

FIRE- RESISTANT RANGE

2019 EDITION



FIRE-RESISTANT METAL CEILINGS

New configuration



**30-minute fire
resistance**



**Acoustic absorption:
 α_w up to 1**



Easy to fit

PLAFOMETAL

CEILINGING DELIVERING SAFETY AND COMFORT FOR PREMISES WITH SPECIFIC NEEDS

Ensuring safety and comfort for occupants is a key challenge when building and refurbishing premises.

It is vitally important to use safe and reliable systems, so that people can be evacuated in areas with a fire risk. **PLAFOMETAL** has developed **four fire-resistant modular ceiling systems** that are capable of remaining in place for at least **30 minutes** without falling*.

GREATER SAFETY

- **30-minute fire resistance:** over and above applicable regulations
- Fire reaction:
 - A1 pre-painted
 - A2-s1, d0 post-painted

GREATER COMFORT

- Acoustic absorption: up to $\alpha_w = 1$
- Light reflection: up to 87% (white non-perforated)
- Choice of colors: standard pre-painted or post-painted (180 RAL colors)

GREATER SIMPLICITY

- Easy to fit**: **quick installation** with no specific fitting direction (refer to the Plafometal installation guides available on our website)
- Easy to handle: simplified access to the plenum for hassle-free maintenance



* Subject to compliance with the fitting requirements defined in the fire classification report.

** This information has been summarized. You must refer to the validity range specified in the fire classification report before ordering and installing the product.

FIRE-RESISTANT RANGE

2019 EDITION

WHAT DO WE MEAN BY “FIRE RESISTANCE”?

Fire stability, fire resistance, REI... many different terms are currently in use, but they do not all cover the same concepts!

The fire resistance rating defines the time during which construction elements can perform their intended function despite the action of a fire: this ensures that none of the ceiling components will start falling down.

France uses two types of rating systems: REI ¹ and FS ². These are regulatory requirements for classifying the fire resistance of suspended ceilings in buildings that are open to the public, which vary according to whether they play a role in protecting the building's structural elements:

1 The REI rating is used when the suspended ceiling **acts as a protective barrier for the building's structural elements.**

According to the unified requirements defined in European standard EN 13501-2.

2 The FS rating system is used when the suspended ceiling **does not act as a protective barrier for the building's structural elements**, but must nevertheless offer mechanical resistance to fire (no falling elements); this requirement especially applies to shared-use corridors inside high-rise buildings: **this is the case with metal ceilings!** FS stands for Fire Stable.

Section 2.5 of Appendix 1 in the French Regulation of March 22, 2004 on the fire resistance of construction products describes a test and classification system for fire resistance.

REGULATIONS

In this brochure, we always refer to fire resistance standards:

-  In France: Section 2.5 of Appendix 1 in the Regulation of March 22, 2004 on the fire resistance of construction products describes tests for characterizing fire resistance performance (minimum rating of 15 minutes required).
→ **PLAFOMETAL** offers four metal ceiling systems with a 30-minute fire resistance rating, which go over and above applicable fire regulations for shared-use corridors in high-rise buildings.
-  In Belgium: the NBN 713-020 standard describes tests for characterizing 30-minute fire resistance performance.
→ **PLAFOMETAL** offers three metal ceiling systems that meet applicable Belgian fire regulations for escape routes, public-access areas and collective kitchens.

TESTS

Plafometal carries out all fire resistance tests at certified and independent laboratories (CSTB and EFFECTIS in France, and WarringtonFireGent in Belgium). Contact us for a copy of our fire classification and test reports.

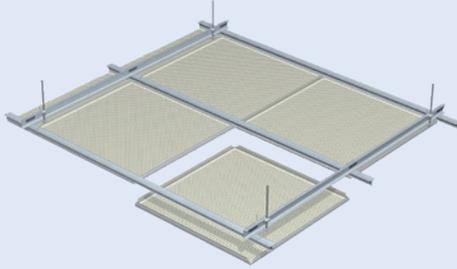
INSTALLATION

In addition to fulfilling the requirements of Section 5.6 of the DTU 58-1 code of practice (December 2008 issue), fire-resistant metal ceilings must always be fitted in accordance with the classification and test reports and their appendices (available on request).

To help you with this process, we have summarized the key elements in a series of installation guides, which should be read in addition to the complete reports.

FIRE-RESISTANT RANGE: FOUR CEILING SYSTEMS OFFERING 30-MINUTE FIRE RESISTANCE

IDEAL FOR HALLS



Clip-in tile system

Monobac FS

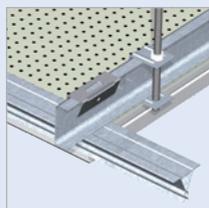
p. 6

- 30-minute fire resistance
- Monolithic aspect
- Secure access to the plenum, requiring use of a disassembly tool
- No specific fitting direction
- Acoustic absorption up to $\alpha_w = 1$



GREATER SAFETY

- Fire reaction: **A1 or A2-s1,d0**
- **30-minute fire resistance***: and regulations

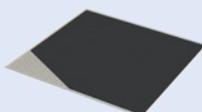


AC21 + Main runner + AC510

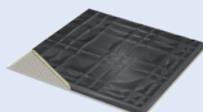
* For any requests, refer to the fire classification report



GREATER COMFORT



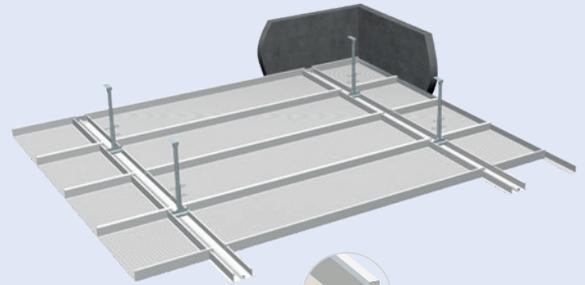
ALPHA range:
up to $\alpha_w = 0.80$



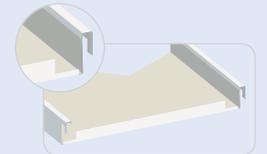
ALPHA PLUS** range:
up to $\alpha_w = 1$

** ALPHA PLUS: specific mineral wool pad in thin plastic film option only

IDEAL FOR OFFICES



New



Bandraster + panel system: Framed installation

Hook-on PM8 FS

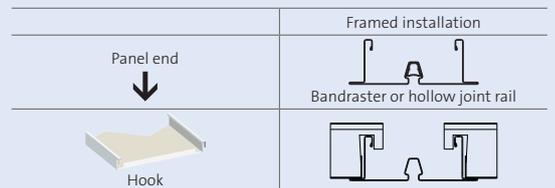
p. 8

- 30-minute fire resistance
- Easy to remove by simply lifting the panel
- Hook-on panels for greater stability
- Acoustic absorption up to $\alpha_w = 1$



GREATER SAFETY

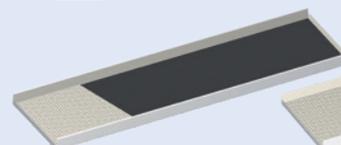
- Fire reaction: **A1 or A2-s1,d0**
- **30-minute fire resistance***: and regulations



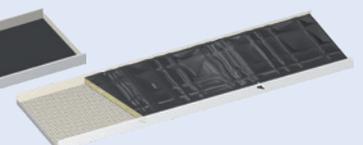
* For any requests, refer to the fire classification report



GREATER COMFORT



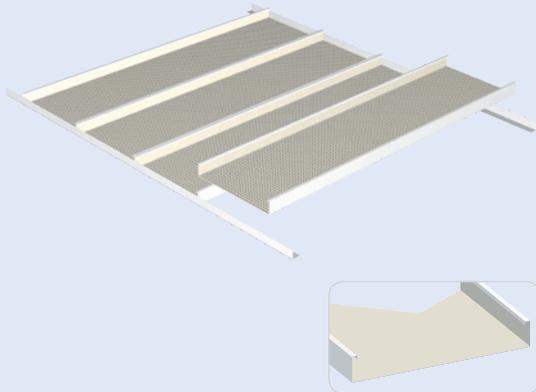
ALPHA range:
up to $\alpha_w = 0.80$



ALPHA PLUS** range:
up to $\alpha_w = 1$

** ALPHA PLUS: specific mineral wool pad in thin plastic film option only

IDEAL FOR CORRIDORS



Wall angle + panel system:
Installation in corridors

PM8 FS

p. 10

- 30-minute fire resistance
- Easy to remove by simply lifting the panel
- Adaptable length: no intermediate grid, faster installation time
- Improved lateral rigidity (with straight raised ends)
- Acoustic absorption up to $\alpha_w = 1$

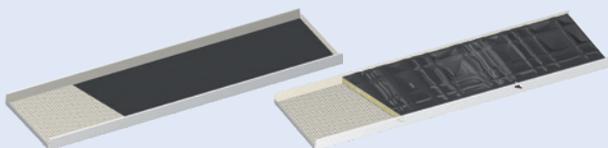
GREATER SAFETY

- Fire reaction: **A1 or A2-s1,d0**
- **30-minute fire resistance***: and regulations

	Installation in corridors	
Panel end	 Wall angle 30 x 30 mm, thickness 0.8 mm	 Wall angle with hemmed edges 30 x 30 mm, thickness 0.8 mm
 Open	✓	✓
 Straight raised ends	✓	✓

* For any requests, refer to the fire classification report

GREATER COMFORT



ALPHA range:
up to $\alpha_w = 0.80$

ALPHA PLUS** range:
up to $\alpha_w = 1$

** ALPHA PLUS: specific mineral wool pad in thin plastic film option only

IDEAL FOR CORRIDORS



Swing-down panel system:
Installation in corridors

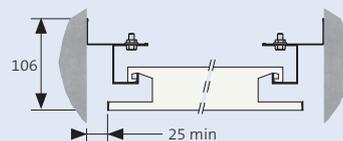
Oriol FS

p. 12

- 30-minute fire resistance
- Adaptable length: the system is quick and easy to install
- Left or right opening
- Absorbs alignment gaps with vertical walls
- Allows ventilation of the plenum when used in hospitals
- Acoustic absorption up to $\alpha_w = 0.80$

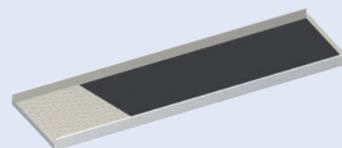
GREATER SAFETY

- Fire reaction: **A1 or A2-s1,d0**
- **30-minute fire resistance***: Regulations



* For any requests, refer to the fire classification report

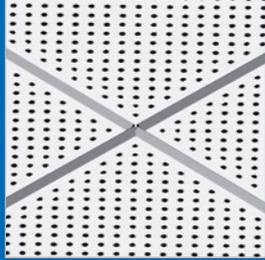
GREATER COMFORT



ALPHA range:
up to $\alpha_w = 0.80$

SUSPENDED CEILING

Monobac (Fire-stable)



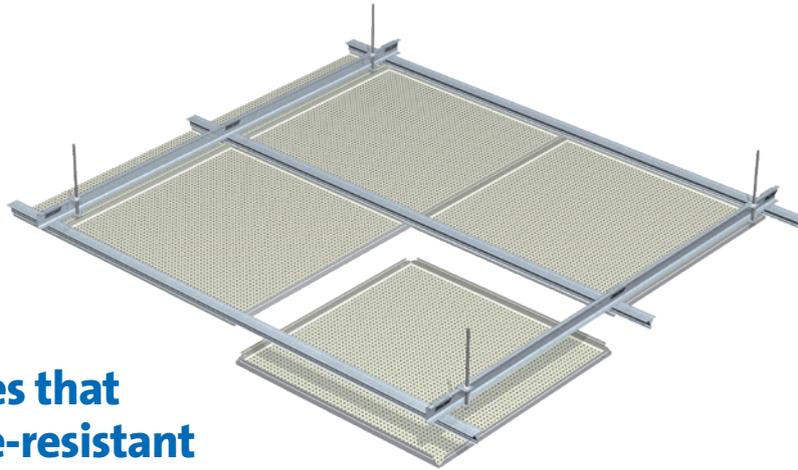
> System of tiles that clip into a fire-resistant concealed grid

- 30-minute fire-resistant system to meet French and Belgian regulations.
- Designed to be clipped into a concealed grid.
- Beveled peripheral edges.

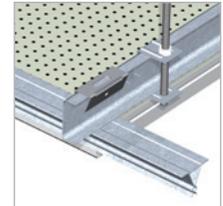
KEY PRODUCT FEATURES

- 30-minute fire resistance
- Monolithic aspect
- Secure access to the plenum, requiring use of a disassembly tool
- No specific fitting direction
- Acoustic absorption up to $\alpha_w = 1$

FOR ALL PREMISES



Fire-resistant system
AC21 + Main runner + AC510



System of tiles that clip into a fire-resistant concealed grid

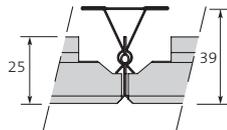
> PLAFOMETAL-SC-240



Installation according to DTU 58.1 and the fire classification report

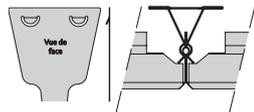
• AC21 special holding clamps for Ø6 threaded rods at 1,200 mm center-to-center spacings on U1029 main runners with 1,200 mm center-to-center spacings, and connected with AC510 accessories to the T D5110 transversely arranged secondary profiles with 600 mm center-to-center spacings.

Note: For further information, refer to the Monobac FS installation guide and always consult the fire classification report.



Removal for accessing the plenum

• Unclip at the bottom using a specific disassembly tool.



Absorption

For acoustic tiles:

- α_w up to 0.80 - Alpha* range
- α_w up to 1 - Alpha Plus* range

For decorative tiles:

- α_w of 0.20

* Values may vary depending on the perforations and filling.



Fire reaction

• A1 for preprinted products with an acoustic fleece (ALPHA) or without.

- A2-s1,d0:
 - For preprinted tiles with a surfaced insulating material or mineral absorbent in thin plastic film (ALPHA PLUS)
 - For all products with a polyester powder coating



Fire resistance

Tiles and grids must be installed according to the classification and test report. Contact us.

🇫🇷 **France:** Fire-stable Monobac offers 30-minute fire resistance performance pursuant to the test described in Section 2.5 of Appendix 1 in the French Regulation of March 22, 2004 and meets applicable French fire regulations for shared-use corridors, halls and collective kitchens inside high-rise buildings.

🇧🇪 **Belgium:** Fire-stable Monobac offers 30-minute fire resistance performance pursuant to the test defined in the Belgian NBN 713-020 standard and meets applicable Belgian fire regulations for escape routes, public-access areas and collective kitchens.

Module dimensions	<ul style="list-style-type: none"> • 600 x 600 mm with beveled edges on four sides • Square edges on request
Materials	<ul style="list-style-type: none"> • 0.5 mm-thick galvanized steel
Colors and finishes	<ul style="list-style-type: none"> • Preprinted in White 137 polyester (≈ RAL 9003) • Preprinted in RAL 9006 Metallic Gray polyester on request • Polyester powder coating: 180 RAL colors available on request
Packaging	<ul style="list-style-type: none"> • Package of 14 tiles = 5.04 m², pallets of 20 packages or 100.8 m² • Grid not included



Steel perforations

Non-perforated	M perforated 11% Ø1.5	U* perforated 12% Ø2.5
U perforated 16% Ø2.5	M perforated 22% Ø1.5	M perforated 23% Ø2.5

* Not stored.
All tiles have a non-perforated area of a few mm around the edges.



Cut outs and integration

• The ceiling should not support any loads other than its own weight. For further details, refer to the installation guide or contact us.



Light reflection

• Up to 87%. Contact us for details according to the perforations and colors.



Environment and health

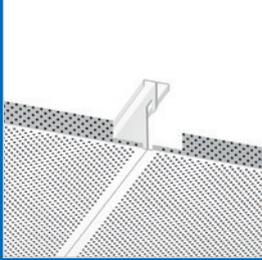
• Our ceilings can be fully recycled over an indefinite period of time. They are sustainable, easy to maintain, produce no dust, particles or vapor and are inert and odor-free. They do not promote microbial growth and do not emit any VOCs or formaldehyde.

• Indoor air quality (IAQ):



• Verified Environmental & Product Declarations (EPDs) are available for downloading from the INIES national database.

Hook-on PM8 (Fire-stable)

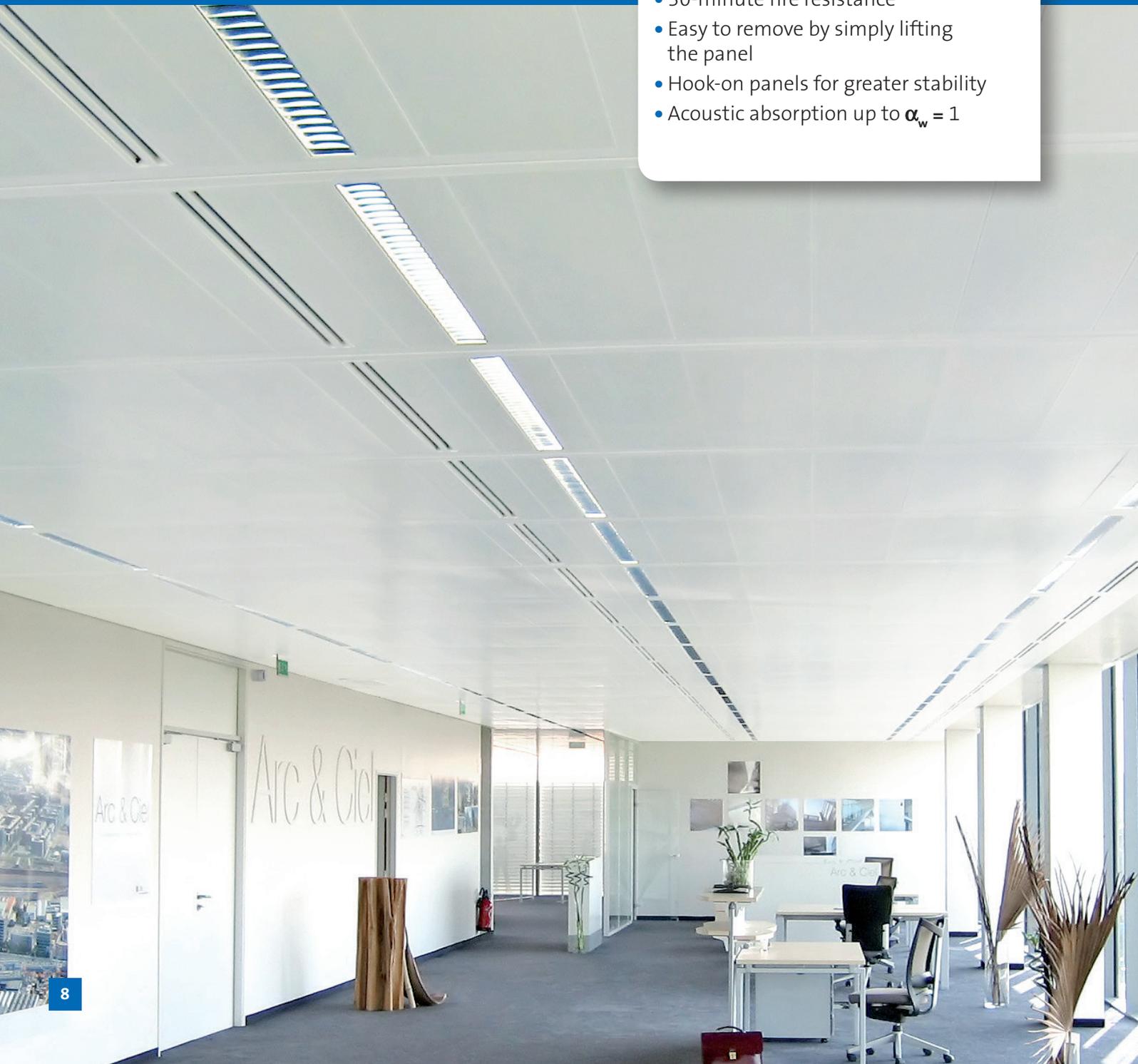


> Fire-resistant system of bandrasters and hook-on panels

- 30-minute fire resistance to meet French and Belgian regulations.
- Designed for a framed installation on 100 mm bandrasters or hollow joint rails: ideal for offices with removable partitions.
- Panels have hooks with abutting sides and square edges.

+ KEY PRODUCT FEATURES

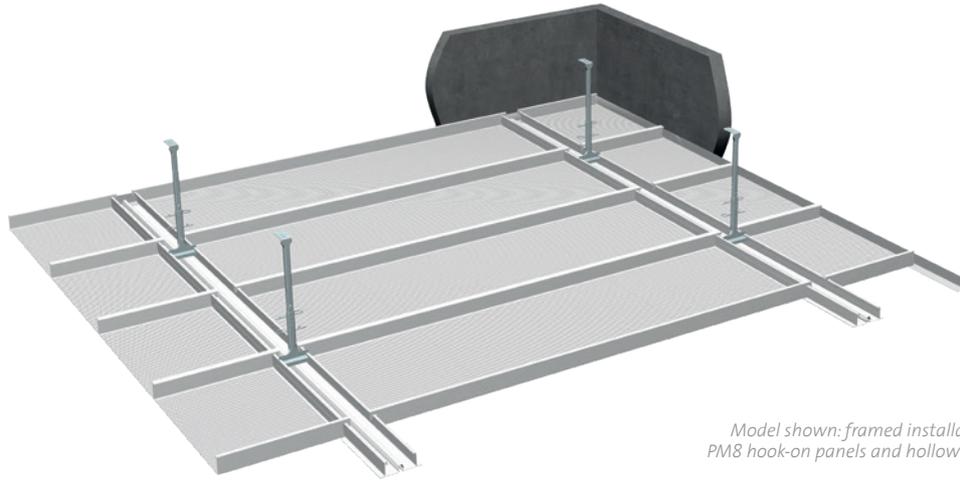
- 30-minute fire resistance
- Easy to remove by simply lifting the panel
- Hook-on panels for greater stability
- Acoustic absorption up to $\alpha_w = 1$



FOR OFFICES AND HALLS



Nonius hanger

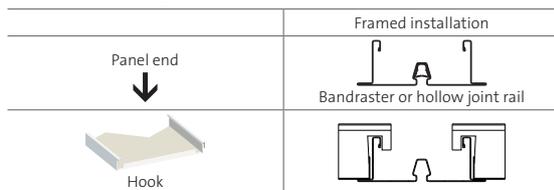


Model shown: framed installation with PM8 hook-on panels and hollow joint rails

Fire-resistant system of bandrasters and hook-on panels

> PLAFOMETAL-SC-130

Installation according to DTU 58.1 and the fire classification report



- Installation on 100 mm bandrasters - Nonius hangers.
- Note:** For further information, refer to the PM8 FS installation guide and always consult the fire classification report.

Removal for accessing the plenum

- By lifting an edge of the panel in the grid.

Absorption

For acoustic panels:

- α_w up to 0.80 - Alpha* range
- α_w up to 1 - Alpha Plus* range

For decorative panels:

- α_w of 0.20

* Values may vary depending on the perforations and filling.

Fire reaction

- A1 for pre-painted products with an acoustic fleece (ALPHA) or without.

- A2-s1,d0:
 - For pre-painted tiles with a surfaced insulating material or mineral absorbent in thin plastic film (ALPHA PLUS)
 - For all products with a polyester powder coating

Fire resistance

France: Fire-stable PM8 offers 30-minute fire resistance performance pursuant to the test described in Section 2.5 of Appendix 1 in the French Regulation of March 22, 2004 and meets applicable French fire regulations for shared-use corridors inside high-rise buildings. Panels and edge profiles must be installed in conformity with the applicable fire classification report and appendices. Contact us.

Belgium: Fire-stable PM8 offers 30-minute fire resistance performance pursuant to the test defined in the Belgian NBN 713-020 standard and meets applicable Belgian fire regulations for escape routes, public-access areas and collective kitchens. Panels and edge profiles must be installed in conformity with the applicable fire classification and test reports. Contact us.

Panel dimensions	<ul style="list-style-type: none"> • Width 300 mm • Length on request (min 900 - max 2,400 mm) • Height 43.5 mm • Self-supporting capacity: 2,400 mm • Beveled edges on request 	
Materials	• 0.6 mm-thick galvanized steel	
Colors and finishes	<ul style="list-style-type: none"> • Pre-painted in White 137 polyester (\approx RAL 9003) • Pre-painted in RAL 9006 Metallic Gray polyester on request • Polyester powder coating: 180 RAL colors available on request 	



Steel perforations

- | | | |
|----------------|---------------------------------------|--|
| Non-perforated | M perforated
11% $\varnothing 1.5$ | U* perforated
12% $\varnothing 2.5$ |
|----------------|---------------------------------------|--|



- | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|
| U perforated
16% $\varnothing 2.5$ | M perforated
22% $\varnothing 1.5$ | M perforated
23% $\varnothing 2.5$ |
|---------------------------------------|---------------------------------------|---------------------------------------|



* Not stored.
All tiles have a non-perforated area of a few mm around the edges.



Cut outs and integration

- The ceiling should not support any loads other than its own weight. For further details, refer to the installation guide or contact us.



Light reflection

- Up to 87%. Contact us for details according to the perforations and colors.



Environment and health

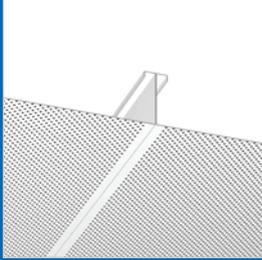
- Our ceilings can be fully recycled over an indefinite period of time. They are sustainable, easy to maintain, produce no dust, particles or vapor and are inert and odor-free. They do not promote microbial growth and do not emit any VOCs or formaldehyde.
- Indoor air quality (IAQ):



- Verified Environmental & Product Declarations (EPDs) are available for downloading from the INIES national database.

SELF-SUPPORTING CEILING FOR CORRIDORS

PM8 (Fire-stable)



> Fire-resistant panel system fitted on wall angles

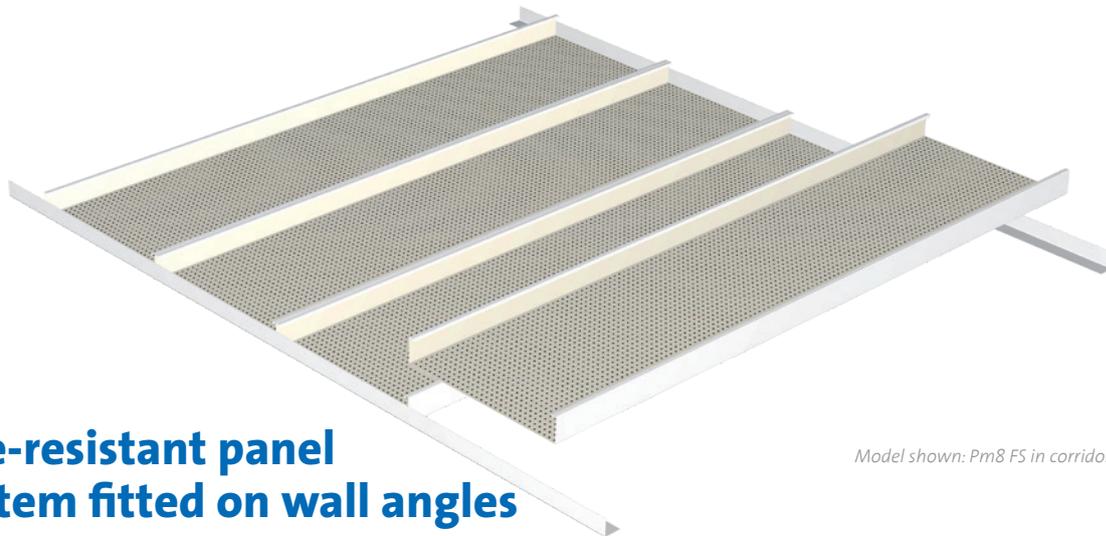
- 30-minute fire resistance to meet French and Belgian regulations.
- Designed to be installed on wall angles in passageways.
- The panel has abutting sides and square edges.

+ KEY PRODUCT FEATURES

- 30-minute fire resistance
- Easy to remove by simply lifting the panel
- Adaptable length: no intermediate grid, faster installation time
- Improved lateral rigidity (with straight raised ends)
- Acoustic absorption up to $\alpha_w = 1$



FOR CORRIDORS



Model shown: Pm8 FS in corridors on wall angles

Fire-resistant panel system fitted on wall angles

> PLAFOMETAL-CC-420



Installation according to DTU 58.1 and the fire classification report

Installation in corridors		
Panel end	 Wall angle* thickness 0.8 mm	 Wall angle with hemmed edges* thickness 0.8 mm
Open	✓	✓
Straight raised ends	✓	✓

Note: For further information, refer to the PM8 FS installation guide and always consult the fire classification report.

* 30 x 30 mm, thickness 0.8 mm



Removal for accessing the plenum

- By lifting an edge of the panel in the grid.



Absorption

For acoustic panels:

- α_w up to 0.80 - Alpha* range
- α_w up to 1 - Alpha Plus* range

For decorative panels:

- α_w of 0.20

* Values may vary depending on the perforations and filling.



Fire reaction

- A1 for pre-painted products with an acoustic fleece (ALPHA) or without.
- A2-s1,d0:
 - For pre-painted tiles with a surfaced insulating material or mineral absorbent in thin plastic film (ALPHA PLUS)
 - For all products with a polyester powder coating



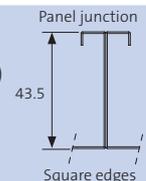
Fire resistance

France: Fire-stable PM8 offers 30-minute fire resistance performance pursuant to the test described in Section 2.5 of Appendix 1 in the French Regulation of March 22, 2004 and meets applicable French fire regulations for shared-use corridors inside high-rise buildings. Panels and edge profiles must be installed in conformity with the applicable fire classification report and appendices. Contact us.

Belgium: Fire-stable PM8 offers 30-minute fire resistance performance pursuant to the test defined in the Belgian NBN 713-020 standard and meets applicable Belgian fire regulations for escape routes, public-access areas and collective kitchens. Panels and edge profiles must be installed in conformity with the applicable fire classification and test reports. Contact us.

Panel dimensions

- Width 300 mm
- Length on request (min 900 - max 2,400 mm)
- Height 43.5 mm
- Self-supporting capacity: 2,400 mm
- Beveled edges on request



Materials

- 0.6 mm-thick galvanized steel

Colors and finishes

- Pre-painted in White 137 polyester (\approx RAL 9003)
- Pre-painted in RAL 9006 Metallic Gray polyester on request
- Polyester powder coating: 180 RAL colors available on request



Steel perforations

Non-perforated M perforated 10% \varnothing 2.5 M perforated 11% \varnothing 1.5 U perforated 12% \varnothing 2.5 U perforated 16% \varnothing 2.5



Cut outs and integration

- The ceiling should not support any loads other than its own weight. For further details, refer to the installation guide or contact us.



Light reflection

- Up to 87%. Contact us for details according to the perforations and colors.



Environment and health

- Our ceilings can be fully recycled over an indefinite period of time. They are sustainable, easy to maintain, produce no dust, particles or vapor and are inert and odor-free. They do not promote microbial growth and do not emit any VOCs or formaldehyde.
- Indoor air quality (IAQ):



- Verified Environmental & Product Declarations (EPDs) are available for downloading from the INIES national database.

SELF-SUPPORTING CEILING FOR CORRIDORS

Orial (Fire-stable)



> Fire-resistant swing-down panel system on both sides

- 30-minute fire-resistant system to meet French regulations.
- Designed to be installed on a special concealed grid.
- Notches mean that the panel can be suspended on the grid and swung down from one side or the other.

+ KEY PRODUCT FEATURES

- 30-minute fire resistance
- Adaptable length: the system is quick and easy to install
- Left or right opening
- Absorbs alignment gaps with vertical partitions
- Allows ventilation of the plenum when used in hospitals
- Acoustic absorption up to $\alpha_w = 0.80$

FOR FREQUENT ACCESS IN CORRIDORS



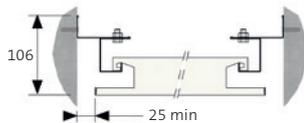
Fire-resistant swing-down panel system on both sides

> PLAFOMETAL-CC-120



Installation according to DTU 58.1 and the fire classification report

- Installation in corridors
Wall profiles to be fixed to the wall and Orial hinged profiles to be screwed beneath the wall angle.



Note: For further information, refer to the Fire-Stable Orial installation guide and always consult the fire classification report.



Removal for accessing the plenum

- The panel is opened by pushing upwards and then sliding sideways to free it from the hinged profile. The panel swings down and remains suspended on the opposite profile. To replace the panel, proceed in reverse order while ensuring that the panel is correctly positioned so that each element is aligned with the next.



Absorption

- For acoustic panels:
 - α_w up to 0.80 - Alpha range
- For decorative panels:
 - α_w of 0.20



Fire reaction

- A1 for pre-painted products with an acoustic fleece (ALPHA) or without.
- A2-s1,d0 for products with a polyester powder coating with or without an acoustic fleece.



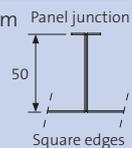
Fire resistance

France: Fire-stable Orial versions offer 30-minute fire resistance performance pursuant to the test described in Section 2.5 of Appendix 1 in the French Regulation of March 22, 2004 and meet applicable French fire regulations for shared-use corridors inside high-rise buildings. Fire-stable panels and edge profiles are specific and must be installed in conformity with the applicable fire classification report and appendices. Contact us.

Belgium: System not tested according to Belgian standard NBN 713-020.

Panel dimensions

- Widths: 300, 400 and 600 mm
- Length on request (min 800 - max 1,500 mm).
- Height 50 mm
- Self-supporting capacity: 1,500 mm



Materials

- 0.6 to 0.8 mm-thick galvanized steel (depending on width & length)

Colors and finishes

- Pre-painted in White 137 polyester (\approx RAL 9003)
- Pre-painted in RAL 9006 Metallic Gray polyester on request
- Polyester powder coating: 180 RAL colors available on request



Steel perforations

- Non-perforated
- M perforated 10% \varnothing 2.5
- M perforated 11% \varnothing 1.5

30-minute fire resistance



Cut outs and integration

- The ceiling should not support any loads other than its own weight. For further details, refer to the installation guide or contact us.



Light reflection

- Up to 87%. Contact us for details according to the perforations and colors.



Environment and health

- Our ceilings can be fully recycled over an indefinite period of time. They are sustainable, easy to maintain, produce no dust, particles or vapor and are inert and odor-free. They do not promote microbial growth and do not emit any VOCs or formaldehyde.
- Indoor air quality (IAQ):



- Verified Environmental & Product Declarations (EPDs) are available for downloading from the INIES national database.

PLAFOMETAL FIRE-RESISTANT RANGE

Tools to offer you support and guidance throughout your project.

Website



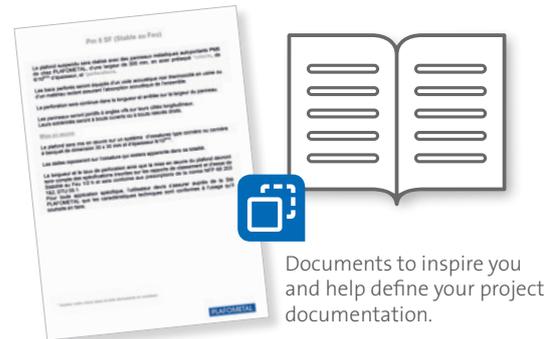
Installation guides

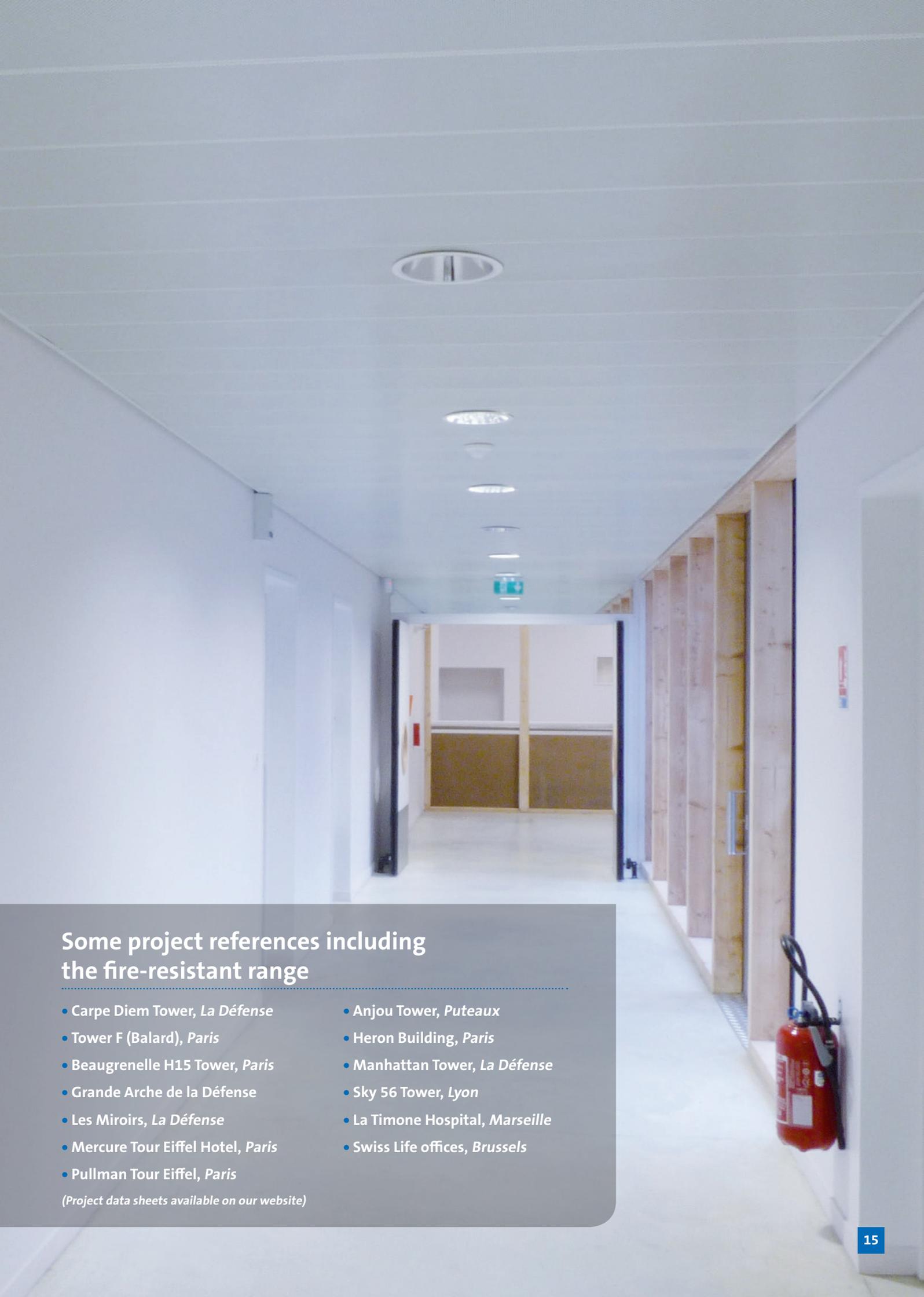


YouTube channel



Standard specifications and documentation

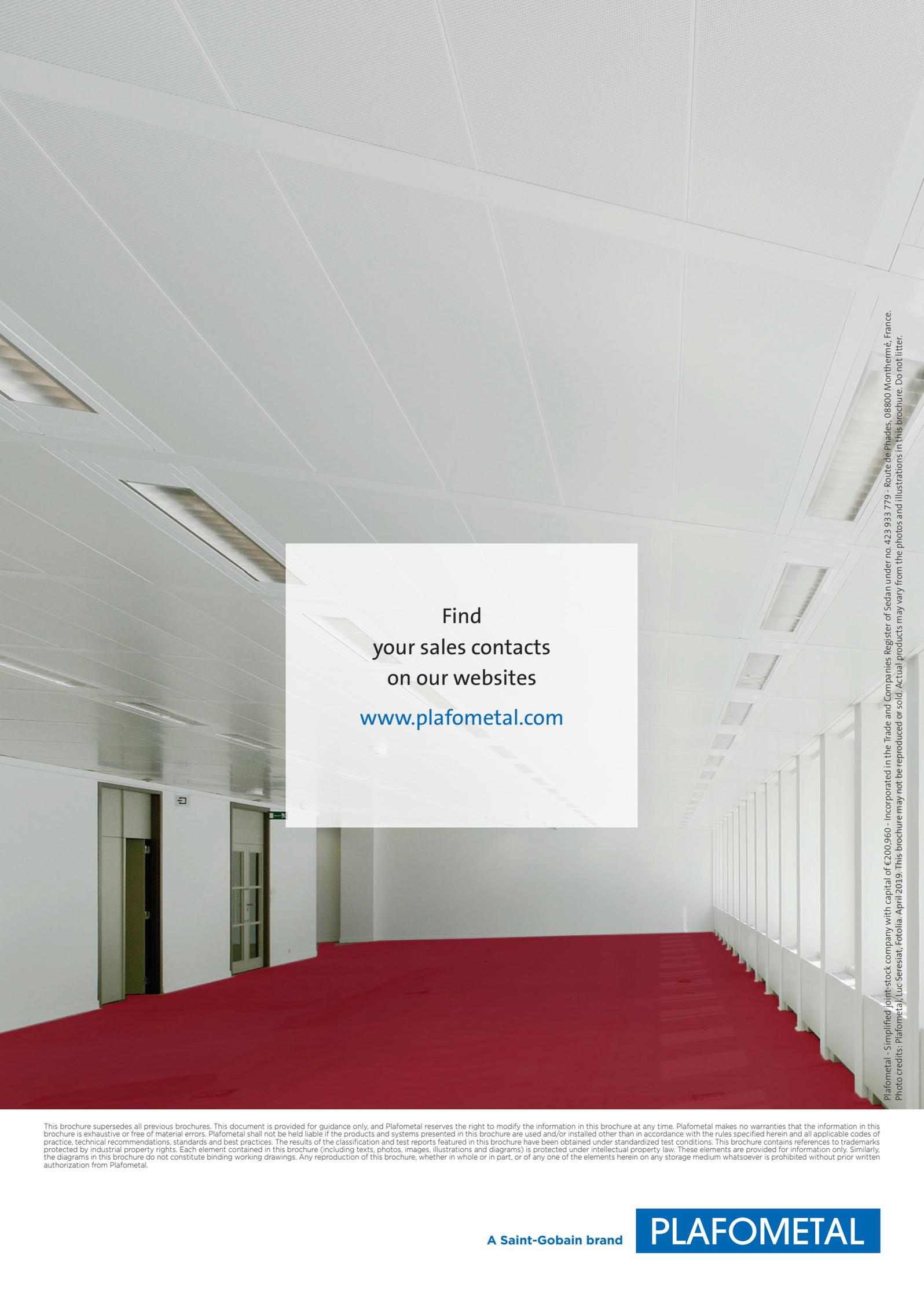




Some project references including the fire-resistant range

- Carpe Diem Tower, *La Défense*
- Tower F (Balard), *Paris*
- Beaugrenelle H15 Tower, *Paris*
- Grande Arche de la Défense
- Les Miroirs, *La Défense*
- Mercure Tour Eiffel Hotel, *Paris*
- Pullman Tour Eiffel, *Paris*
- Anjou Tower, *Puteaux*
- Heron Building, *Paris*
- Manhattan Tower, *La Défense*
- Sky 56 Tower, *Lyon*
- La Timone Hospital, *Marseille*
- Swiss Life offices, *Brussels*

(Project data sheets available on our website)



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your sales contacts
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