strategies for building recovery

Related companies: ROCKWOOL

DESCRIPTION

Ventilated façade system with two type of insulation slabs, fixed mechanically on the outer face that defines the existing building to be refurbished or the new building.

The combination of a ventilated air chamber and insulation ensure notable thermal benefits. Ventilated facades achieve in summer less heat absorption and eliminate the risk of interstitial condensations.

The heat reduction potential of ventilated facades considering summer comfort is 30% higher in comparison to traditional insulation systems. In cold periods the insulation minimizes the heat dispersion, reducing energy consumption and CO₂ emissions.

Insulation slab:

- Ventirock Duo, double density 40 kg/m³ inner side, 100 kg/m³ external side, lambda 0,034W/mK
- Ventirock Energy, monodensity, 65 kg/m³, lambda 0,032 W/mK

WHY TO USE

- Freedom of design: multiple possibilities of shapes, textures, colours and finishes.
- Durability, double density and mid density slabs.
- Acoustic insulation, airborne noise.
- Sustainability Certificates (LCA, EPD, Voc's).
- Weather resistance.
- Safety in case of fire.
- Great savings potential: 30% higher than traditional systems.
- High performance in terms of durability, safety, comfort and energy efficiency.
- No risk of interstitial condensation in the summer, with less heat absorption.
- Less dispersion of interior heat in cold periods.
- Quick installation and time saving.

- Sustainable materials. Rockpanel panels classified A+ / A1 BRE Global.

In Rehabilitation:

- Improves the aesthetic appearance of the façade.
- Allows the existing insulation to be replaced or complemented.
- Improves acoustic and fire protection properties in existing facades.
- Especially recommended for buildings that require high performance and aesthetics such as hotels, commercial buildings, multi-family housing, homes for the elderly or hospitals.

In New Construction:

- For all types of buildings.
- Aesthetic finish.

HOW TO USE AND APPLY

Installation:

1. Fix the brackets to the supporting base wall.
2. Place the Double Density rock wool panels, Ventirock Duo, on the brackets, with a mechanical fixing, Ventirock Fixings - INCO I or INCO II, per panel. The panels shall be installed without leaving joints between them to avoid thermal bridges. It is advisable to lay the panels in a staggered pattern from the bottom to the top of the façade. The less dense side of the panel is placed in contact with the substrate, to adapt to imperfections and irregularities. The outer, high-density side is resistant to the action of rainwater and wind.
3. Install the vertical metal profiles, L or T-shaped, to the brackets (these must be on top of the insulation).
4. Fix the Rockpanel finish to the profiles, leaving a ventilated air gap between the Rockpanel and the Ventirock Duo or Ventirock Energy rockwool panels. Rockpanel panels require pre-drilling. The Rockpanel external cladding offers multiple

aesthetic possibilities. See the two Rockpanel fixing systems for timber structure: visible fixing (rivet) or hidden fixing (adhesive).

TECHNICAL CHARACTERISTICS

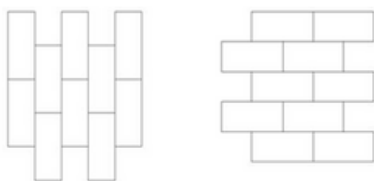
- Fiber loss test: insulation slab submitted to wind pressure of 110 km/h during 4 h, without fiber loss
- Wind suction test: Insulation slab with 1 fixing, resisted wind suction of 120 km/h (800 Pa)
- Rainwater resistance test: Insulation fixed on wall submitted to high pressure water projection 1200 Pa, without water penetration. Test carried out without external cladding, according to EN-12865:2002.

Fixings Diagram:



| Estimated number of fixings | | |
|-----------------------------|--------------------------------------|---------------------------|
| Building height | Exposed sides and edges fixings/slab | Central area fixings/slab |
| 25-40 m | 4 | 3 |
| 10 -25 m | 3 | 2 |
| 0-10 m | 2 | 2 |

Fixings depend on wind action and must be calculated per each project.



Vertical or horizontal slab orientation

RECOMMENDATIONS AND OTHER INFORMATION

Recommended for buildings such as hotels, hospitals, commercial buildings, multi-family dwellings, office buildings, etc.

EXAMPLES

See figures 1-2 at the end of this sheet.

REFERENCES / SOURCES AND LITERATURE

<https://www.rockwool.com/es/productos-y-aplicaciones/aislamiento-fachadas-y-medianerías/fachada-con-revestimiento/fachada-ventilada/sistema-redair/>

<https://p-cdn.rockwool.com/syssiteassets/rw-es/herramientas/biblioteca-de-documentos/fachada-ventilada---sistema-redair/gama-ventirock.pdf?f=20230216151249>

<https://p-cdn.rockwool.com/syssiteassets/rw-es/herramientas/biblioteca-de-documentos/fachada-ventilada---sistema-redair/gama-ventirock.pdf?f=20230216151249>

Study Cases:

<https://www.rockwool.com/es/consejos-inspiracion/obras-de-referencia/hotel-blue-coruna/>

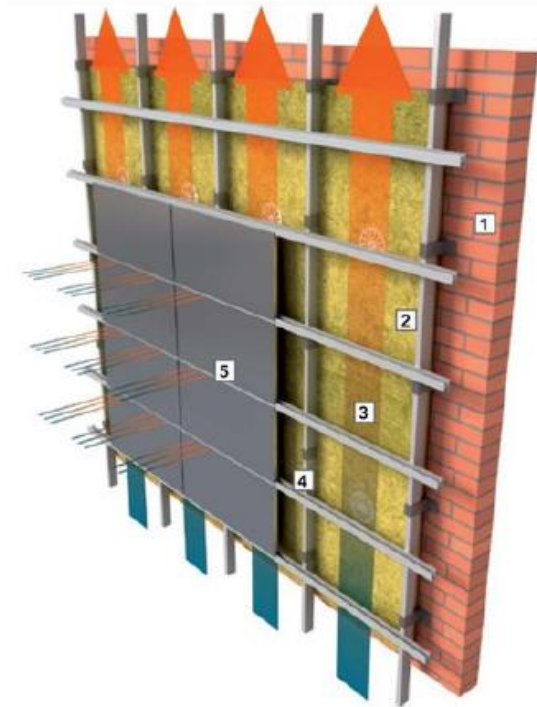
<https://www.rockwool.com/es/consejos-inspiracion/obras-de-referencia/torre-bolueta/>

WEBSITE OF THE COMPANY

<https://www.rockwool.com/>

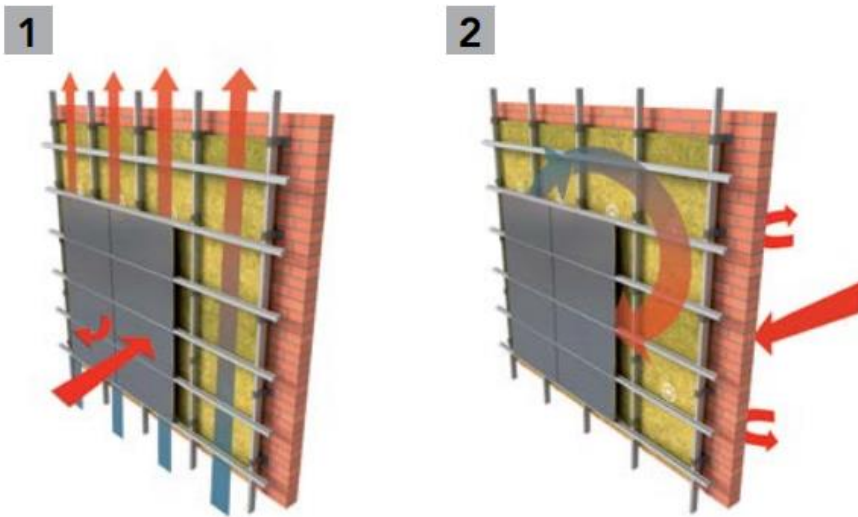


IMAGES AND CAPTIONS



- 1** Wall
- 2** Insulation slab
- 3** Ventilated air chamber
- 4** Metal structure
- 5** ROCKPANEL façade cladding –
Compressed basalt stone bonded with
organic binder

Fig.1: Diagram of the system on a traditional wall structure. © ROCKWOOL



1. Summer

In hot periods when the sun's rays fall directly on the finish, part of these rays filter into the air chamber and activate the "chimney effect", causing the hot air to rise and in its place, this space is occupied by air with a lower temperature. This prevents the accumulation of heat in the façade.

2. Winter

In winter, on the other hand, as solar radiation is not sufficient to achieve the movements of the "chimney effect", the façade acts as a heat accumulator, and the air chamber helping with the thermal stability of the system.

Fig.2: Diagram of the system's performance during different seasons. © ROCKWOOL