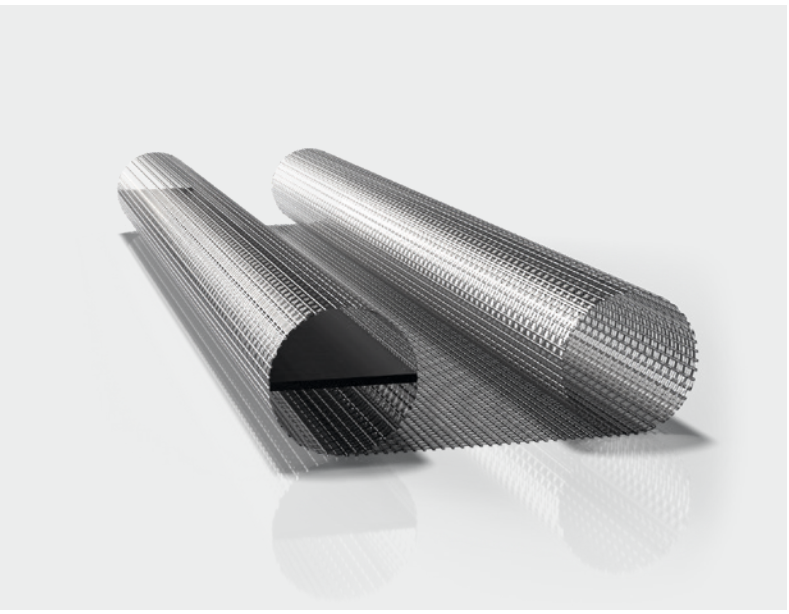
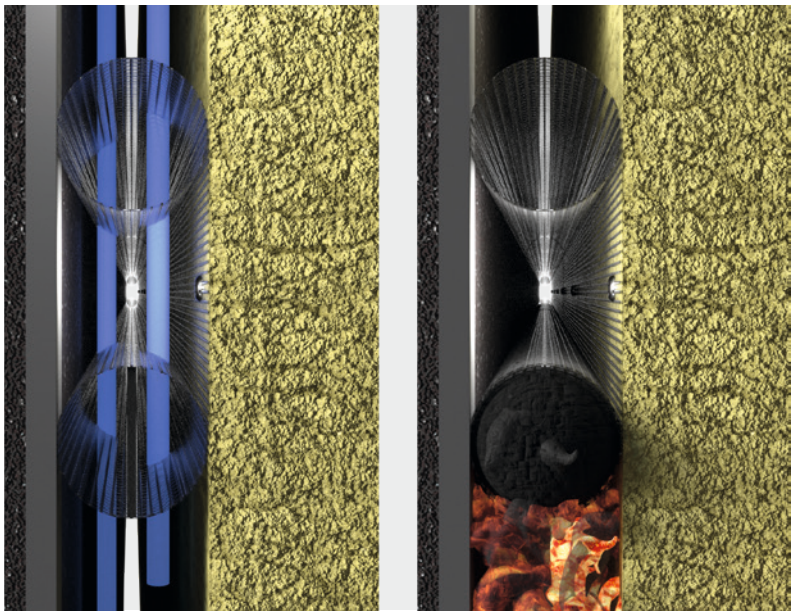
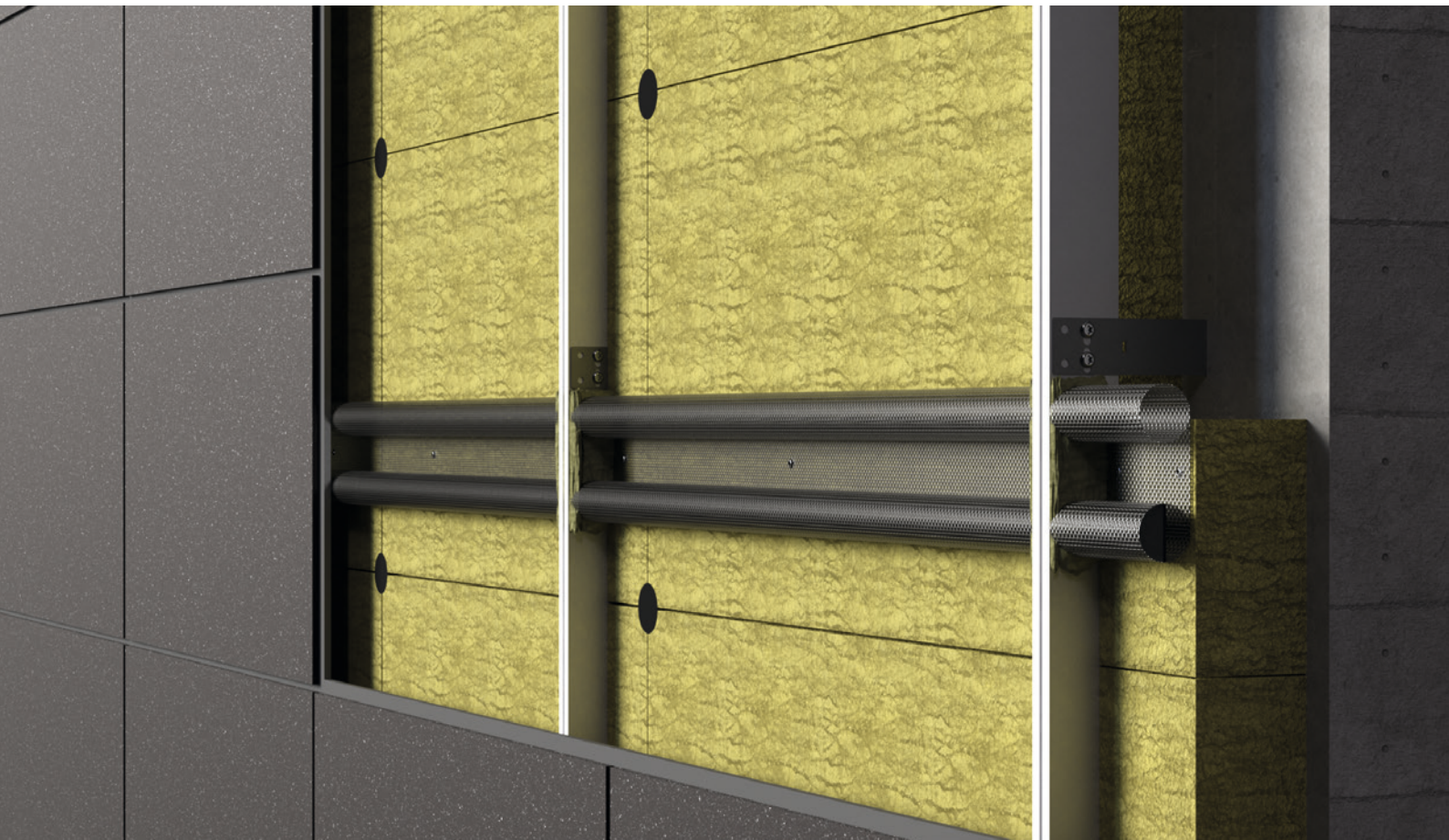
NO

Firebreather® Cavity Barrier with fire rating up to 90 min

High-performance solution for safeguarding ventilated facades and rainscreen cladding







Flamro Norway – your expert in passive air vents with instant fire resistance

Flamro Norway was founded in 2006, originally under the name Securo. The internationally patented Firebreather® technology forms the foundation of all our products. We are located in Verdal municipality in Trøndelag, where we have our office, warehouse, and production facilities. Today, we are also established with sales partners in several countries and are actively working on expanding into new markets. Since 2020, we have been part of the svt Group, the largest group in passive fire protection in Europe, with a sales network spanning more than 50 countries.

With realigning its strategic focus, svt´s product division has been operating under the newly introduced brand name Saverto since June 2025. This step consolidates svt's international product brands under a single, unified umbrella – with the same strong commitment to high quality, safety and reliability.

Expertise built on innovation

As part of this development, Securo officially became Flamro Norway in 2025. Within Saverto, Flamro acts as the leading brand for expertise in passive fire protection in multiple categories. With more than 30 years of Flamro expertise in delivering high-quality solutions worldwide, we combine proven know-how with continuous innovation. In addition, we benefit from production sites across Europe, ensuring adaptability to local market requirements and the ability to serve diverse customer needs with maximum efficiency. At Flamro Norway, we specialize in fire-resistant ventilation products based on the renowned Firebreather® technology.

Committed to fire protection worldwide

We actively participate in several international forums, including organizations responsible for developing new test standards for fire protection products in Europe and the USA. In the U.S., we were the leading contributor to the development of a new test standard for passive air transfer grilles, which was launched in 2017. In addition, we have been actively involved in the development of national standards in several European countries.

Limiting property damage, preventing operational failures, avoiding environmental damage, and – above all – protecting human lives, health, and property; these are the goals of Flamro. At the same time, our overarching ambition is to be the leading manufacturer in our field and to provide the best possible service, so that all our customers feel safe and satisfied with us.

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 facade one of the most vulnerable elements of a building in case of a fire. A facade 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 facade 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.

Photo: Moelven

How the Firebreather® technology works

Our technology is based on a unique integration of four key elements: a flame-stopping component for immediate fire suppression, a heat-absorbing and accumulating layer that prolongs protection, a thermal bridge that minimizes heat transfer to the unexposed side, and an intumescent material that swiftly seals the product within minutes.

What makes the Firebreather® technology unique:
One of its most notable characteristics is its ability to stop flames instantly, 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.

Firebreather®

One of the world's tallest timber buildings, Mjøstårnet, is secured by Flamro Norway

Standing 85.4 meters tall, Mjøstårnet was certified as the world's tallest timber building by the Council on Tall Buildings and Urban Habitat, as well as Guinness World Records. The tower has also received numerous awards and recognitions, such as the New York Design Awards, Norwegian Tech Awards and CTBUH's Award of Excellence.

Mjøstårnet stands as a symbol of the "green shift" and proves that tall buildings can be built using local resources, local suppliers and sustainable wooden materials.

Firebreather® Cavity Barriers are installed between the storeys and provide a good facade compartmentation in the building.
Flamro Norway is proud to be a part of the fire safety of such a landmark building.

Fire compartmentation of the facade

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

A facade can be divided into fire compartments by using ventilated cavity barriers at floor level, ensuring that normal ventilation of the facade 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.

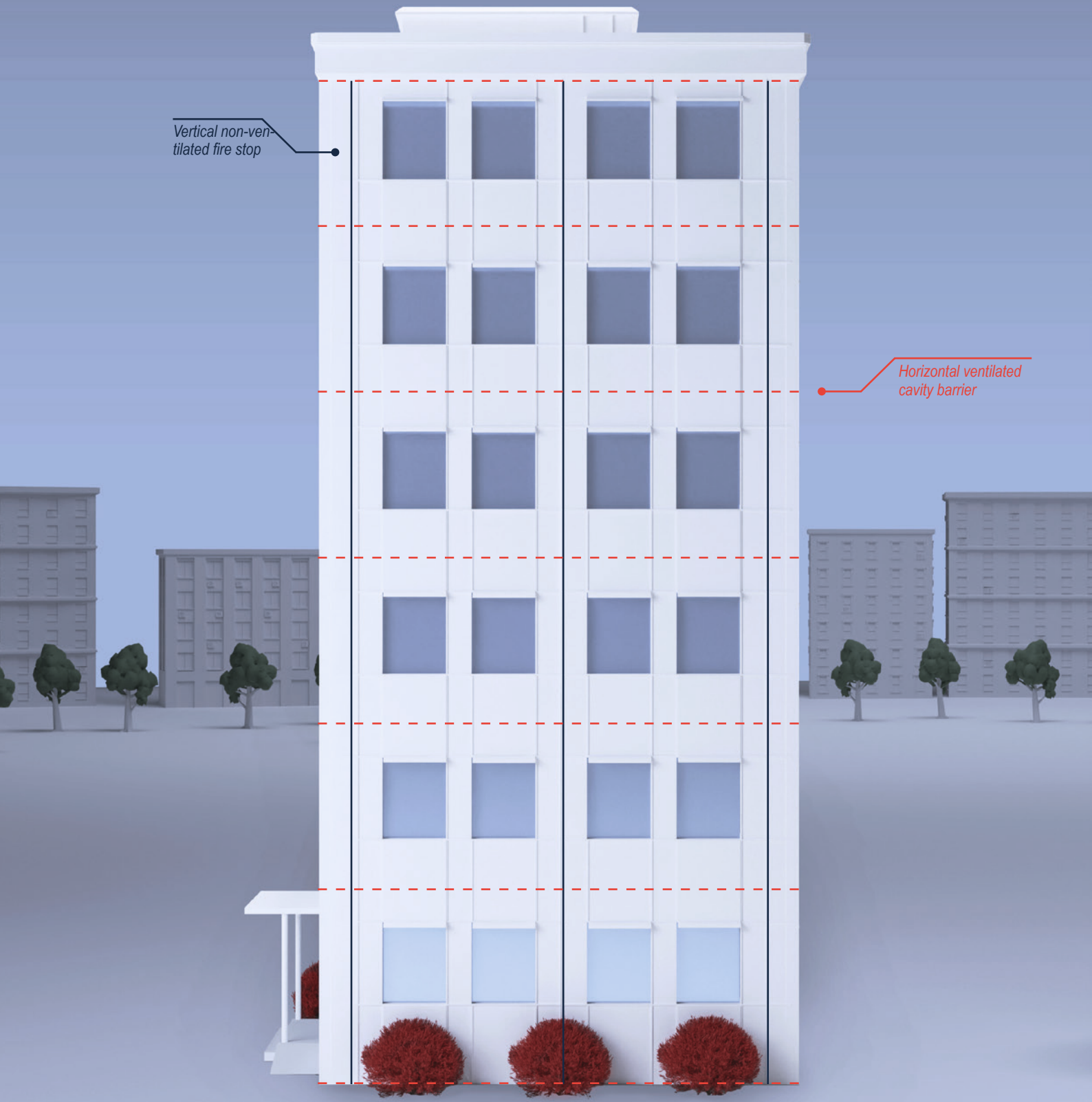
Fire in the cavity behind the cladding can spread 5–10 times faster than on the outside, with a speed of up to 8 meters per minute. Fire-breather® Cavity Barrier instantly stops the fire from spreading to the floor above while maintaining the necessary ventilation for the facade. This means that the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

Working principle of 30 minutes external wall cavity compartmentation

0–30 minutes:
External fire

60 minutes:
Fire contained within cavity compartment 1

90 minutes:
Fire contained within cavity compartments 1 and 2


Vertical non-ventilated fire stop
Horizontal ventilated 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 facades:

- ✓ The cavity barrier creates strong fire 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.

Firebreather® Cavity Barrier is also tested according TDG19.

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.

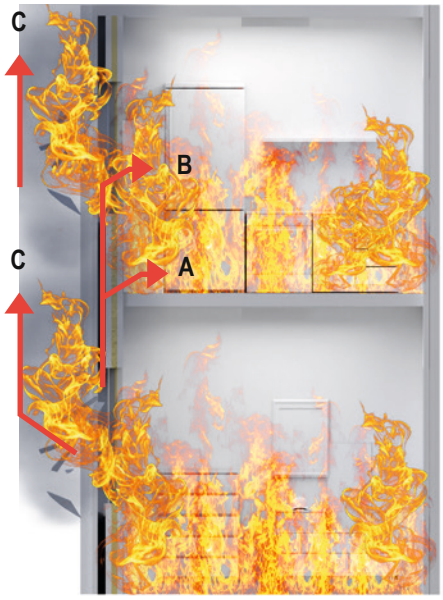
Additionally, the Firebreather® Cavity Barrier is tested according to third-party facade system tests, such as SP105, Lepir 2, and BS8414.

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

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

- ✓ No bypassing of fire compartments via perimeter wall-deck joint **(A)**.
- ✓ No bypassing fire compartments via air gaps and breaking window **(B)**.
- ✓ Limit fire spread on the facade **(C)**.
- ✓ Block flames in the open state (traditional products allow flames to pass for up to 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).

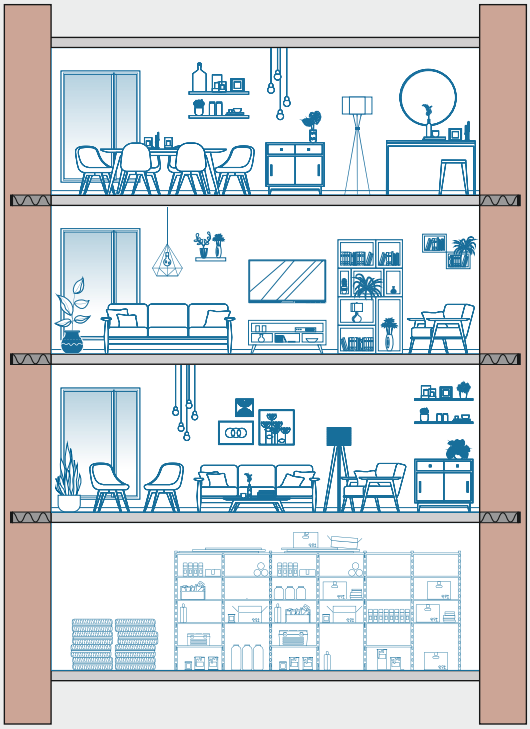
* While all other products on the market need up to several minutes to expand and close the cavity, the **Firebreather® Cavity Barrier** has instant fire stop that will keep flames from entering the protected area at any time.



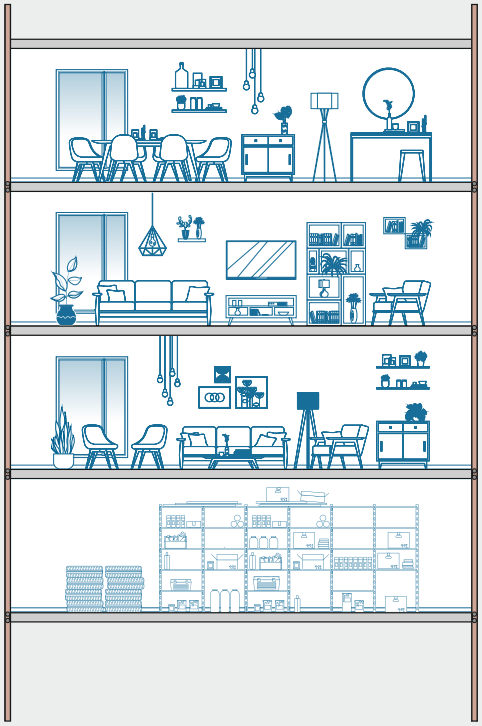
Without Firebreather® Cavity Barrier

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 **(C)**. Flames **(C)** are no longer supported by the torch **(B)** emanating from the vent opening at top of the air gap, so its capability of leap frogging to next panel is significantly reduced.



Large air gap with stonewool based cavity barrier.



Narrow air gap with Firebreather® Cavity Barrier.

Narrow construction

Here are some of the key benefits:

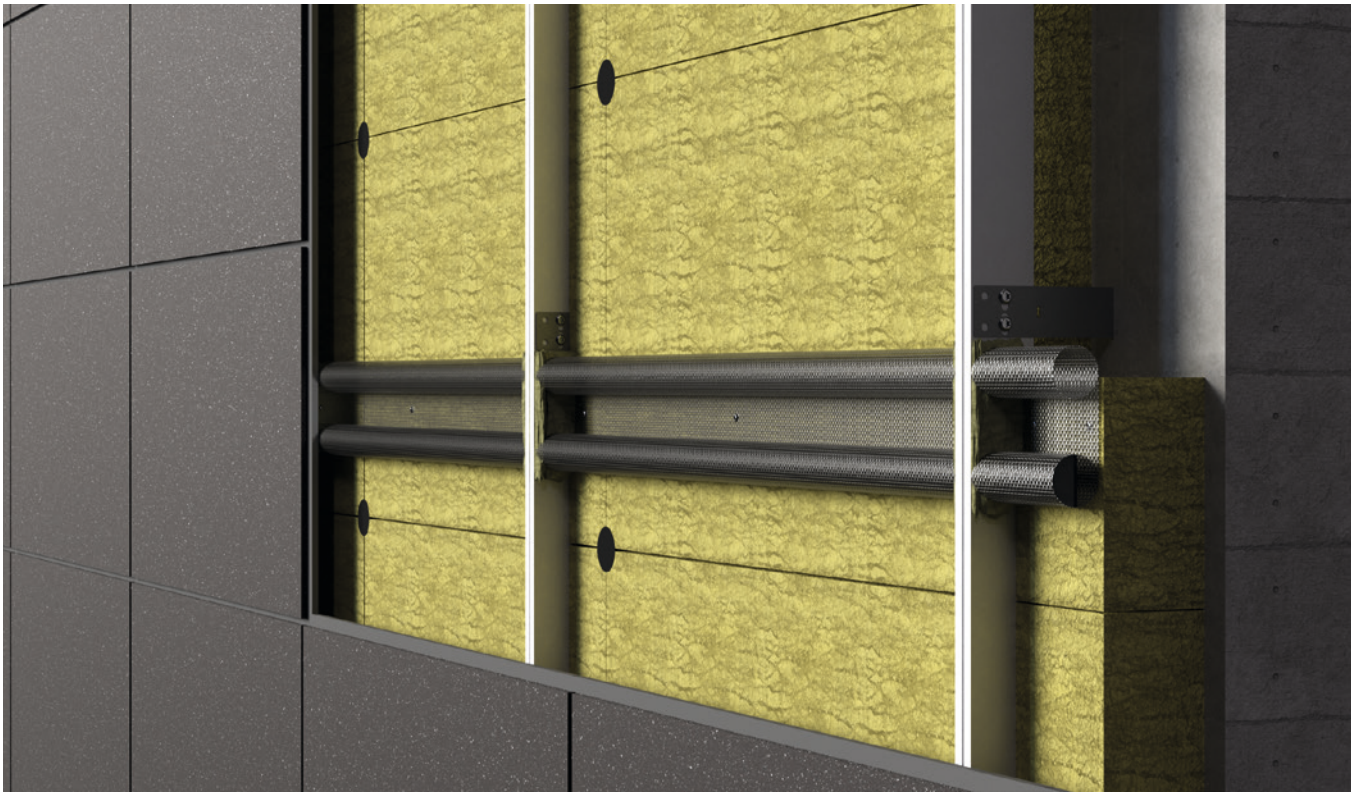
Space efficiency: In densely populated urban areas, where space is at a premium, narrow facades allow for the construction of more units within the same footprint. This can be particularly advantageous for residential and commercial buildings looking to maximize useable area.

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.

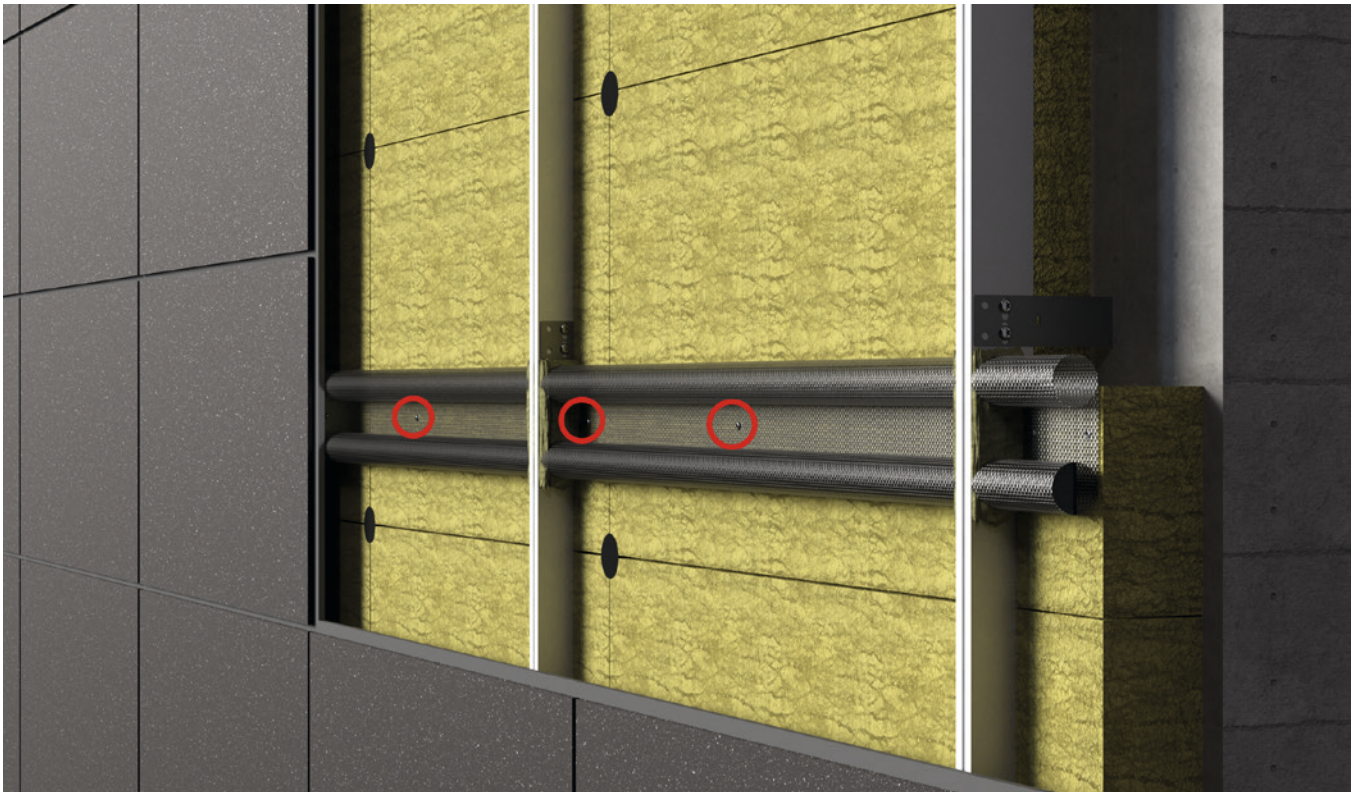
Cost-effective: Depending on the design and materials used, narrow facade construction can be more cost-effective compared to other types of construction. The potential for reduced material usage and lower energy costs over time can make narrow facades an economically attractive option. Additionally, our cavity barrier has a very short installation time, further reducing labor costs and making it a highly cost-effective fire protection solution.

Advantages with a narrow facade construction

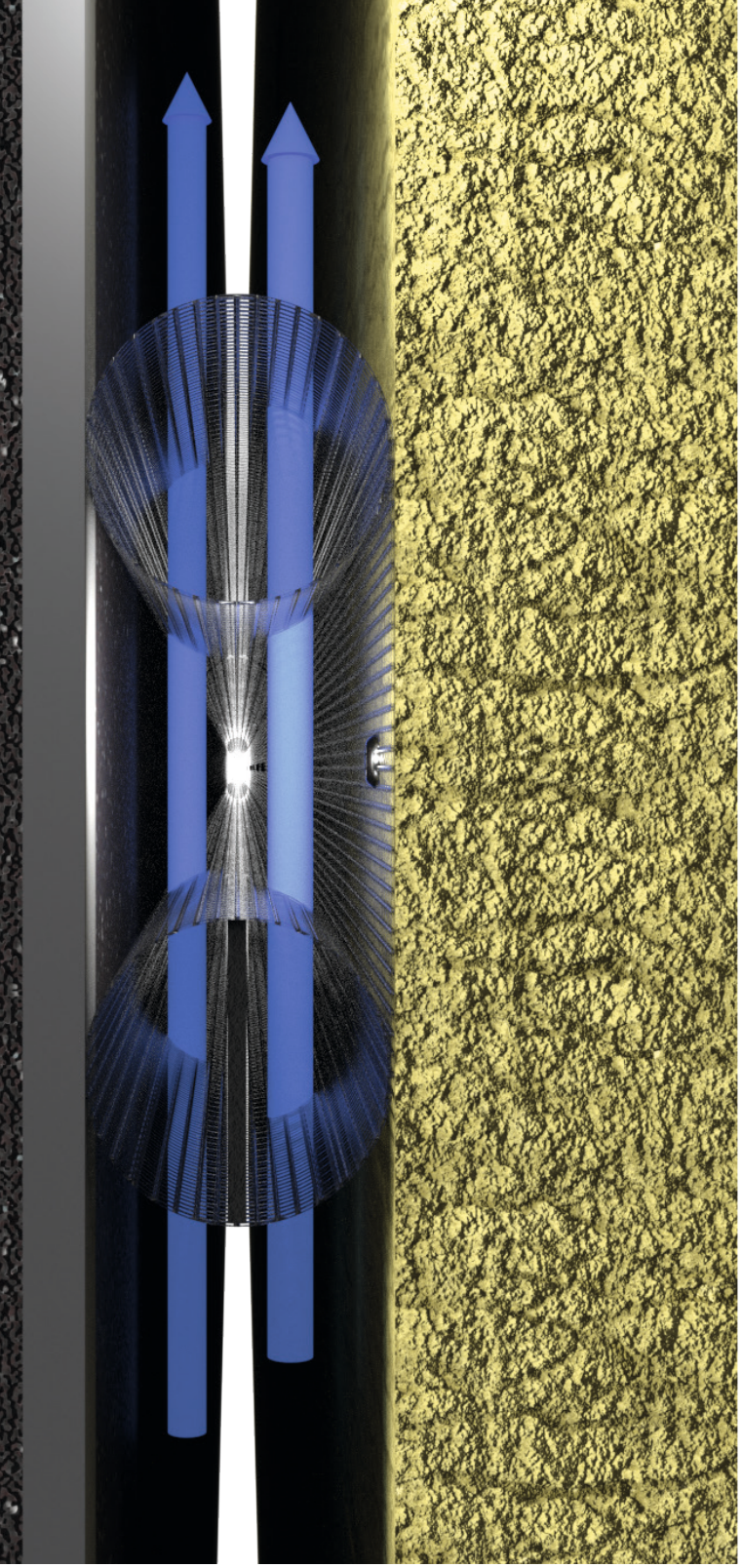
Narrow facade construction offers several advantages, especially in urban environments and in the context of sustainable building practices. Using Firebreather® Cavity Barriers with widths between 20 mm - 50 mm instead of cavity barriers with large mineralwool slabs provides you with several advantages.



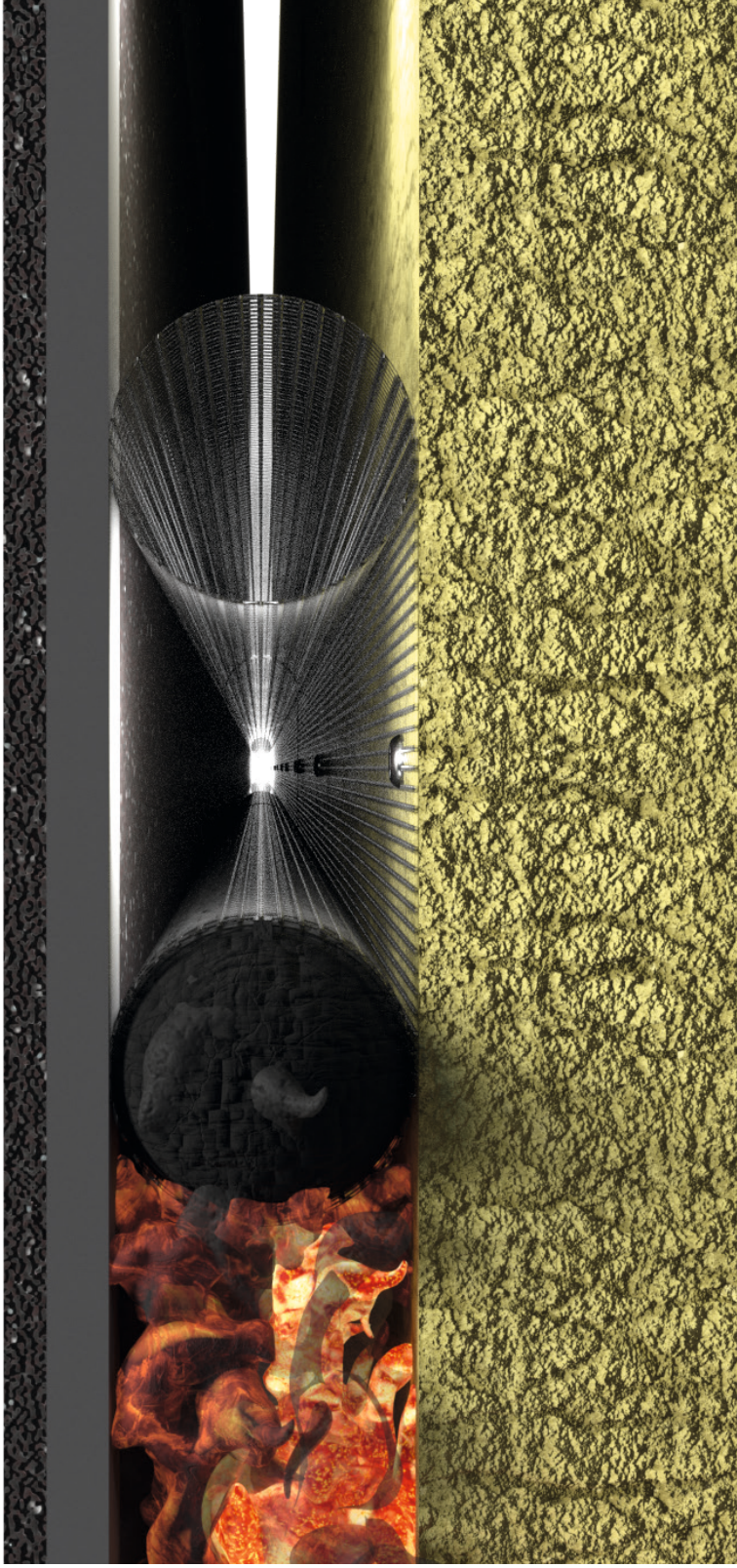
Firebreather® Cavity Barrier installed behind the cladding, directly on insulation.



Very fast and easy installation.



unexposed to fire



exposed to fire

Highlights at a glance

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 facade 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 facades 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 a tested solution that provides an immediate fire stop. This distinction underscores its unmatched efficacy and reliability in enhancing building safety.

Reliable fire protection behind the cladding

- 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 facade cladding
- In ventilated roof constructions

Dimensions

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

Fire rating

- EI30, EI60 and EI90

We welcome your inquiries!

Flamro Norway AS

Industrivegen 10
7652 Verdal
Norway
T +47 994 19 000
E norway@flamro.com
W flamro.com

Registered head office: Gluesinger Strasse 86, 21217 Seevetal, Germany