









PROJECT: multi-purpose facility

LOCATION: Girona, Spain

DESIGNER: Capella García Arquitectura MATERIAL: VIVIX® F0163 Fantasía Marrón

APPLICATION: building entrance canopy cladding

"The exceptional feature of this building is its unique entrance with a stunning overhang measuring almost 20 metres. In order to bring this element to life architecturally, we needed to select a material that would be ideal for both interior and exterior applications, being resistant as well as lightweight, given that a bulkier material would challenge the gracefulness of the structure. We decided easily that VIVIX panels met our needs perfectly."







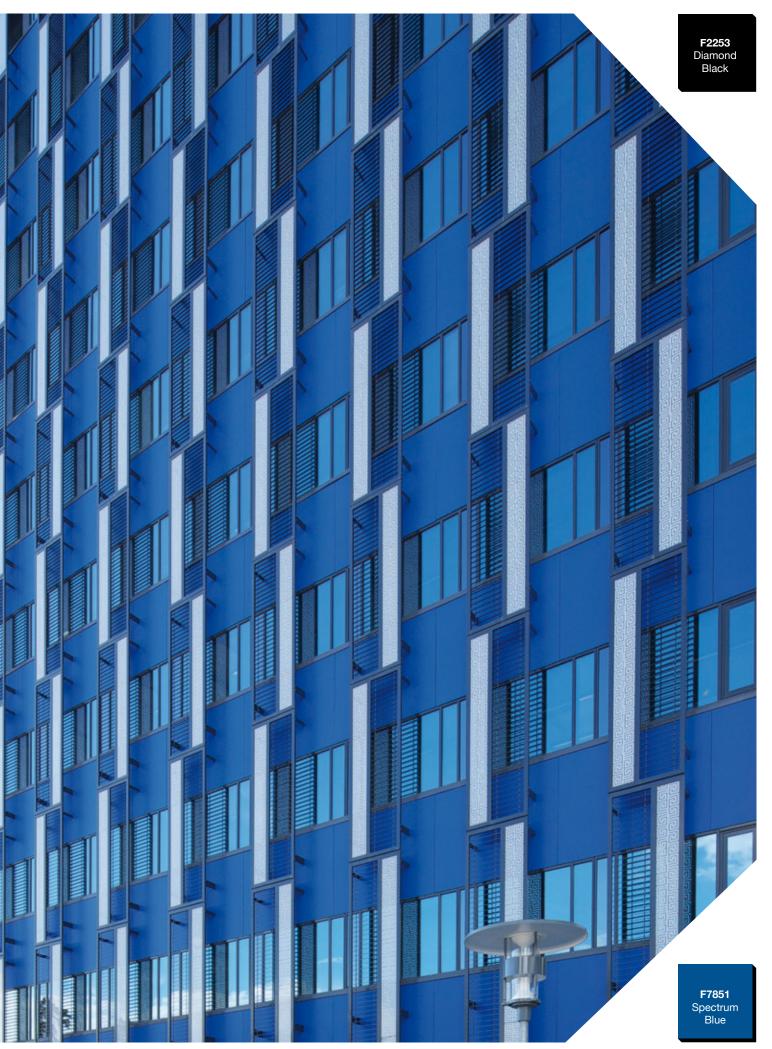












Keilaranta office building. Arkton Arkkitehdit Oy. Finland.





Keilaranta office building. Arkton Arkkitehdit Oy. Finland.

## be ECO-FRIENDLY

VIVIX® panels incorporate Formica Group's commitment to sustainable principles and practices. VIVIX panels are manufactured in Europe to ISO 9001 standards with minimal environmental impact as determined by Formica Group's product Life Cycle Assessment (LCA), which tracks the ecological effects of a product throughout its lifespan from raw material procurement, manufacture and transport, to its use, reuse and disposal.

## VIVIX, AN ENVIRONMENTALLY RESPONSIBLE SOLUTION

- · Contains 3% of pre-consumer recycled wood fibre content (ISO 14021)
- Wood fibres used in the manufacturing process come from responsibly managed forests
- · All colour pigments are free from heavy metals and solvents.
- Multiple panel sizes optimize yield and minimize fabrication waste
- · When used in rainscreen construction, VIVIX panels can contribute to a building's thermal efficiency
- · May contribute toward optimized building energy performance and moisture regulation
- · Manufacturing plants in Europe are accredited to ISO 14001 environmental management system.
- Formica Group are FSC® certified and comply with the requirements of FSC. Network of participating European Formica Group sites is shown on certificate number TT-COC-003588.
- · FSC® certified laminates and compact panels are manufactured in Formica Group's European plants, including VIVIX exterior façade panels.





Prim-Dolaretxe residential buildings. Lázaro, Grijelmo & Asociados. Spain.



Kiddicare. Paul Allan. United Kingdom.



Etone College Nuneaton. Allex Collins. United Kingdom.



Asha house - Harthill House Project. BM3 Architecture. United Kingdom.



Single family dwelling. Kent Johansson. Sweden.



Oriamendi residential buildings. Tanco & Asociados Arquitectura y Urbanismo. Spain.

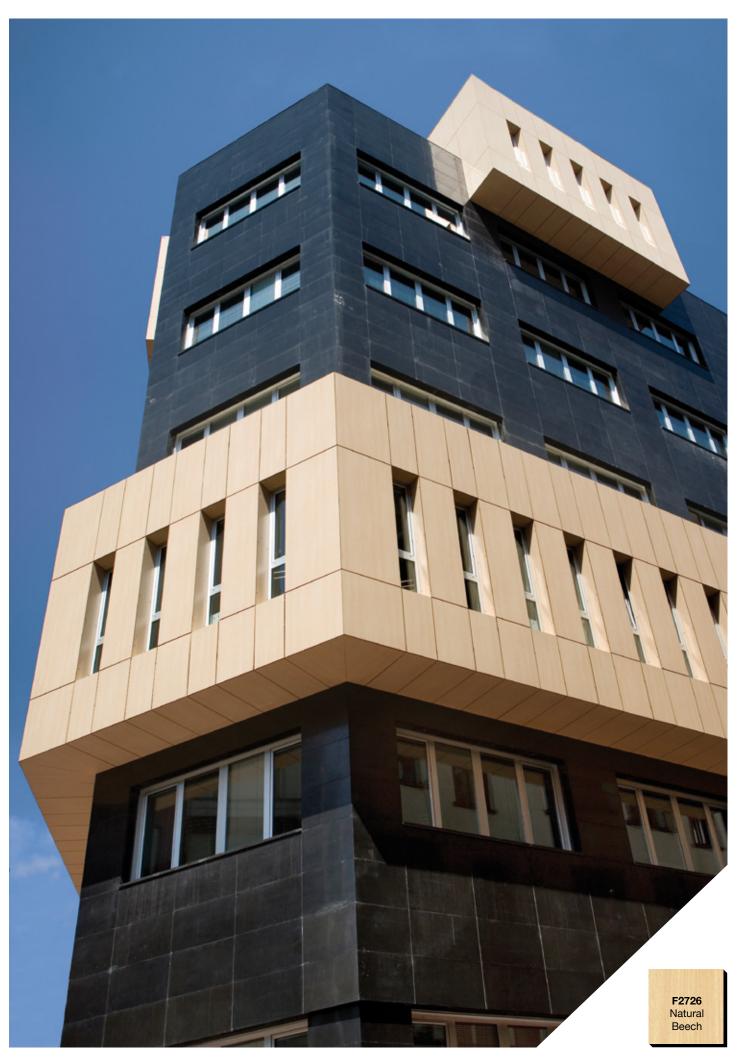




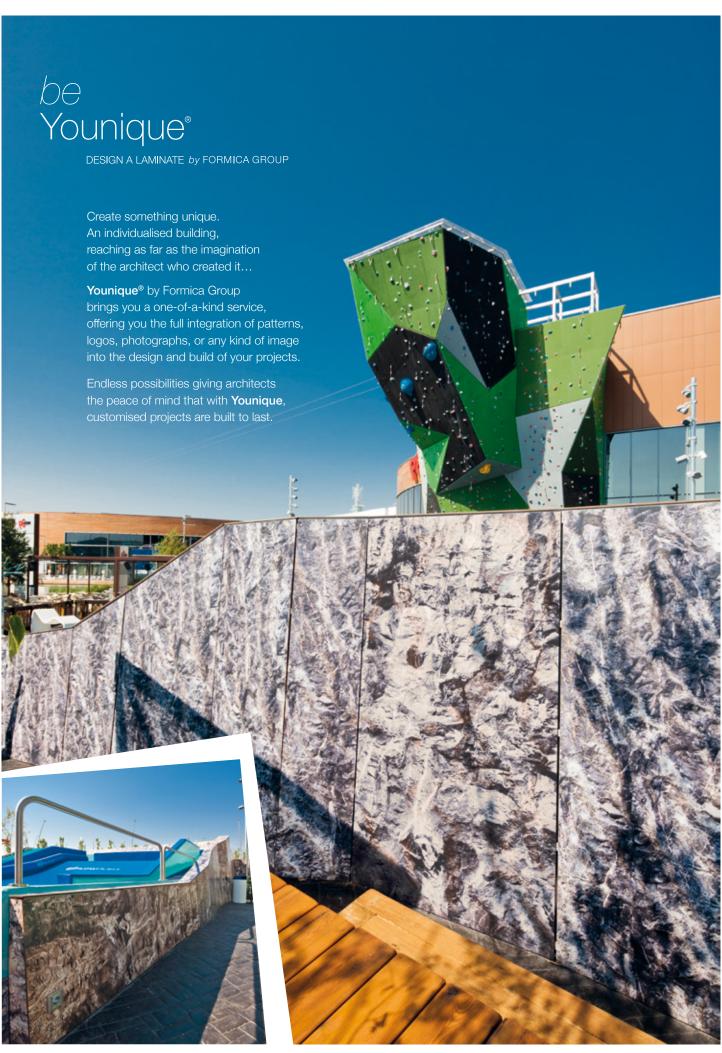
Oosterbeek-Verpakkinge. Heijneman Bouw. Netherlands.



Hytry Derrington residence. Lynn Bichler Architects. Manitowoc, Wl.



Social services building. J. González Aristondo & V. Fernández Amezua. Spain.





Transformer Substation Beniferri-Valencia. Tomás Llavador Arquitectos+Ingenieros.



Miribilla residential buildings. IMB Arquitectura.



**Younique®** by Formica Group utilises the latest in print technologies to deliver optimum visual replication of your designs and original artworks.

Access to both digital and silk-screen prints is another advantage provided by Formica Group, allowing for high quality optimisation and the most economical solution on a project-by-project basis.

DIGITAL PRINTING is ideal for photographic, detailed or multi-coloured projects or for small run production with no set-up costs and ease of translation from file to print. File transfer is made easy via multiple options for receiving images.

SILK-SCREEN PRINTING is ideal for bold, vibrant patterns where specific solid colour references are key (RAL®, Pantone® Matching System or NCS®). Silk-screen printing is cost-effective when the fixed set-up costs are factored out over larger volume production.















## FOR ALL TYPES OF APPLICATIONS

Façades Fencing Balconies Shelters

Soffits Decorative screening



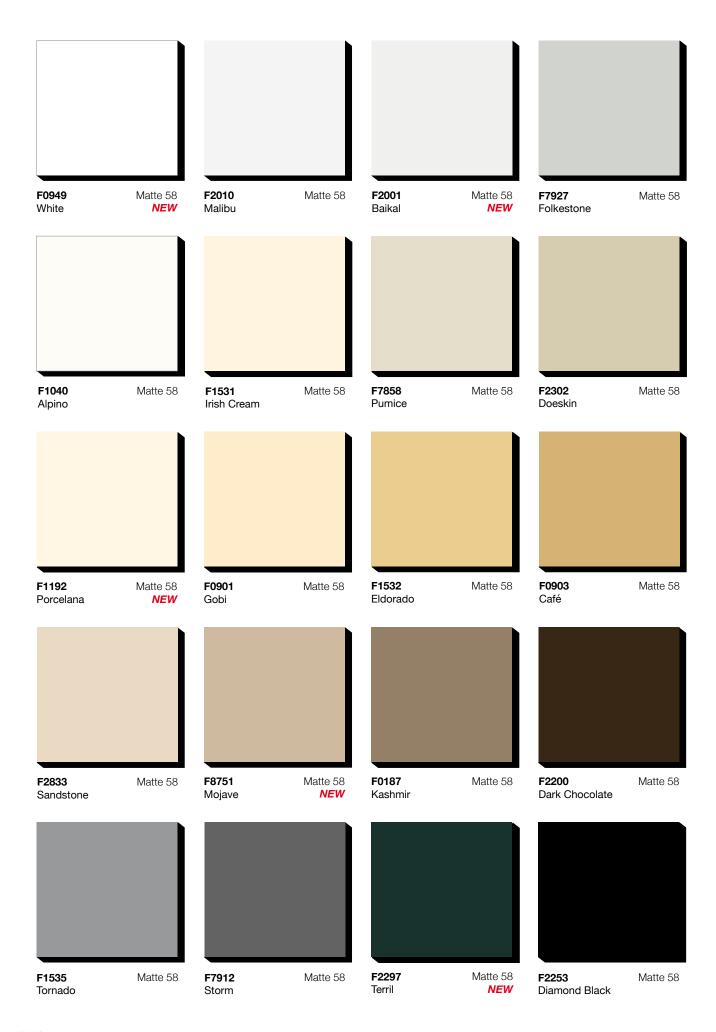








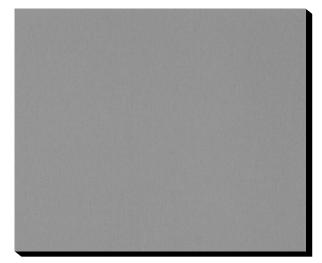




## Colors



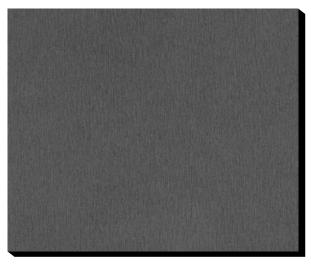




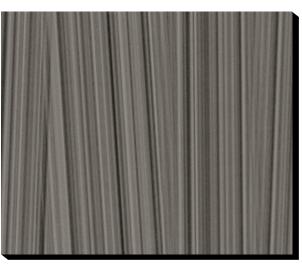
**F3735** Matte 58 Krypton



F6074 Matte 58
Millsawn Slate NEW
TRUE SCALE



**F3734** Matte 58 Radon



F6068 Matte 58 Shadow Strié NEW TRUE SCALE



**F6067** Steel Materia





**F6064** Oxide Materia

Matte 58 NEW TRUE SCALE

# Patterns



F6071 Millsawn Stone

Matte 58 **NEW** TRUE SCALE



F1155 Marrón



F6069 Delta Strié

Matte 58 **NEW** TRUE SCALE



F0163 Fantasía Marrón

Matte 58



F6063 Rust Materia

Matte 58 NEW TRUE SCALE



F6065 Bronze Materia

Matte 58 NEW TRUE SCALE









F5530 Savoy Beech



F2510 Golden Morning Oak





F5532 Erable Whisky



F5511 Vosges Pear



F6060 Marron Cumaru

Matte 58 **NEW** TRUE SCALE



F6059 Sienna Cumaru





F5513 Redwood



F0905 Mahogany

Matte 58



F6053 Matte 58 Chalet Oak NEW TRUE SCALE



F6052 Cottage Oak



NEW

TRUE SCALE

Matte 58

F6058 Bark Microplank





F6050 Barn Oak



F5488 Smoky Brown Pear



F6057 Ash Microplank

Matte 58 **NEW** TRUE SCALE



F6051 Mission Oak

Matte 58 **NEW** TRUE SCALE

NEW

TRUE SCALE



F1614 Punga Punga Wood

Matte 58

VIVIX® by Formica Group offers you TRUE SCALE, the next generation of decorative surfacing represented in the real scale of natural timber and other materials, depicting the patterns, striking veining and rich colour variations of each material across the width of the V/V/X panel.

In exterior, large-scale applications, TRUE SCALE gives you the effect of endless wood grain or the visual richness of aged metals, avoiding the repetition of smaller patterns in more conventional decorative surfaces. With TRUE SCALE enjoy all the practical advantages of robust architectural panels with the exclusive look and scale of real materials, without the associated expense and maintenance issues.





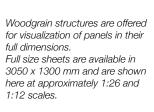




F5530 Savoy Beech



F2510 Golden Morning Oak





F5532 Erable Whisky



F5511 Vosges Pear

# Woodgrain structures



F6059 Sienna Cumaru





F5513 Redwood



F0905 Mahogany









F6053 Chalet Oak



F6052 Cottage Oak





F6060 Marron Cumaru



F6051 Mission Oak



**NEW** TRUE SCALE

# Woodgrain structures



F6058 Bark Microplank





F6057 Ash Microplank

**NEW** TRUE SCALE



F1614 Punga Punga Wood



	Code	Name	Range	NCS®	RAL®	Finish
STREET, STREET	F0163	Fantasía Marrón	Patterns			Matte 58
	F0187	Kashmir	Colors	S 5010-Y30R		Matte 58
	F0901	Gobi	Colors	S 1010-Y30R		Matte 58
	F0903	Café	Colors	S 3020-Y20R		Matte 58
	F0905	Mahogany	Woods			Matte 58
	F0949	White	Colors	S 0502-R50B		Matte 58
	F1040	Alpino	Colors	S 0502-G50Y	9010	Matte 58
	F1155	Marrón	Patterns			Matte 58
	F1192	Porcelana	Colors	S 0505-Y20R	1013	Matte 58
	F1238	Carnaval	Colors	S 1580-Y90R	3001	Matte 58
	F1531	Irish Cream	Colors	S 1005-Y50R		Matte 58
	F1532	Eldorado	Colors	S 1020-Y20R	1014	Matte 58
	F1535	Tornado	Colors	S 4500-N	7036	Matte 58
DATE OF STREET	F1614	Punga Punga Wood	Woods			Matte 58
	F1998	Oslo	Colors	S 3020-B		Matte 58
	F2001	Baikal	Colors	S 1502-Y	9002	Matte 58
	F2005	Paprika	Colors	S 4050-Y80R		Matte 58
	F2010	Malibu	Colors	S 1000-N		Matte 58
	F2200	Dark Chocolate	Colors	S 8005-Y80R	8017	Matte 58
	F2253	Diamond Black	Colors	S 9000-N	9011	Matte 58
	F2288	Peach	Colors	S 1515-Y40R		Matte 58
	F2297	Terril	Colors	S 7502-B	7016	Matte 58
CAPTA TUE DIMETER D	F2302	Doeskin	Colors	S 2010-Y		Matte 58
	F2510	Golden Morning Oak	Woods	0.0010.1/000		Matte 58
	F2833	Sandstone	Colors	S 2010-Y30R		Matte 58
	F2966	Opal	Colors	S 1010-G10Y		Matte 58
	F3007	Pale Olive	Colors	S 3020-G60Y		Matte 58
CHARLES CONTRACTOR OF THE PARTY	F3734	Radon	Patterns Patterns			Matte 58
GENARISM SHAP	F3735 F3855	Krypton Clear Maple	Woods			Matte 58 Matte 58
	F4161	Terracotta	Colors	S 3040-Y60R		Matte 58
	F4168	Campanula	Colors	S 1550-R80B		Matte 58
	F5347	Maui	Colors	S 2030-B30G		Matte 58
H SEE CO	F5488	Smoky Brown Pear	Woods	0 2000 B000		Matte 58
	F5493	Arctic Blue	Colors	S 0510-R90B		Matte 58
	F5494	Aquamarine	Colors	S 0510-B90G		Matte 58
	F5511	Vosges Pear	Woods	2 00 10 2000		Matte 58
阿拉西斯阿斯	F5513	Redwood	Woods			Matte 58
17,534,034,03	F5530	Savoy Beech	Woods			Matte 58
	F5532	Erable Whisky	Woods			Matte 58
	F6050	Barn Oak	Woods			Matte 58
	F6051	Mission Oak	Woods			Matte 58
	F6052	Cottage Oak	Woods			Matte 58
是 ()是 你的人事人可能。	F6053	Chalet Oak	Woods			Matte 58
	F6057	Ash Microplank	Woods			Matte 58
	F6058	Bark Microplank	Woods			Matte 58
	F6059	Sienna Cumaru	Woods			Matte 58
	F6060	Marron Cumaru	Woods			Matte 58
The state of the state of	F6063	Rust Materia	Patterns			Matte 58
Tentando Luis	F6064	Oxide Materia	Patterns			Matte 58
MARK BUSINESS	F6065	Bronze Materia	Patterns			Matte 58
	F6067	Steel Materia	Patterns			Matte 58
	F6068	Shadow Strié	Patterns			Matte 58
<b>美国保护的外部</b> 。	F6069	Delta Strié	Patterns			Matte 58
Name of the Control o	F6071	Millsawn Stone	Patterns			Matte 58
(1) 10 mm (1) m	F6074	Millsawn Slate	Patterns	0.0000.0001	0010	Matte 58
	F6901	Vibrant Green	Colors	S 2060-G30Y	6018	Matte 58

Code	Name	Range	NCS®	RAL®	Finish
F7846	Grotto	Colors	S 5030-B10G		Matte 58
F7851	Spectrum Blue	Colors	S 3060-R80B		Matte 58
F7853	Ocean Grey	Colors	S 3010-G20Y		Matte 58
F7858	Pumice	Colors	S 2005-Y20R		Matte 58
F7884	China Blue	Colors	S 3020-R90B		Matte 58
F7912	Storm	Colors	S 6502-B	7015	Matte 58
F7927	Folkestone	Colors	S 2500-N		Matte 58
F7940	Spectrum Yellow	Colors	S 1070-Y10R	1023	Matte 58
F7967	Hunter Green	Colors	S 7020-G	6005	Matte 58
F7969	Navy Blue	Colors	S 7020-R80B	5013	Matte 58
F8751	Mojave	Colors	S 3010-Y30R		Matte 58

Panel Sizes (mm)				
3050 x 1300				
3660 x 1525				

Grades (EN 438-6)
EDS Exterior grade, severe use, standard grade.
EDF
Exterior grade, severe use, flame-retardant grade B-s1,d0.

Thicknesses (mm)				
6.0				
8.0				
10.0				



Please note that colour systems and their notations represent the closest colour available in the particular colour system and are provided for guidance only.

### **CERTIFICATES**

- · Avis Technique (Technical Opinion) Nº 2/03-984-985, Centre Scientifique et Technique du Bâtiment (CSTB).
- · Document for Technical Suitability (DIT), Eduardo Torroja.
- · Euroclass B-s1,d0 (EDF ≥ 6mm) Fire Retardant Certificate in accordance with European regulation EN 13501-1.
- $\cdot$  VIVIX® panels are certified by the CE Mark to meet or exceed conformity with European consumer safety, health and environmental requirements.
- · Certificate N° E203388 for Quality Management Systems, (ISO 9001:2000), Lloyd's Register Quality Assurance Limited.
- Formica Group are FSC® certified and comply with the requirements of FSC. Network of participating European Formica Group sites is shown on certificate number TT-COC-003588.













**(E** 

EN438-6





BYGGVARUBEDÖMNINGEN











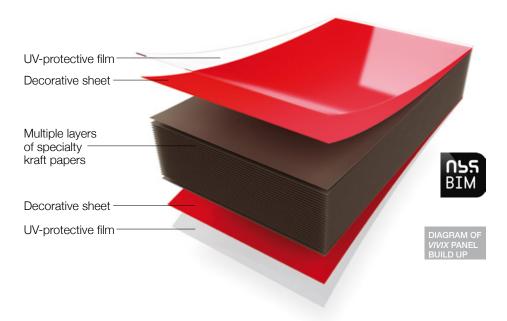
Please note, not all sizes of panel are available with all certifications.



### **Product description**

VIVIX® solid phenolic, engineered exterior façade panels have a decorative surface on both sides. Robust and resilient, these rigid homogeneous panels are manufactured by Formica Group, using tough thermosetting resins reinforced with cellulose fibre for added strength and durability.

An acrylic overlay provides enhanced UV protection and VIVIX panels have been rigorously tested for severe use in accordance with EN 438-6, making them ideal for applications in ventilated rainscreen façades and other external building elements.



# VIVIX architectural panels for ventilated rainscreen façades and other external building elements

Ventilated rainscreen façades with VIVIX panels are made up of the following elements:

- · VIVIX panel in EDS or EDF grade
- · Substructure, which transmits load to the structural wall

· Air cavity

- · Elements that attach panels to the substructure
- Thermal insulation

### VIVIX panel features and benefits:

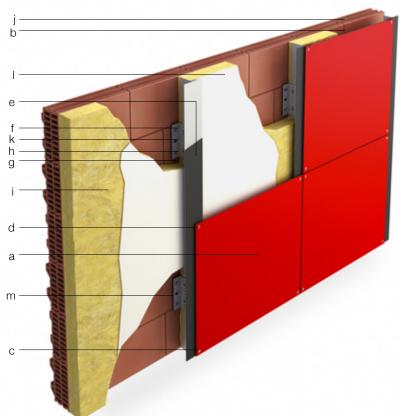
- · Broad range of decorative panels
- · Optimal modulation using different sized panels
- UV resistant
- Durability
- Weather resistant
- Impact resistant
- · VIVIX panels do not rot and are highly resilient against cracking
- $\cdot$  Mechanical and chemical properties unchanged in testing at 180  $^{\circ}\text{C}$
- · Meets Fire Safety Standards. Does not melt or drip
- · Easy to clean and maintain
- Dimensional stability and flatness
- Lightweight
- · Low static electricity, does not attract dust
- · Quick and easy to assemble
- Minimal maintenance
- · No thermal bridge
- ${\boldsymbol{\cdot}}$  Limits heat loss in winter and the transmission of heat in summertime
- · Overall lightweight substructure and façade

All features and benefits are subject to fair wear and tear and wilful damage, misuse or negligence by the buyer or user.

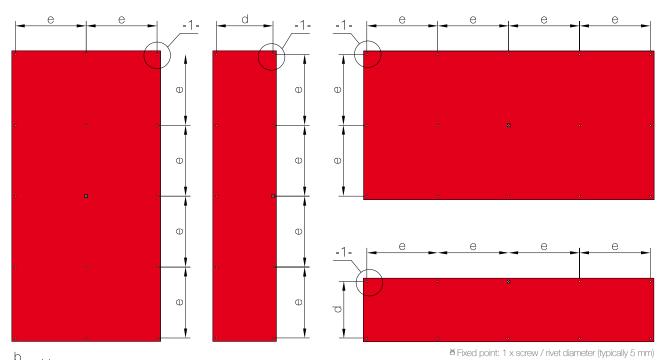
UN and weather resistance cannot be confirmed where the panels are located in places with climatic sunlight energy conditions exceeding those in EN 438-2, test methods

These drawings indicate typical fixing arrangements on various supporting structures. Please contact your Formica Group representative for other possibilities. Any information or suggestions concerning applications, specification or compliance with regulations and standards is provided solely for your convenient reference and without any representation as to accuracy or suitability. The user must verify and test the suitability of any information or products for his or her particular purpose or specific application. Technical drawings in this brochure should be considered as general examples of how VVIX panels can be installed, there are other profiles and systems available in the market for ventilated façades which are not shown in this brochure. Consideration needs to be given to local circumstances, for example climate, wind load and local building regulations.

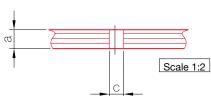
### RAINSCREEN SYSTEM IN DETAIL WITH VISIBLE ATTACHMENTS



- a VIVIX® panel thickness: 6, 8 or 10 mm
- Air cavity: 20 mm (min.)
- Hole diameter: 1.5 x screw/rivet diameter
- d Rivet
- e EPDM rubber strip
- f Vertical fixing profile
- g Stainless steel screw
- h Fixing bracket
- i Thermal insulation
- Load bearing wall
- k Bridge bearing rubber pads
- Weather resistive barrier
- m Anchor bolt / screw







Scale 1:40

750 mm

900 mm

VIVIX panel thickness: 6 mm 450 mm 60 mm (max) 600 mm VIVIX panel thickness: 8 mm 600 mm 750 mm 80 mm (max)

100 mm (max)

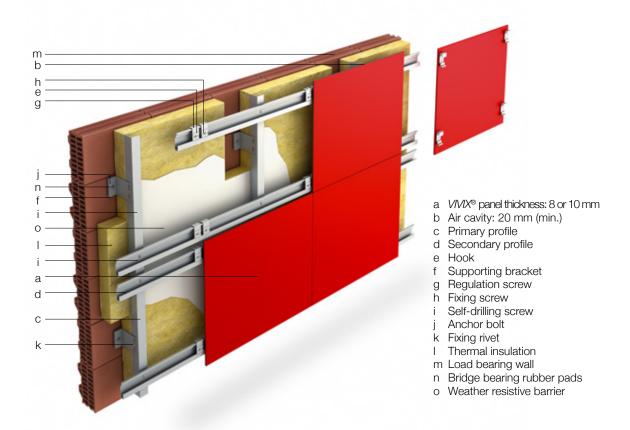
VIVIX panel thickness: 10 mm

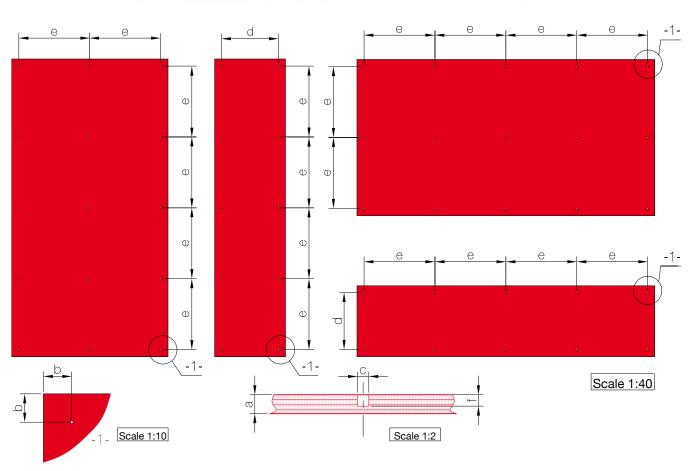
- a VIVIX panel thickness: 6, 8 or 10 mm

- b Typical edge distance: min 20 mm max see table on right
  c Hole diameter: 1.5 x screw / rivet diameter
  d Spacing: 450 mm, 600 mm, 750 mm (2 fixings in one direction)
  e Spacing: 600 mm, 750 mm, 900 mm (3 or more fixings in one direction)



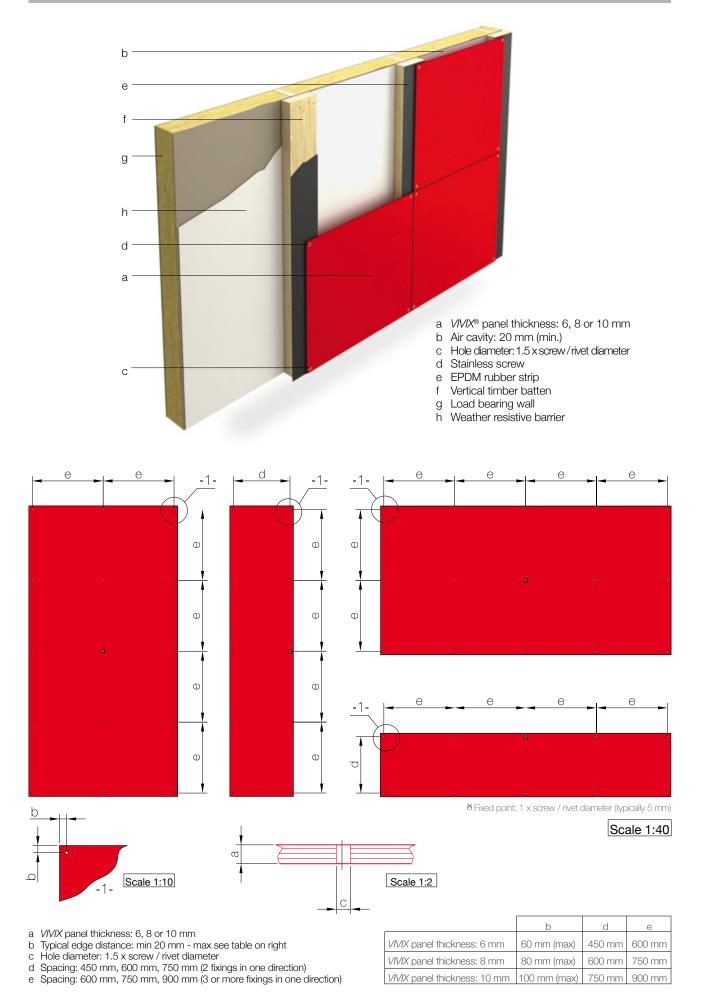
### RAINSCREEN SYSTEM IN DETAIL WITH CONCEALED ATTACHMENTS





- a WWX panel thickness: 8 or 10 mm
  b Min 75 mm max see table on right
  c Diameter to suit fixing screw
  d Spacing: 600 mm, 750 mm (2 fixings in one direction)
  e Spacing: 750 mm, 900 mm (3 or more fixings in one direction)
  f Fixing screw depth: 6 mm

	b	d	е
VIVIX panel thickness: 8 mm	80 mm (max)	600 mm	750 mm
VIVIX panel thickness: 10 mm	100 mm (max)	750 mm	900 mm



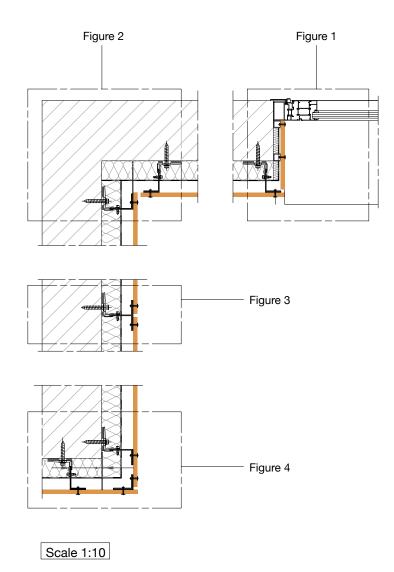


### Metal substructure

## Visible attachment

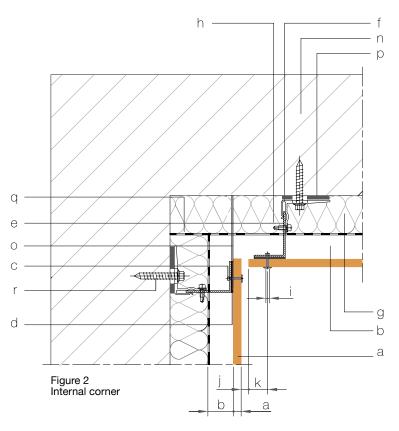
### Horizontal cross-section

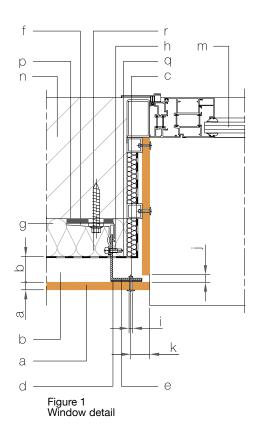
VIVIX® panels can be attached to a metal profile using rivets, screws and concealed attachments.

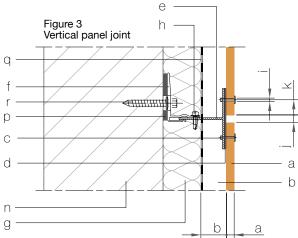


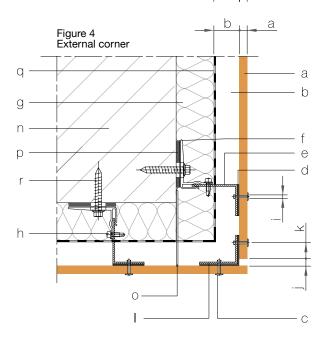
This drawing indicates a typical fixing arrangement on a metal supporting structure. Please contact your Formica Group representative for other possibilities.

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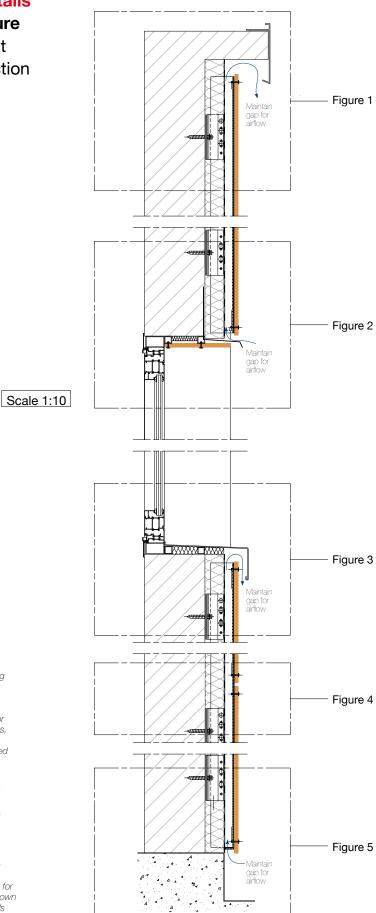


### Scale 1:5

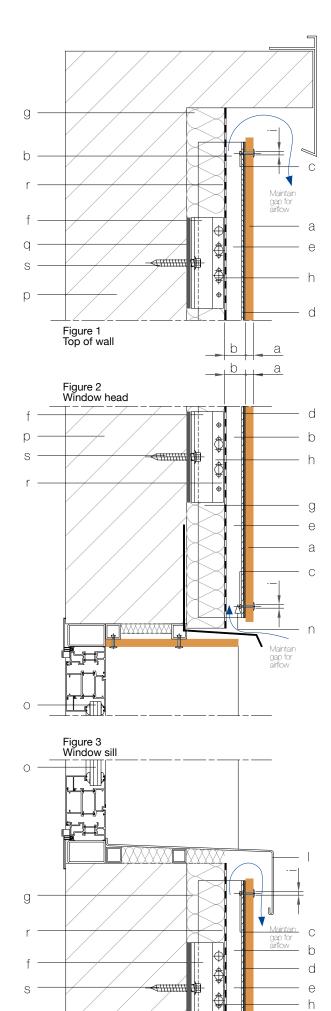
- a VIVIX® panel thickness: 6, 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Fixing rivet
- d EPDM rubber strip
- e Vertical fixing profile (L or T)
- f Fixing bracket
- g Thermal insulation
- h Stainless steel screw
- i Hole diameter: 1.5 x fixing rivet diameter
- j Min. joint dimension: 10 mm
- k Edge distance: min. 20 mm max. 10 x panel thickness
- I Vertical profile "L"
- m Window
- n Load bearing wall
- o Aluminium plate (air cavity interruption)
- p Bridge bearing rubber pads
- q Weather resistive barrier
- r Anchor bolt / screw



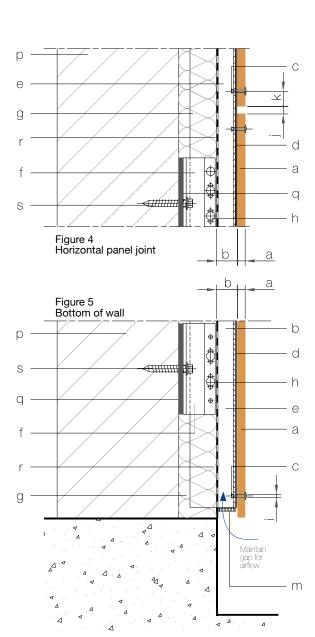
# Metal substructure Visible attachment Vertical cross-section



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р



### Scale 1:5

- a VIVIX® panel thickness: 6, 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Fixing rivet
- d EPDM rubber strip
- e Vertical fixing profile (L or T)
- f Fixing bracket
- g Thermal insulation
- h Stainless steel screw
- i Hole diameter: 1.5 x fixing rivet diameter
- j Min. joint dimension: 10 mm
- k Edge distance: min. 20 mm max. 10 x panel thickness
- Formed metal sheet
- m Ventilation grille
- n Ventilation area: 50 cm²/m (min.)
- o Window

а

b

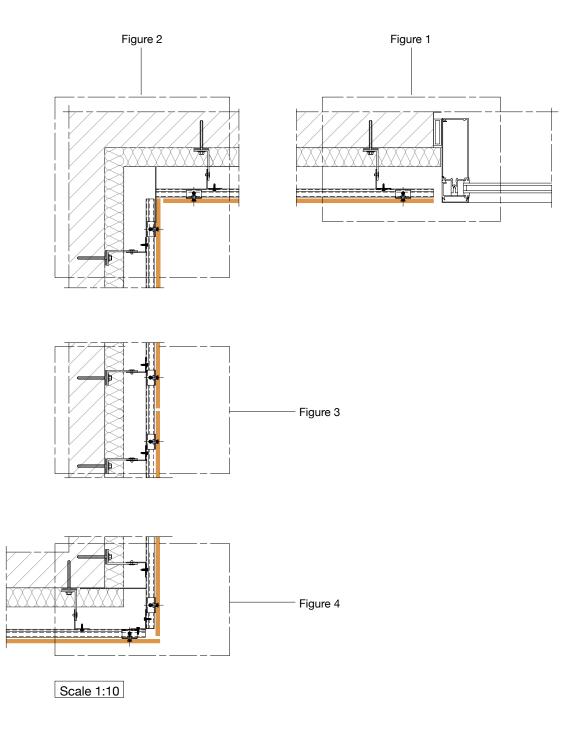
- p Load bearing wall
- q Bridge bearing rubber pads
- r Weather resistive barrier
- s Anchor bolt / screw



### **Metal substructure**

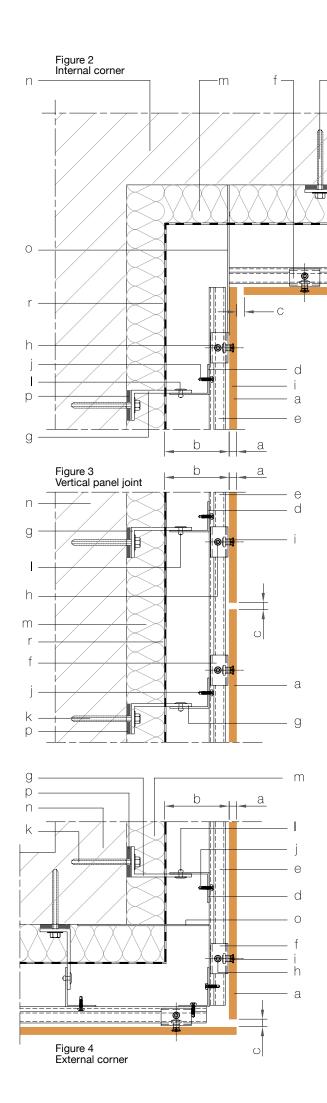
Concealed metal attachment

Horizontal cross-section



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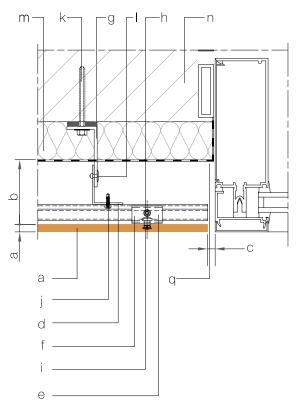


Figure 1 Window detail

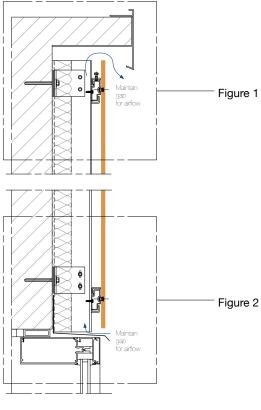
### Scale 1:5

- a  $\ensuremath{\textit{VIVIX}}^{\ensuremath{\text{\tiny{\$}}}}$  panel thickness: 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Min. joint dimension: 10 mm
- d Primary profile
- e Secondary profile
- f Hook
- g Supporting bracket
- h Regulation screw
- i Fixing screw
- Self-drilling screw
- k Anchor bolt
- I Fixing bracket
- m Thermal insulation
- n Load bearing wall
- o Aluminium plate (air cavity interruption)
- p Bridge bearing rubber pads
- q Window
- r Weather resistive barrier

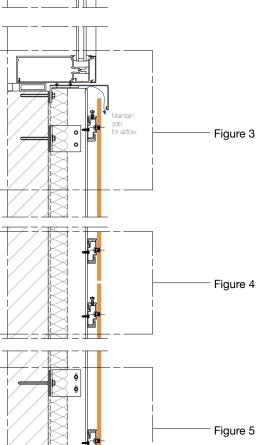


### **Metal substructure**

Concealed metal attachment Vertical cross-section

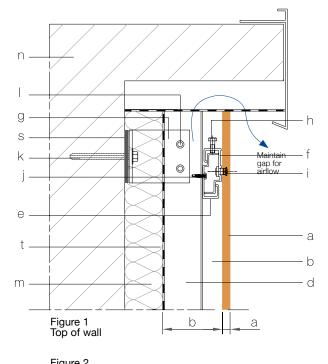


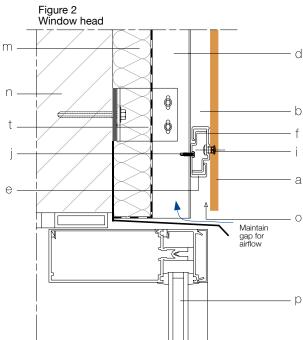
Scale 1:10

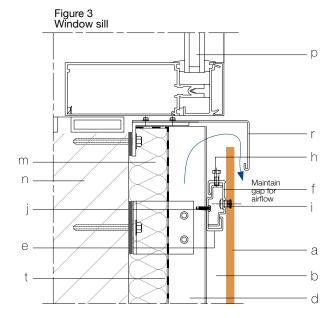


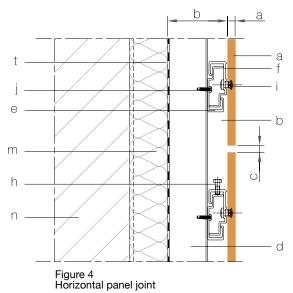
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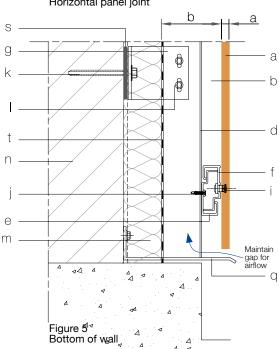
This drawing indicates a typical fixing arrangement on a metal supporting structure. Please contact your Formica Group representative for other possibilities. Any information or suggestions concerning applications, specification or compliance with regulations and standards is provided solely for your convenient reference and without any representation as to accuracy or suitability. The user must verify and test the suitability of any information or products for his or her particular purpose or specific application.











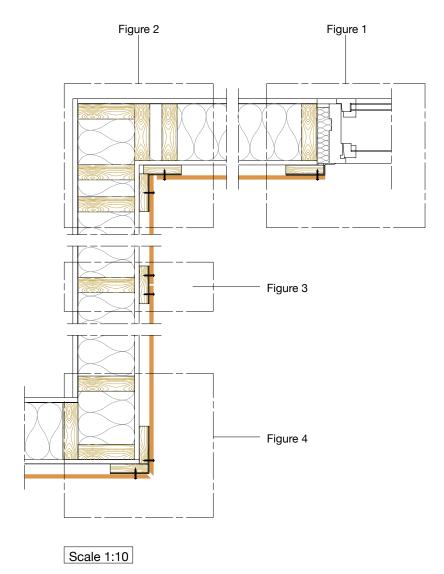
### Scale 1:5

- a VIVIX® panel thickness: 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Min. joint dimension: 10 mm
- d Primary profile
- e Secondary profile
- f Hook
- g Supporting bracket
- h Regulation screw
- i Fixing screw
- j Self-drilling screw
- k Anchor bolt
- I Fixing bracket
- m Thermal insulation
- n Load bearing wall
- o Ventilation area: 50 cm²/m (min.)
- p Window
- g Formed metal sheet
- Formed metal sill flashing
- s Bridge bearing rubber pads
- t Weather resistive barrier



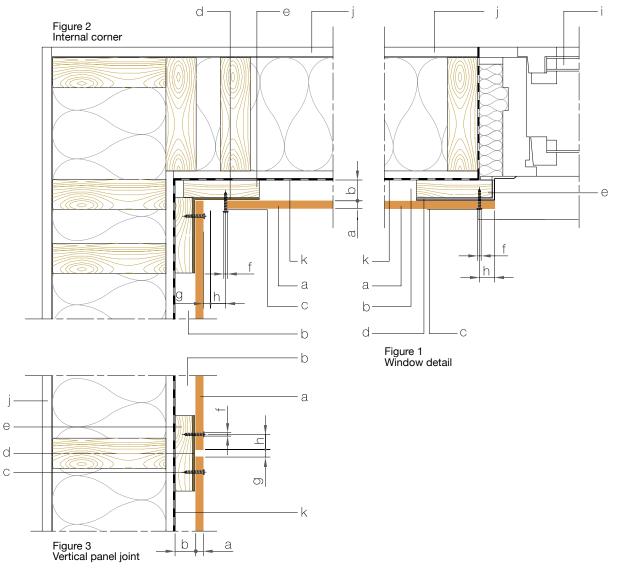
### Wooden substructure

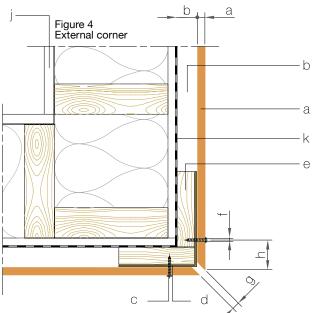
Visible attachment Horizontal cross-section



This drawing indicates a typical fixing arrangement on a wooden supporting structure. Please contact your Formica Group representative for other possibilities.

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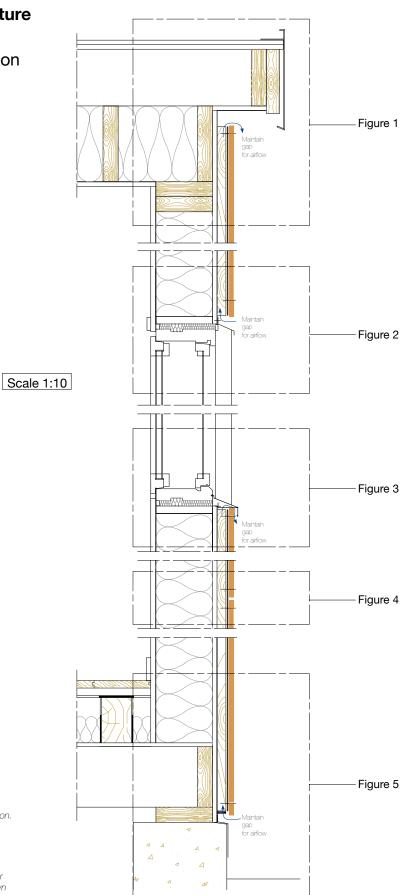


### Scale 1:5

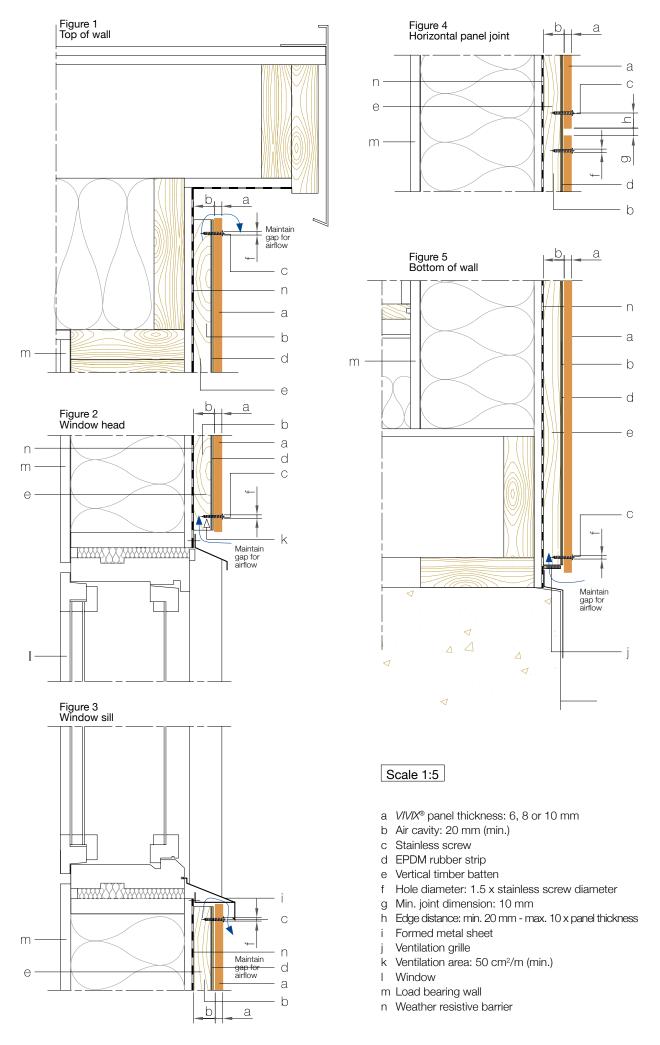
- a  $\ensuremath{\textit{VIVIX}}^{\ensuremath{\text{\tiny{B}}}}$  panel thickness: 6, 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Stainless steel screw
- d EPDM rubber strip
- e Vertical timber batten
- f Hole diameter: 1.5 x stainless screw diameter
- g Min. joint dimension: 10 mm
- h Edge distance: min. 20 mm max. 10 x panel thickness
- i Window
- j Load bearing wall
- k Weather resistive barrier



Wooden substructure Visible attachment Vertical cross-section



This drawing indicates a typical fixing arrangement on a wooden supporting structure. Please contact your Formica Group representative for other possibilities. Any information or suggestions concerning applications, specification or compliance with regulations and standards is provided solely for your convenient reference and without any representation as to accuracy or suitability. The user must verify and test the suitability of any information or products for his or her particular purpose or specific application.





### The building envelope

**VIVIX**® installations utilising the rainscreen system contribute to seven areas of the LEED credits across several LEED rating systems. In order to be recognized by these rating systems, they must have various sustainable attributes. One of the most important is the system's durability. Because of its long lifespan, there are no refurbishments required and very little maintenance. Using a ventilated insulated rainscreen cladding system means less material replacements and considerably lower maintenance costs over the lifetime of the building or structure.

The rainscreen cladding system is used in conjunction with VIVIX architectural panels for the exterior of the building enclosure. It is especially resistant to both mold and moisture build-up, which directly contributes to the quality of the living environment. It also helps insulate the exterior of a building, which helps to address any thermal bridging issues.

The biggest benefit of using rainscreen systems is the temperature regulation and its ability to accommodate for the use of exterior insulation. This will help buildings comply with ASHRAE 90.1 building codes (www.ashrae.org) which will require a continuous energy barrier, preventing thermal bridging which causes energy loss and building envelope inefficiency.

The ventilated rainscreen cladding system, on its own, also helps to cool the building as most of the sun's rays are reflected away. Additionally, any heat that does in fact pass through the exterior wall dissipates because of the ventilating effect of the air space between the exterior cladding *VIVIX* panel and the structural wall itself. Ultimately, any residual heat that does penetrate the building is very minor.

The VIVIX architectural panels act as a rainscreen and keep the structural wall dry. This is because the air space that connects to the outside air evacuates both water and humidity that may have penetrated behind the panels through the joints. This water will in fact never reach the load bearing walls or any of the thermal insulation.

### Components of the ventilated façade

### VIVIX architectural panels - a variety of sizes

The choice of panel formats provides flexibility to adapt the panels in the most cost effective and suitable combination for façades or building elements. Please refer to page 45 for specific panel sizes.

### **Substructure**

The substructure may be made up of:

- · Metallic brackets (L)
- · Vertical profile (T)
- Timber battens

# Elements used for attachment of VIVIX panels to the substructure

Panels are attached to the substructure using screws, rivets or other hidden attaching devices.

### Calculations for façade systems

### Loads to be taken into consideration

The loading to be factored into calculating the façade system is worked out using the weight of the panels themselves and the wind load. The effects of variations in temperature or humidity do not need to be taken into account when the system has been calculated and executed properly.

The installer must take into account local wind load and national building regulations.

### VIVIX panel weights

Thickness 4.5 mm + 6 mm + 8 mm + 10 mmWeight per m² 6.5 kg + 8.7 kg + 11.6 kg + 14.5 kgNote: EN438 minimum density is  $1.35 \text{ gr/cm}^3$ .

### Wind load

Wind load is transmitted through panels to the substructure and unloaded through the supporting wall.

Calculations are performed on a project basis by assigned engineers. Please contact your preferred system manufacturer or installer who will be able to provide the necessary values and calculations. Your Formica Group representative can provide contact information, if necessary.

### **Design**

The following recommendations need to be taken into consideration:

- The minimum distance between a drilled hole and the edge of the *VIVIX* panel should be 20 mm (or 75 mm concealed) and the maximum distance should be the panel thickness x 10.
- The minimum space between VIVIX panels should be no less than 10 mm.
- The maximum distance between screws/rivets depends on the thickness of the panel:

	6 111111	8 111111	<u> 10 mm</u>
2 fixings in one direction	450 mm	600 mm	750 mm
3 or more fixings in one direction	600 mm	750 mm	900 mm

- *VIVIX* panels in 4.5 mm thickness can for example be used in balcony panel applications.
- The maximum distance between screws/rivets for 4.5 mm thick panels is 300 mm.
- A minimum of 6 mm thickness is recommended for façade cladding.

### Setting up the system

The system should be installed by skilled and experienced fitters using the appropriate tools and equipment.

The system profile should be perfectly level and flat, particularly when using panels of 6 mm thickness.

The system manufacturer's instructions must be followed carefully especially with regard to the attachment of the parts of the profile to allow for its expansion differential for thermal loads.

*VIVIX* panels should be pre-conditioned, outdoors on site, for a period of 72 hours before installation.

Care should be taken to shield the protective film on the surface of the panels from solar radiation or other heat sources during pre-conditioning and storage.

The protective film should be removed from both sides of the panel simultaneously before installation.

VIVIX architectural panels, should be transported packed on the specially supplied pallets and should be stored on flat pallets and covered with a cap sheet. Care should be taken to shield the protective film on the surface of the panels from solar radiation or other heat sources during pre-conditioning and storage.

Lift the panels straight up, do not slide the panels against each other.

The protective film should be removed from both sides of the panel simultaneously before installation.

# Physical properties

Property	Standard	Standard Value		
	& Clause	EDF Exterior grade, severe use, flame-retardant grade	EDS Exterior grade, severe use, standard grade	
Thickness Tolerance	EN 438-2-5	6 mm +/-0.4 mm 8 mm +/-0.5 mm 10 mm +/-0.5 mm		
Flatness Tolerance	EN 438-2-9	6 mm 5 mm/m 8 mm 5 mm/m 10 mm 3 mm/m		
Length Width Tolerance	EN 438-2-6	+101	mm/-0	
Straightness of Edge Tolerance	EN 438-2-7	1.5 mm/m r	max deviation	
Flexural Modulus	EN ISO 178	9000 N	1Pa (min)	
Flexural Strength	EN ISO 178	80 MPa (min)		
Tensile Strength	EN ISO 572-2	60 MPa (min)		
Density	EN ISO 1183	1.35 g/cm³ (min)		
Impact Resistance	pact Resistance EN 438-2-21 height 1800 mm (D = 10 mm.		(D = 10 mm. max.)	
Resistance to Wet conditions	EN 438-2-15	mass increase 8% (max) appearance grade 4 (min)	mass increase 5% (max) appearance grade 4 (min)	
Dimensional Stability at Elevated Temperature	EN 438-2-17	L 0.3% (max) T 0.6% (max)		
Resistance to UV Light	EN 438-2-28	contrast min 3 after 1500 hrs appearance min 4 after 1500 hrs		
Resistance to Artificial Weathering	EN 438-2-29	contrast min 3 after 650 MJ/m² appearance min 4 after 650 MJ/m²		
Resistance to Climatic Shock	EN 438-2 - 19	flexural strength index (Ds) 0.95 (min) flexural modulus index (Dm) 0.95 (min) appearance grade 4 (min)		
Fire Test (SBI)	EN 13501-1	B-s1,d0 (≥ 6 mm)	D-s2,d0	
Oxygen Index	ISO 4589-2	45% (min)		
Thermal Conductivity	EN 12524	0.3	w/mk	

Formica Group is committed to making sustainable principles and practices a part of everything we do. We strive to adhere to the highest ethical standards as we advance in our efforts to protect vital resources for future needs.









A FRESH PERSPECTIVE IN ARCHITECTURAL PANELS by FORMICA GROUP

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