SECURO

Open state Cavity Barriers with instant fire stop

Firebreather® by Securo


SECURO

Protect what matters is more than a slogan for us at Securo

Protecting people is something we strive to do every day by having the safest fire-resistant vents and ventilated fire stop solutions on the market and also by continuously working for safer regulations, both nationally and internationally.

People and infrastructure
Since 2006 our products based on the award-winning Firebreather® technology have made everyday life safer for both people and infrastructure. It is satisfying for everyone who works here to know that the results of our work are socially beneficial and give people better protection. We are a Norwegian company with sales partners in several countries around the world. We are also actively working with new markets worldwide.

A part of svt Group
Since 2020, Securo has been a part of the international svt Group, which is the largest group in the field of passive fire safety in Europe and has sales networks in more than 50 countries. For more than 50 years, the svt Group of Companies has been recognized as a leading full-service provider in the field of passive structural fire protection and industrial fire stop applications.

Svt's range of products
With our brands PYRO-SAFE®, ROKU®, KERAFIX®, FLAMRO®, FLAMMADUR®, GEAQUELLO®, FLEXILODICE®, VENTILODICE®, MORTON®, PYROGUARD and FIREBREATHER®, we offer Europe's most comprehensive portfolio of state-of-the-art fire protection products and applications.

FB Firebreather® by Securo

svt
Protect your values.

Why fire resistance is an integral part of the building envelope.

A free flow of air behind the cladding is very important for keeping the cavity dry, but this also makes the façade one of the most vulnerable elements of a building in case of a fire. A façade must neither propagate fire, nor allow fire or heat to travel from one area to another (compartmentation) and it should remain structurally intact for a reasonable amount of time when exposed to fire.

That ultimately means that:

- The separating function between fire cells must be maintained.
- Spread of flame within the wall must be stopped.
- Spread of fire along the surface of the building façade should be limited.

Why are fires in cavities and air gaps in facades so dangerous?

Due to the "chimney effect", fire in the air gap behind cladding can spread very quickly. As the oxygen in the air gap is utilized, the fire seeks more oxygen and moves rapidly upwards.

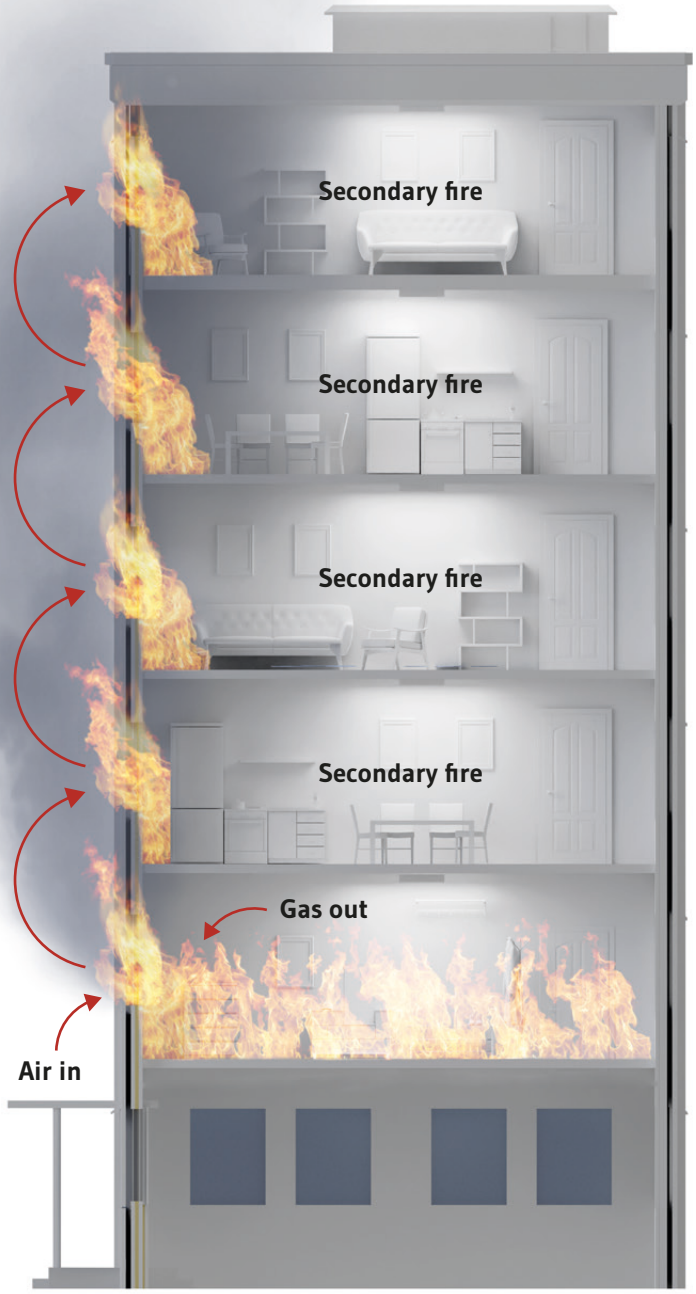
Fire spreading only on the outside of cladding is often not that critical, while fire that spreads in the air gap behind the cladding can travel 5-10 times faster in the same time frame due to rapid buoyancy of hot air in the air gap, compared to fire on the outside.

"The Leap-Frog Effect"

A flashover in a room may cause fire to break out of a window. Flames and hot gases escaping through a window opening are sufficient to cause the re-entry of the fire in the room above the storey of fire origin. Speeds up to 8 meters per minute have been measured. Since the fire is hidden behind the cladding, it is very hard for fire fighters to extinguish it.

When this mechanism of fire spread occurs, it has the potential to repeat through the same mechanism to every floor above it. Therefore, this is referred to as the "Leap-Frog"-Effect.

Modern ventilated rainscreen cladding systems have become one of the preferred choices worldwide for high-rise structures, providing design flexibility as well as weather protection.



What if the cavity is non-combustible?

Even if the cavity itself is fully non-combustible, the extended length of flames created in the "chimney" still allows the flames to reach the next floor level, where windows and other wall penetrations will allow the fire to re-enter the building and maintain the spread of fire.

The Firebreather® Cavity Barrier stops the chimney effect

The Firebreather® Cavity Barrier is the only product on the market that has the ability to instantly stop fire from spreading in the air gap behind the cladding in a facade. This makes it possible to use non-combustible materials in the air gap.

Photo: Delver

How the Firebreather® Technology works

Our technology is founded on a unique combination of a flame-stopping element, a heat-absorbing and accumulating element that prolongs the flame-stopping effect, a thermal bridge that prevents products from becoming too hot on the unexposed side, and an intumescent material that completely seals the product within minutes.

What makes the Firebreather® technology unique:
One of its most notable characteristics is its immediate ability to suppress fire, setting it apart from competitors' products, which often take several minutes to control the spread of fire.

Beyond this, it provides a multitude of benefits, including quick and easy installation, enhanced security for building movement during fires, sustainability through reduced material use, competitive installation costs, and effective suppression of flames and embers.

Incorporating our cavity barriers not only ensures increased safety but also promotes leaner, more sustainable, and cost-efficient constructions. Through the reduction in material use and swift installation, our solutions promise optimized construction processes.

It's also important to note that our product has undergone extensive testing and carries a solid third-party product approval, ensuring its reliability and safety.

Application Areas
The Firebreather technology can be adapted to various configurations and areas of use. Our ventilated fire stopping solutions can be implemented and customized for construction,
offshore installations, shipping, batteries, industry, and more.

Fire compartmentation of the façade

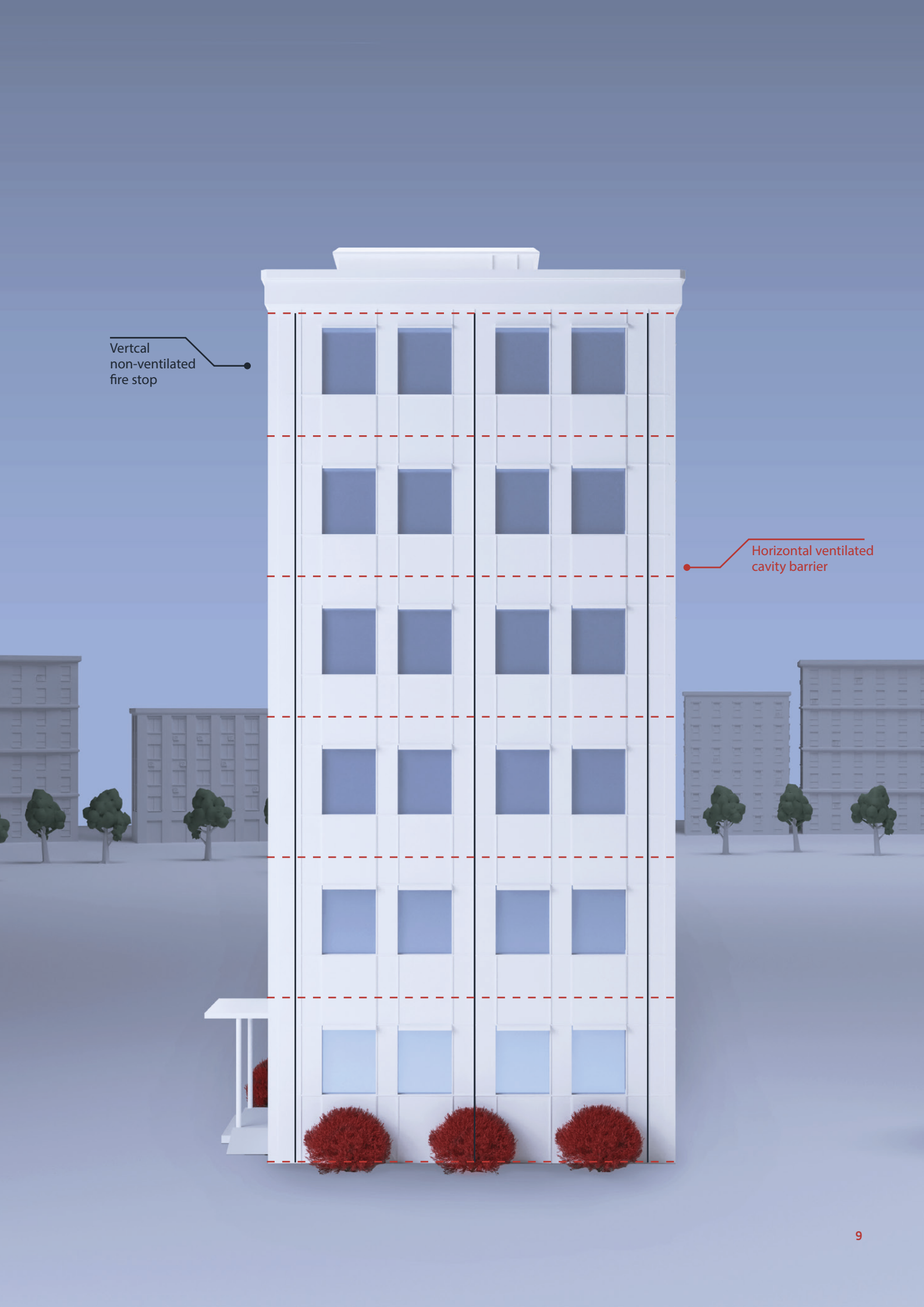
Just like fire cells inside a building, façade compartmentation prevents fire from spreading in the facade and eventually inside the building.

A façade can be divided into fire compartments by using ventilated cavity barriers at floor level, ensuring that normal ventilation of the façade is maintained and at the same time ensuring effective fire protection. Non-ventilated fire stops would be installed vertically.

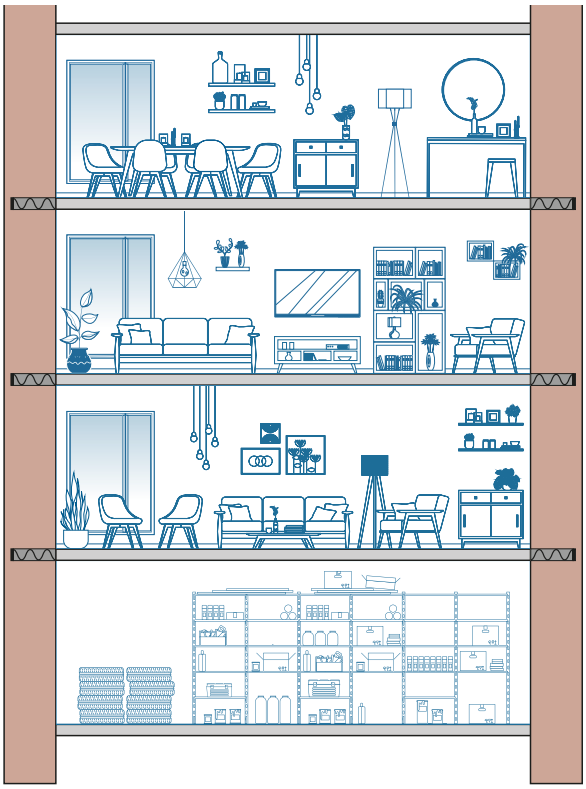
Role of barriers in cavity compartmentation

Cavity barriers prevent fire from entering the cavity of rainscreens and from bypassing fire-separating elements, like floors. A cavity can be as large as the wall itself, so it is most often sub-divided into cavity compartments.

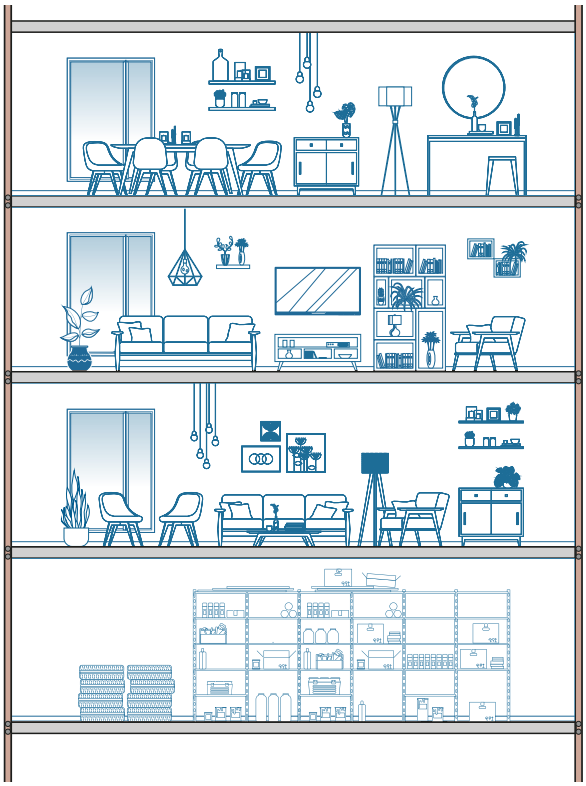
Fire in the cavity behind the cladding can spread 5–10 times faster than on the outside, with a speed of up to 8 meters per minute. Firebreather® Cavity Barrier instantly stops the fire from spreading to the floor above while maintaining the necessary ventilation for the facade. This means that the fire can only spread on the outside of the facade, which is often less critical compared to a fire that spreads in the cavity.


Vertcal
non-ventilated
fire stop
Horizontal ventilated
cavity barrier

Narrow construction



Large air gap with stonewool based cavity barrier.



Narrow air gap with Firebreather® Cavity Barrier.

Advantages with a narrow facade construction

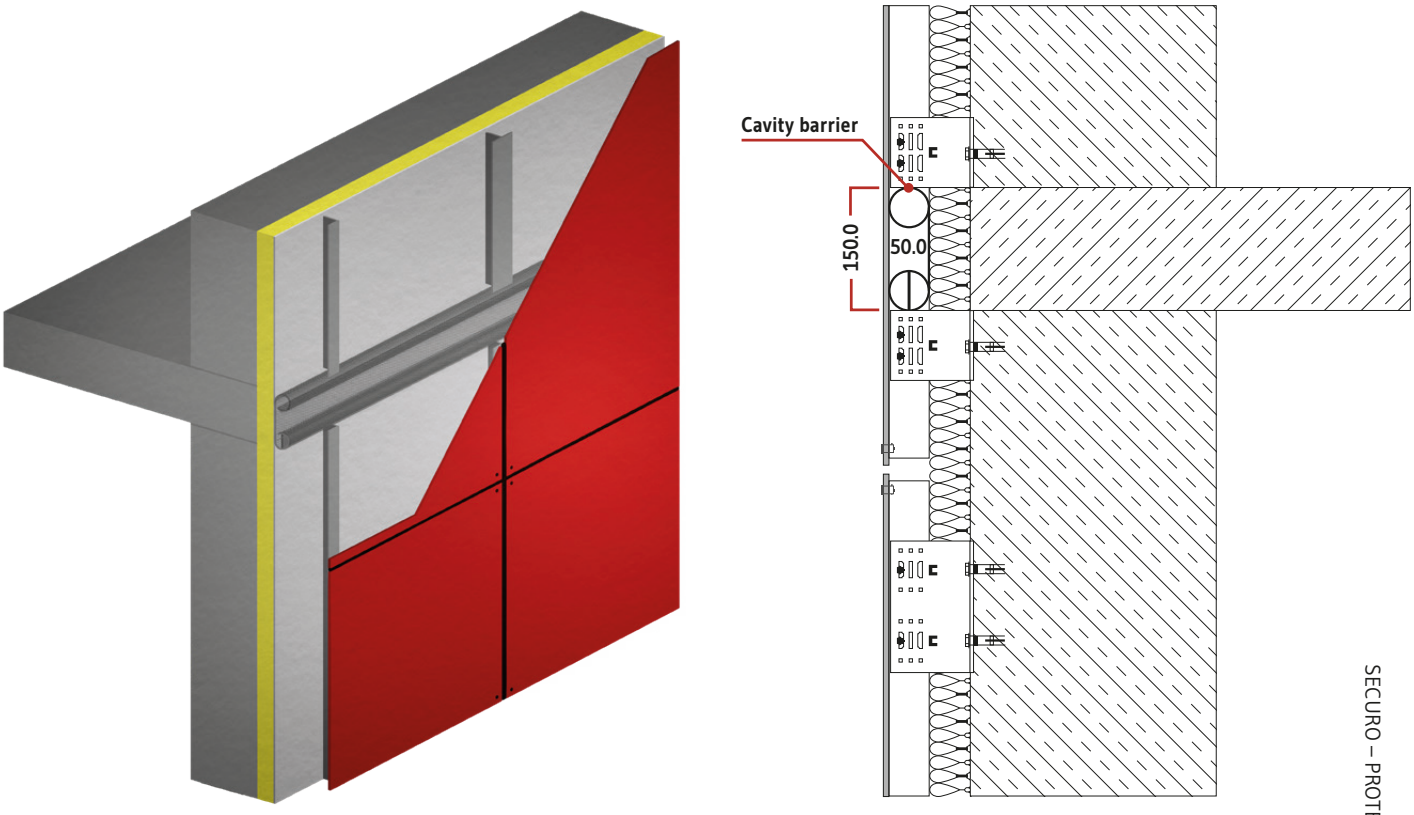
Narrow facade construction offers several advantages, especially in urban environments and in the context of sustainable building practices. Using Firebreather® Cavity Barriers with widths between 20 mm - 50 mm instead of cavity barriers with large roockwool slabs provides you with several advantages.

Here are some of the key benefits:

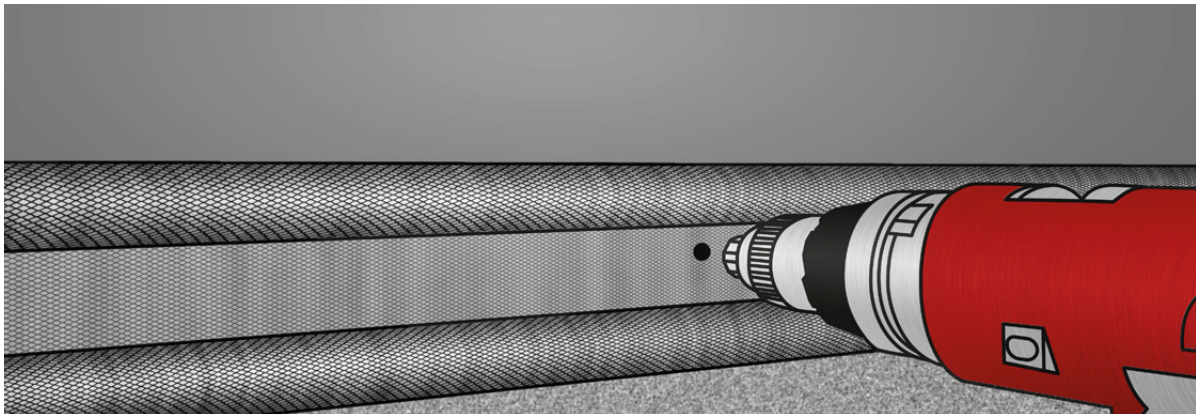
Space Efficiency: In densely populated urban areas, where space is at a premium, narrow facades allow for the construction of more units within the same footprint. This can be particularly advantageous for residential and commercial buildings looking to maximize useable area.

Sustainable Development: Narrow facades support sustainable development goals by promoting energy efficiency, less material use, reducing waste, and improving occupant comfort. This approach aligns with broader environmental objectives, such as reducing carbon emissions and minimizing the ecological footprint of buildings.

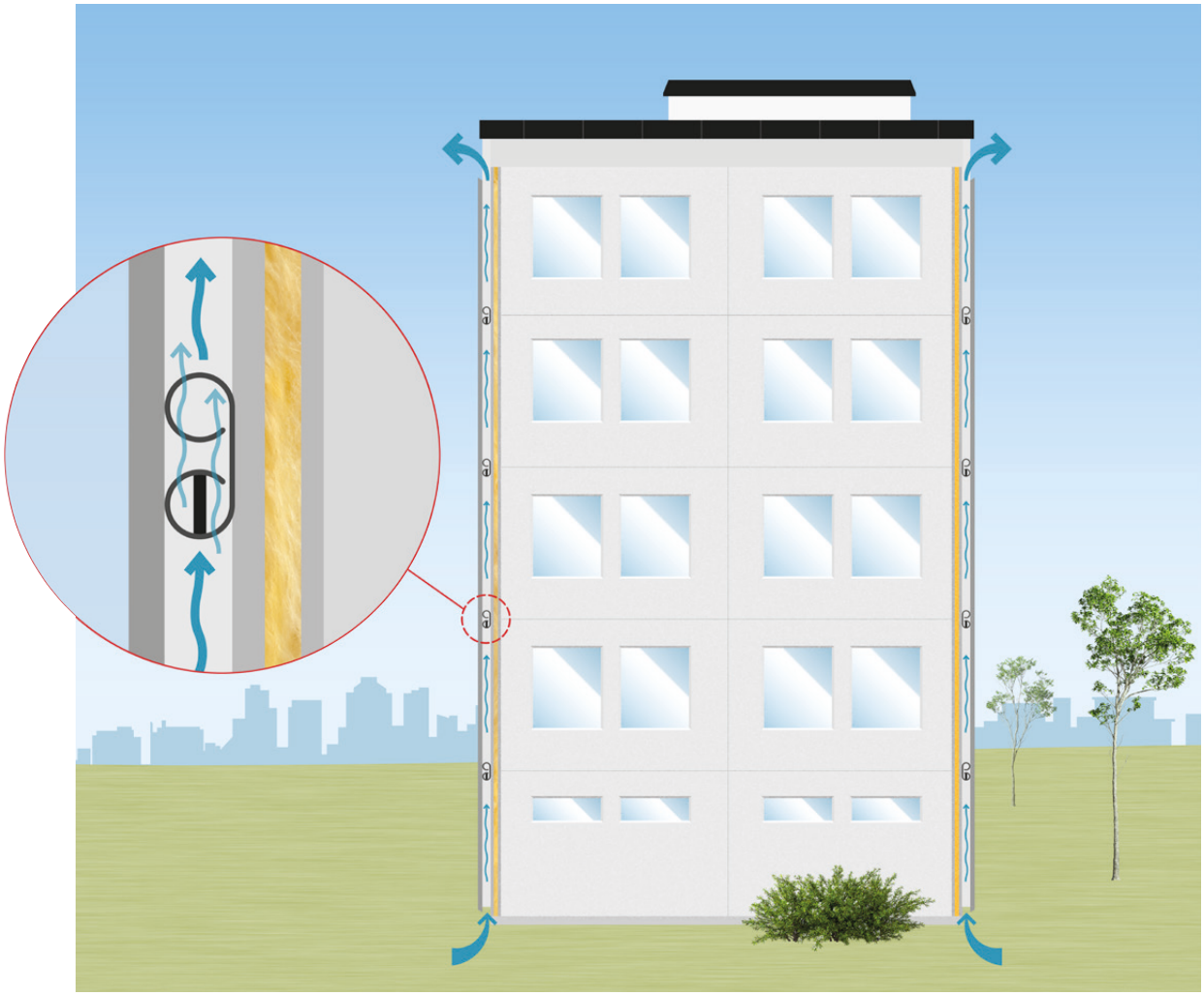
Cost-Effective: Depending on the design and materials used, narrow facade construction can be more cost-effective compared to other types of construction. The potential for reduced material usage and lower energy costs over time can make narrow facades an economically attractive option.



Firebreather® Cavity Barrier installed behind the cladding, directly on insulation.



Very fast and easy installation - one man, one tool in just a few seconds.



Firebreather® Cavity Barriers strategically installed at floor level to ensure optimal compartmentation of the facade, enhancing fire safety by preventing the spread of fire between floors.

Firebreather® Cavity Barriers: Seamlessly integrated directly onto insulation, offering a compact and eco-friendly fire protection solution that maintains building aesthetics without compromising safety.

Firebreather® Cavity Barrier

To prevent vertical fire spread in facades, effective fire stopping is essential. Balancing the building's breathability with the capacity to block smoke and fire through cavities poses a significant challenge. The optimal solution involves employing non-combustible cavity barriers that are mechanically affixed to the façade wall. This ensures that, in the event of a fire, the expanding material remains securely in place.

The Firebreather® Cavity Barrier stands out as the premier, high-performance solution for safeguarding ventilated façades and rainscreen cladding. Integral to the external building envelope, it delivers robust protection against fire and hot smoke without compromising on airflow and drainage.

Distinguished by several superior attributes, the Firebreather® Cavity Barrier is unique in the market, offering the only tested solution that provides an immediate fire stop. This distinction underscores its unmatched efficacy and reliability in enhancing building safety.

Firebreather® Cavity Barrier:

> Instant fire stop
> Ember stop
> Continues ventilation and drainage behind the cladding
> No disintegration of intumescent during fire and movement in the building
> Tested both as stand-alone and as part of several large-scale system tests
> Fast and easy installation

Applications:

> Behind ventilated façade cladding
> In ventilated roof constructions

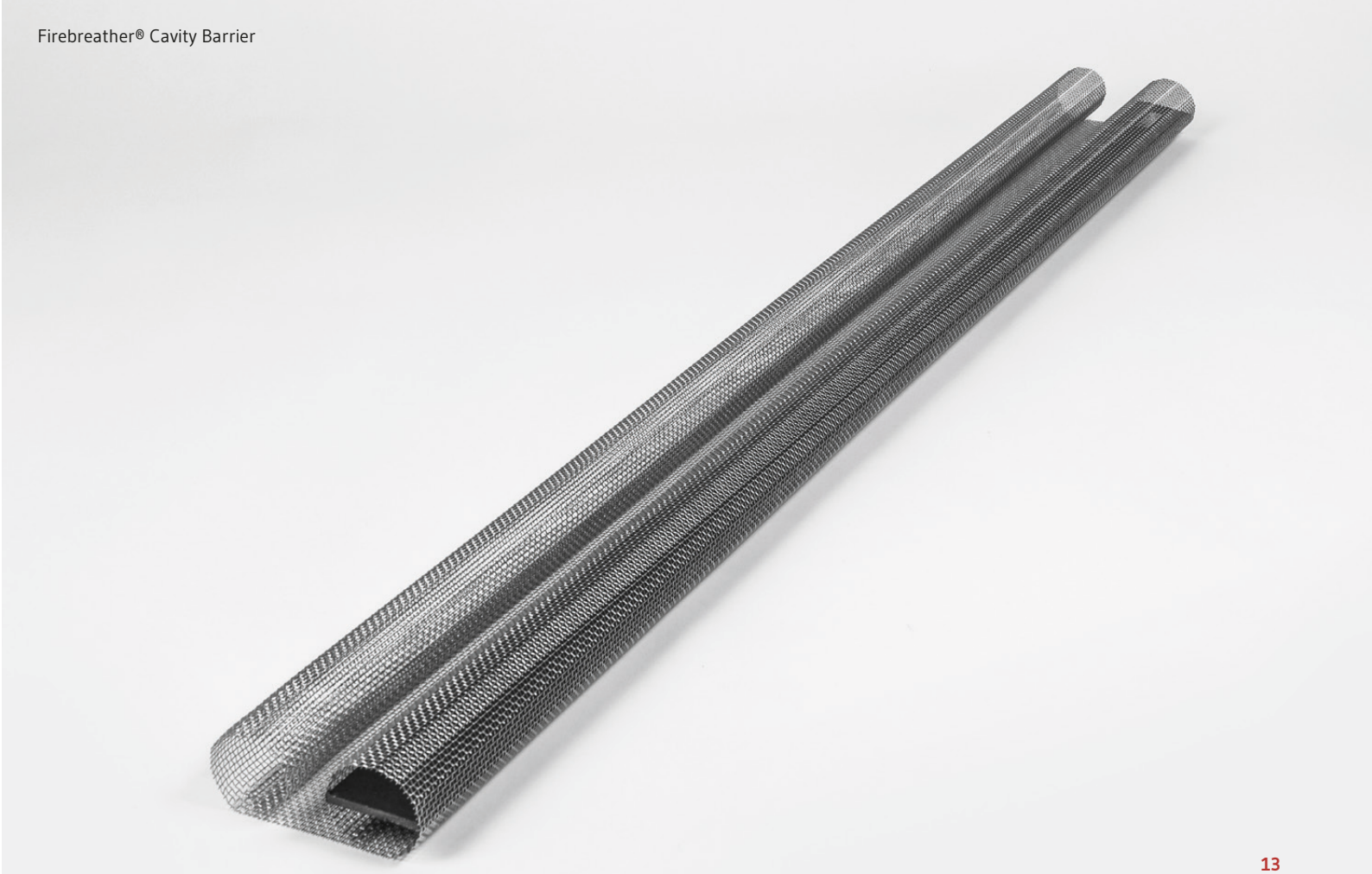
Dimensions:

> Width: 23mm, 28/30mm, 36mm and 50mm
> Length: 53cm and 113cm

Fire rating:

> EI30, EI60 and EI90

Firebreather® Cavity Barrier



The solution for fire resistance

Fire resistance is the ability of a construction element to maintain its fire stability, integrity, and thermal insulation for a certain period of time.

All Firebreather® products are tested and certified with EI rating.

Technical advantages with Firebreather® Cavity Barrier
What makes the Firebreather® Cavity Barrier the superior choice for passive fire safe ventilation of façades:

- The cavity barrier creates strong fire cell compartments in facades.
- The cavity barrier instantly stops fire spread in cavities.
- The cavity barrier limits the spread along the outside of the facade.

Firebreather® Cavity Barrier tests and certified documentation
Firebreather® Cavity Barrier is tested according to the European standard EN 1366-4 and have a product documentation from RISE fire research and a French product approval.

It's also tested according to TGD19, NFPA 285 and numerous third-party tests.

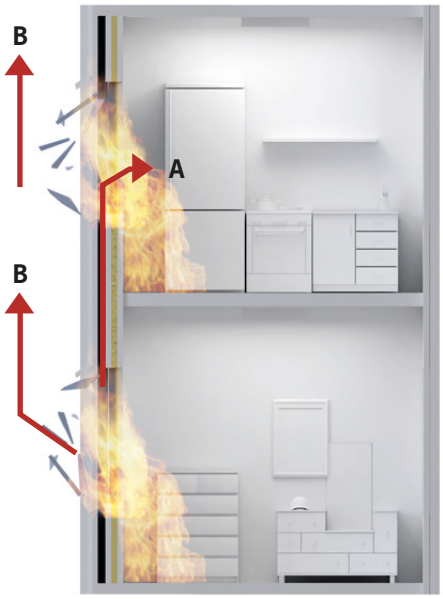
Firebreather® Cavity Barrier is also tested according to ASTM 2912 – Test method for sudden direct flame impingement for the open state in ventilated constructions. This shows the products ability to stop the passage of flames, embers, radiation, and hot gases caused by sudden direct flame impingement.

These documentations is a guarantee of quality and performance and makes the product safe to use in your projects.

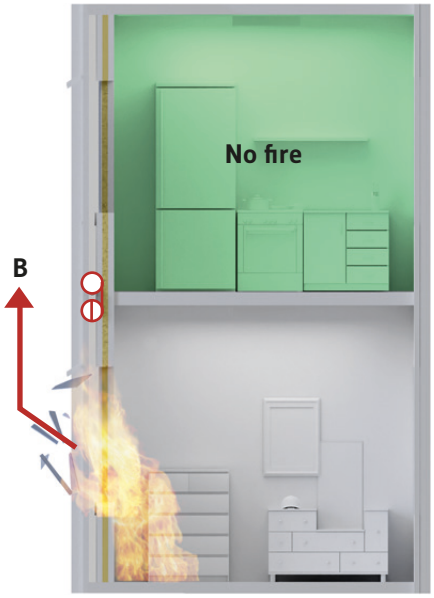
Download EPD

What makes the Firebreather® Cavity Barrier from Securo your best choice for passive fire safe venting of your façade?

- No bypassing fire compartments via air gaps and breaking window (A).
- Limit fire spread on the façade (B).
- Block flames in the open state (traditional products allow flames to pass first 5 minutes).*
- No disintegration during fire (Firebreather® keeps in place even with movement).
- No PVC or plastic that can form burning droplets spreading downward fires.
- Block ember attacks.
- Block birds, rodents and insects (more than 2 mm).



Without Firebreather® Cavity Barrier



With Firebreather® Cavity Barrier

Knowing the speed at which a fire can spread in a cavity, instant fire stop is an essential attribute for a cavity barrier. As the Firebreather® prevents any concealed fire in the cavity, the only way for fire to spread is on the panels' outer surfaces **(B)**. Flames **(B)** are no longer supported by the torch **(A)** emanating from the vent opening at top of the air gap, so its capability of leap frogging to next panel is significantly reduced.

* While all other products on the market need up to several minutes to expand and close the cavity, the Firebreather® Cavity Barrier has instant fire stop that will keep flames from entering the protected area at any time.

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