

A FRESH PERSPECTIVE IN ARCHITECTURAL PANELS by FORMICA GROUP



In your hands is the latest in lightweight, exterior surfacing by Formica Group. The innovative, high quality, practical and durable solution for all your projects. Be the architect who envisions with the heart and creates with the mind. Unleash your imagination. Be fresh, authentic, demanding. Be creative. Be *VIVIX*.

A FRESH PERSPECTIVE IN ARCHITECTURAL PANELS by FORMICA GROUP

KRISTIANSAND AIRPORT

PROJECT: air traffic control tower LOCATION: Kjevik, Norway DESIGNER: Archus Architects and Wiig og Horgmo Architects MATERIAL: *VIVIX*® F7912 Storm

APPLICATION: control tower cladding

"VIVIX panels are the ideal solution for this project. The panels are easily machined and can be cut into a variety of shapes and sizes. The control towers are at least 30 metres above ground; the material we used for cladding had to be lightweight for ease of installation and safety as well as versatile and flexible to allow us to realize the design concept."

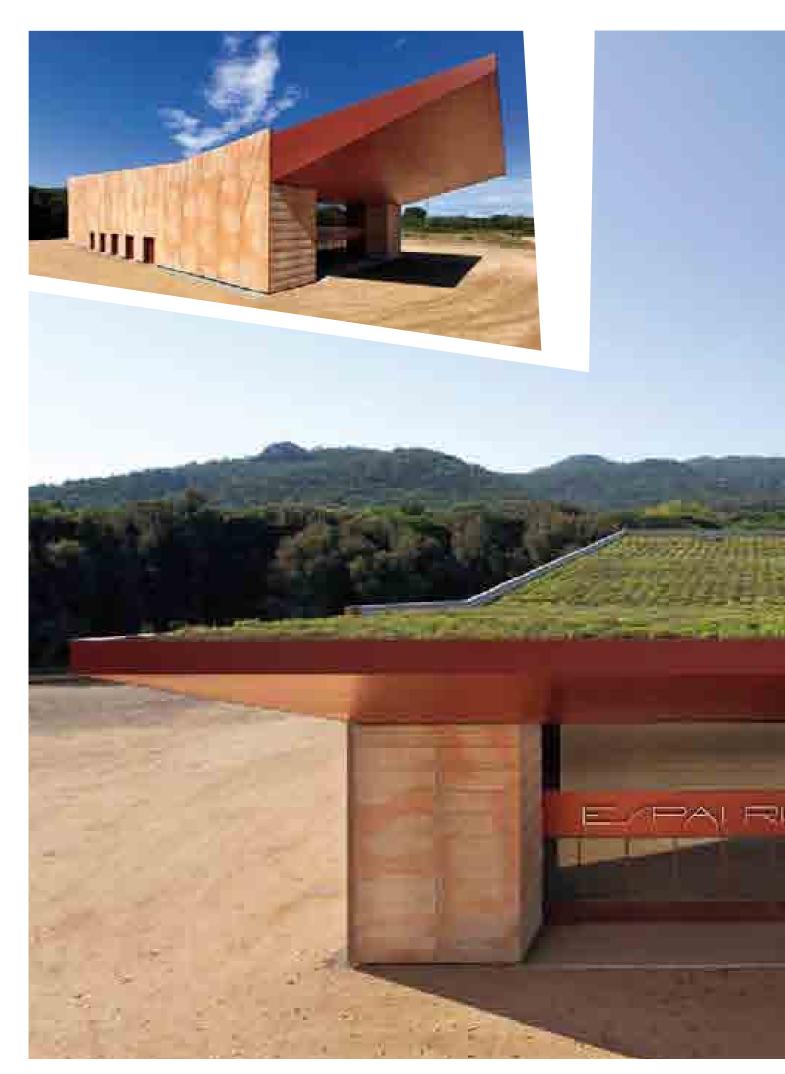
Roald Bakke Architect

"VIVIX panels proved ideal thanks to the colour choice, versatility, durability and quality offered."

Tor Henrik Sømme Architect

Kristiansand Airport control tower. Archus Architects & Wiig og Horgmo Architects. Norway.

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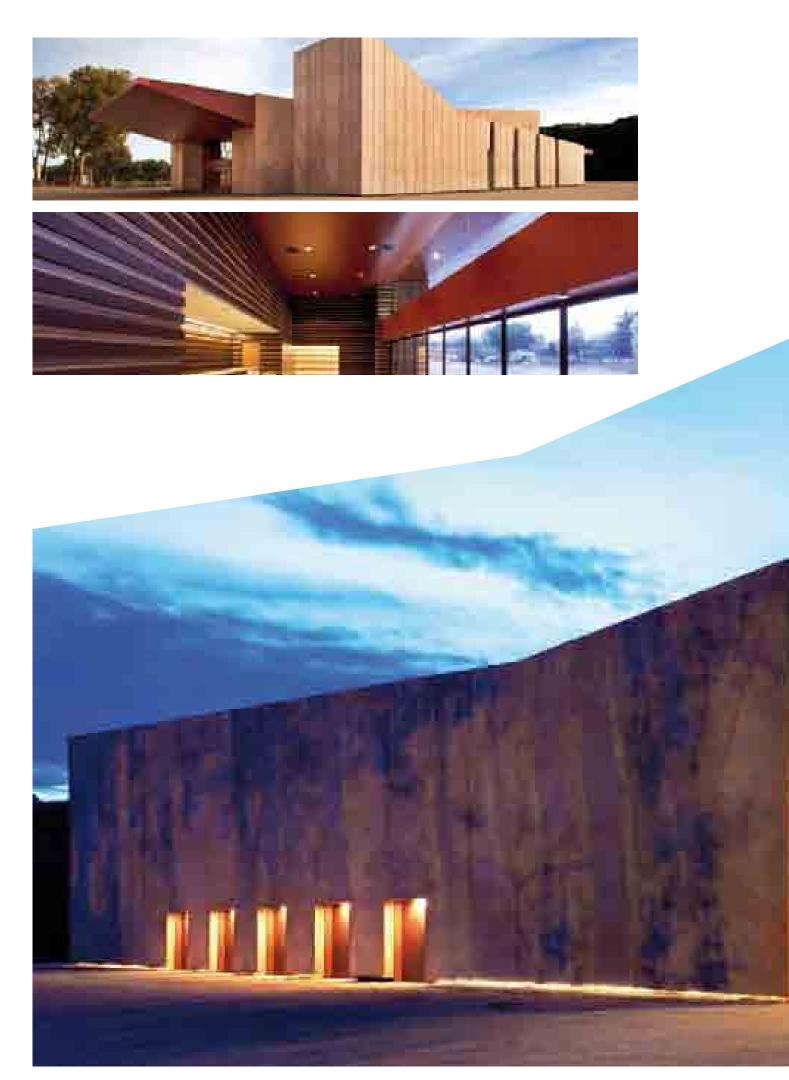
VIVIX[®] architectural panels by Formica Group are solid, lightweight, compact exterior façade panels with a decorative surface on both side.

An innovative solution composed of thermosetting resins, reinforced with cellulose fibre for its superior strength and durability, enabling the construction of any architectural envelope · Office and commercial buildings

Hospitals and clinics
Schools and Universities
Transportation centres
Industrial buildings
Cultural, sports and leisure facilitie
Residential buildings
Hotels

F0163 Fantasía Marrón

Espai Ridaura multi-purpose facility. Capella García Arquitectura. Spain.



ESPAI RIDAURA

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."

> Juli Capella Architect

> > **F0163** Fantasía Marrón

Espai Ridaura multi-purpose facility. Capella García Arquitectura. Spain.

be FUNCTIONAL

The exceptional characteristics of $V/V/X^{\mbox{\tiny (N)}}$ panels make this product a versatile solution, with simple installation and maintenance, improving the look, performance and durability of any building:

- \cdot VIVIX panels are resistant to impact and abrasion.
- VIVIX panels are UV and weather resistant and have been rigorously tested for severe use in accordance with EN 438-6&7.
- Available in an array of colours and patterns attuned to contemporary architecture and design.
- *VIVIX* panels are easily machined and can be cut into a variety of shapes and sizes to express virtually any design concept.
- · Panels can be field modified as needed.
- VIVIX panels are easy to maintain and, in most cases, can simply be cleaned with mild detergent and water, in accordance with the Formica Group Use & Care Guide for VIVIX panels.

"The overall concept was to marry in the rigid form with natural materials using stone and timber. However, the challenge of using timber was the maintenance and durability of the material; we therefore chose VIVIX® panels as they not only exceeded our aesthetics and performance specifications; the maintenance costs have significantly been reduced for the end user."

Gavin Veeran Architect

F5513 Redwood

SAINT JAMES'S HOSPITAL

PROJECT: University teaching hospital LOCATION: Dublin, Ireland DESIGNER: Equator Architects Ireland Ltd. MATERIAL: VIVIX® F5513 Redwood APPLICATION: façade cladding



Saint James's Hospital. Equator Architects Ireland Limited. Ireland.

be FRESH

V/V/X® panels offer different types of solutions for façade cladding with a variety of fixing systems:

- simple fixing systems of timber battens
- proprietary metal or aluminum fixing systems with visible face-fixing or by concealed fixing arrangements

The VENTILATED FAÇADE is based on an air chamber between the inner structure and the outer cladding skin, allowing continuous ventilation in the interior of the cavity, improving thermal protection and stability.

The building is protected from the effects of atmospheric conditions. During the summer a constant renewal of fresh air prevents overheating of the external walls of the building, preventing rising temperatures inside. In winter, the trend is reversed, avoiding heat loss from the building.

Another key advantage is the *RAINSCREEN PRINCIPLE*. The outer cladding acts as a protective screen against rain and snow. In addition, air that runs through the chamber evaporates moisture, keeping the building dry and insulated, avoiding the adverse effects of moisture on building finishes and structural components. K1238 Carnaval



LAKUA-ARRIAGA HEALTH CLINIC

PROJECT: health services building LOCATION: Vitoria-Gasteiz, Spain DESIGNER: Gerardo Zarrabeitia MATERIAL: VIVIX® K1238 Carnaval APPLICATION: façade cladding

"The health services building consists of two adjoining buildings with a façade of more than 1,000 square metres in total. We chose VIVIX exterior panels for the project because, in addition to being aesthetically attractive, VIVIX panels offered us a number of practical advantages: maximum resistance to impact, moisture, weather and ultraviolet rays, along with carefree maintenance."

> Gerardo Zarrabeitia Architect

I LEWO



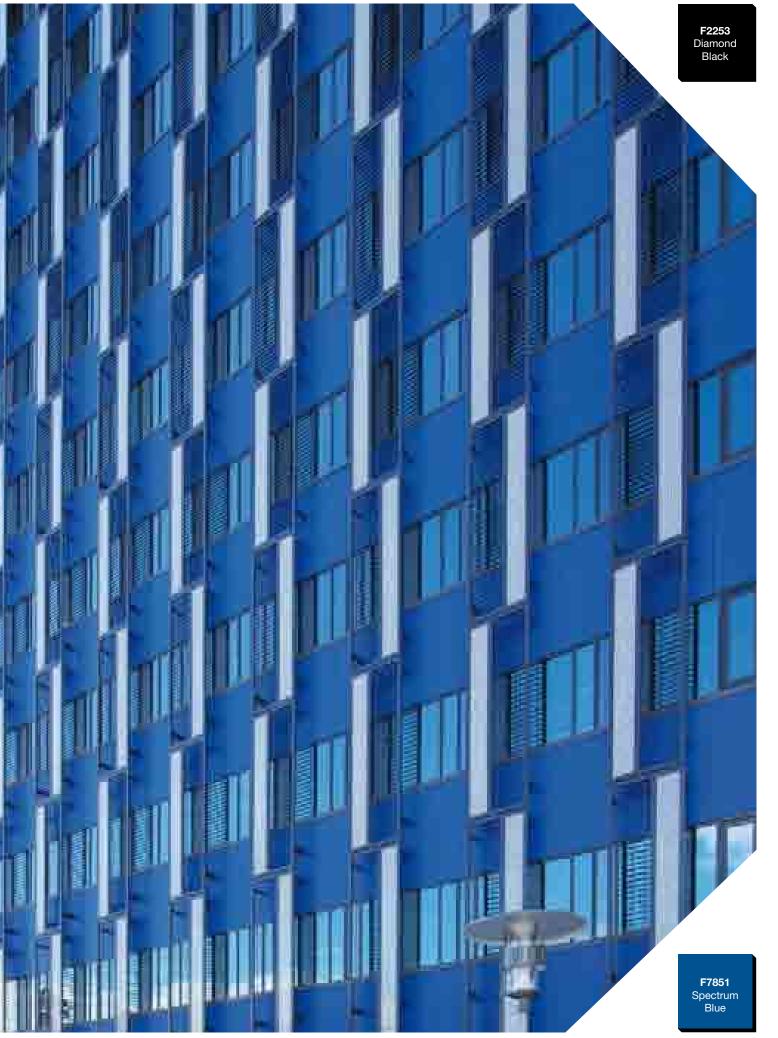


V/V/X® panels, complying with EN438:2005, provide quality solutions for any architectural cladding need.

> When conditions are demanding *VIVIX* responds with its 10-year guarantee.







Keilaranta office building. Arkton Arkkitehdit Oy. Finland.



KEILARANTA 1

PROJECT: eco-efficient office building LOCATION: Espoo, Finland DESIGNER: Arkton Arkkitehdit Oy MATERIAL: V/V/X® F7851 Spectrum Blue V/V/X® F2253 Diamond Black APPLICATION: façade cladding

"An important starting point in the design of the new Keilaranta 1 building was efficient use of space, offering versatile opportunities. In the implementation of the project, environmental friendliness also played a significant role. Our aim was for the property to reach the LEED[®] Platinum certification level, which it did. We chose VIVIX for the façade with it being environmentally friendly and reliable as the certifications show."

Matti Karjanoja Architect



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.
- \cdot 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.



"Apart from the design element VIVIX[®] provides, it is also an easy to install, competitively priced, high quality product; this made it an ideal choice for the Harthill House project."

Richard Peterkin Architect

10000111

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

AND A CONTRACTOR

all mit with a start

F7912 Storm



Single family dwelling. Kent Johansson. Sweden.



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



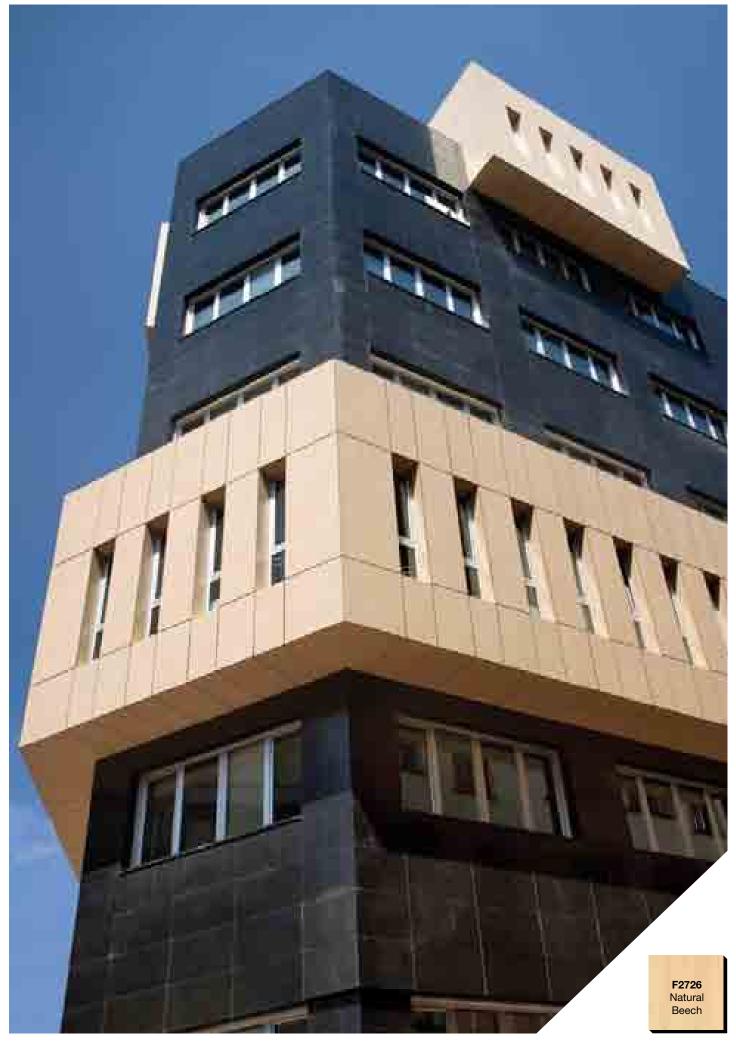
Amara residential buildings. Manu Atristain. Spain.



Oosterbeek-Verpakkinge. Heijneman Bouw. Netherlands.



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



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

be Younique®

DESIGN A LAMINATE by FORMICA GROUP

Create something unique. An individualised building, reaching as far as the imagination of the architect who created it...

Younique® by Formica Group brings you a one-of-a-kind service, offering you the full integration of patterns, logos, photographs, or any kind of image into the design and build of your projects.

Endless possibilities giving architects the peace of mind that with **Younique**, customised projects are built to last.







Recreational & Adventure Park. Jesús Díaz Jubete.



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.



Formica Group exhibition stand at Construmat. Juli Capella & Ramón Cortés.











FOR ALL TYPES OF APPLICATIONS

FaçadesFencingBalconiesSheltersSoffitsDecorative screening









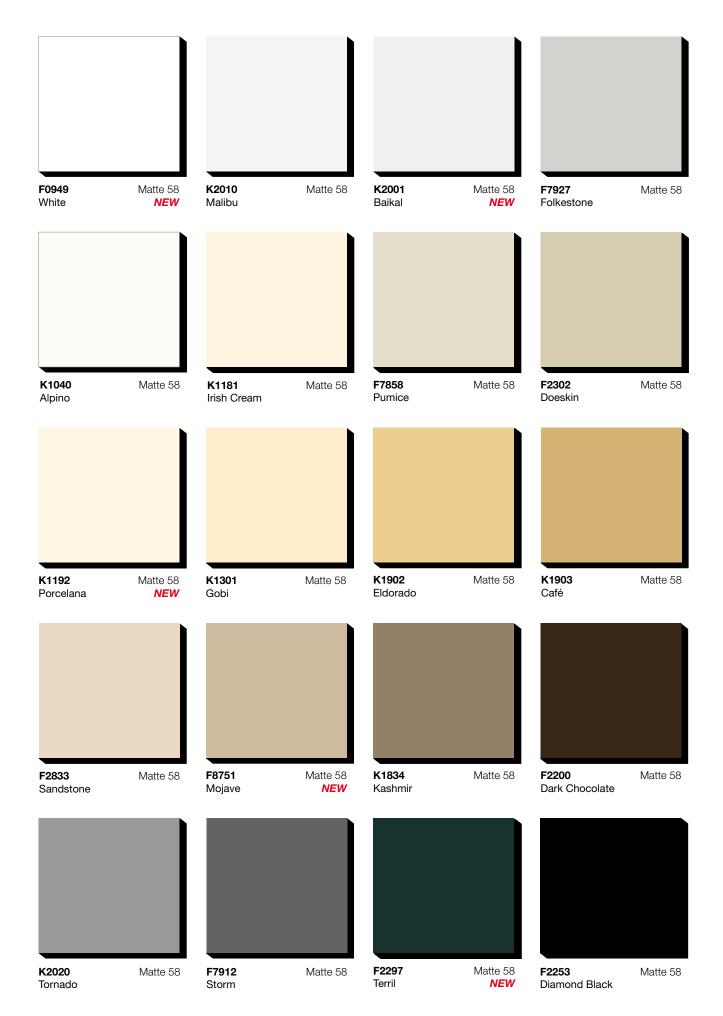
be CREATIVE

Plain colours, neutrals or bright tones, abstract designs inspired by nature. New, **TRUE SCALE** decors celebrate the natural beauty of wood in its true form and scale. The *VIVIX®* panels range is developed in collaboration with architects and chromatography consultants to offer the most extensive range of decorative possibilities.

22.0

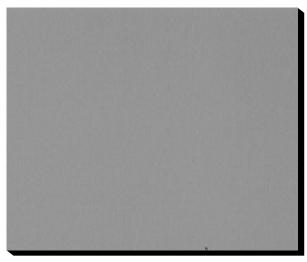
All colours in the V/V/X range have undergone rigorous testing to ensure UV stability in accordance with EN 438-2 test methods 28 & 29 for colour fastness and weather resistance. Panels are tested for severe use compliance.

$V/V/X^{\circ}$



Colors

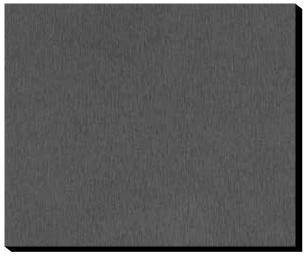




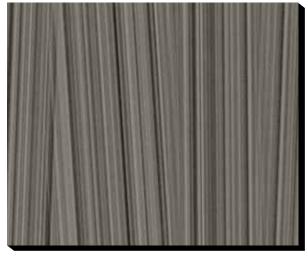
K3735 Krypton Matte 58



F6074 Millsawn Slate Matte 58 NEW TRUE SCALE



K3734 Radon Matte 58



F6068 Shadow Strié Matte 58 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



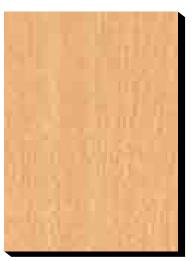
F6065 Bronze Materia

Matte 58 NEW TRUE SCALE



F3855 Clear Maple

Matte 58



F5530 Savoy Beech

Matte 58



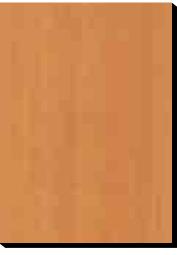
F2510 Golden Morning Oak

Matte 58



F5532 Erable Whisky

Matte 58



F5511 Vosges Pear





F6060 Marron Cumaru

Matte 58 NEW TRUE SCALE



F6059 Sienna Cumaru

Matte 58 **NEW** TRUE SCALE



F5513 Redwood

Matte 58



F0905 Mahogany Matte 58

Woods



F6053 Chalet Oak





F6052 Cottage Oak

Matte 58 NEW TRUE SCALE



F6058 Bark Microplank Matte 58 NEW TRUE SCALE



F6050 Barn Oak Matte 58 NEW TRUE SCALE



F5488 Smoky Brown Pear Matte 58



F6057 Ash Microplank Matte 58 NEW TRUE SCALE



F6051 Mission Oak



F1614 Punga Punga Wood

Matte 58

V/V/X® 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.

NEW

TRUE SCALE

VIVIX®





F3855 Clear Maple

F5530 Savoy Beech



F5532 Erable Whisky

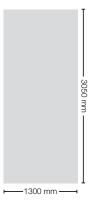


F2510 Golden Morning Oak



F5511 Vosges Pear

Woodgrain structures are offered for visualization of panels in their full dimensions. Full size sheets are available in 3050 x 1300 mm and are shown here at approximately 1:26 and 1:12 scales.





Woodgrain structures



F5513 Redwood



F0905 Mahogany

F6059 Sienna Cumaru

NEW True scale





F6050 Barn Oak

NEW TRUE SCALE

TRUE SCALE

F6053 Chalet Oak

NEW True scale

NEW TRUE SCALE



F6060 Marron Cumaru



F6051 Mission Oak

NEW TRUE SCALE



F5488 Smoky Brown Pear



Woodgrain structures



F6057 Ash Microplank

NEW TRUE SCALE



F1614 Punga Punga Wood

F6058 Bark Microplank

NEW TRUE SCALE

VIVIX®

Numerical listing

| | Code | Name | Range | NCS® | RAL® | Finish |
|-----------------------|-------|--------------------|----------|-------------|------|----------|
| | F0163 | Fantasía Marrón | Patterns | | | Matte 58 |
| | F0905 | Mahogany | Woods | | | Matte 58 |
| | F0949 | White | Colors | S 0502-R50B | | Matte 58 |
| | K1040 | Alpino | Colors | S 0502-G50Y | 9010 | Matte 58 |
| | F1155 | Marrón | Patterns | | | Matte 58 |
| | K1181 | Irish Cream | Colors | S 1005-Y50R | | Matte 58 |
| | K1192 | Porcelana | Colors | S 0505-Y20R | 1013 | Matte 58 |
| | K1238 | Carnaval | Colors | S 1580-Y90R | 3001 | Matte 58 |
| | K1301 | Gobi | Colors | S 1010-Y30R | | Matte 58 |
| | F1614 | Punga Punga Wood | Woods | | | Matte 58 |
| | K1834 | Kashmir | Colors | S 5010-Y30R | | Matte 58 |
| | K1902 | Eldorado | Colors | S 1020-Y20R | 1014 | Matte 58 |
| | K1903 | Café | Colors | S 3020-Y20R | | Matte 58 |
| | K1998 | Oslo | Colors | S 3020-B | | Matte 58 |
| | K2001 | Baikal | Colors | S 1502-Y | 9002 | Matte 58 |
| | K2005 | Paprika | Colors | S 4050-Y80R | | Matte 58 |
| | K2010 | Malibu | Colors | S 1000-N | | Matte 58 |
| | K2020 | Tornado | Colors | S 4500-N | 7036 | 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 |
| | F2302 | Doeskin | Colors | S 2010-Y | | Matte 58 |
| | F2510 | Golden Morning Oak | Woods | | | 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 |
| | K3734 | Radon | Patterns | | | Matte 58 |
| | K3735 | Krypton | Patterns | | | Matte 58 |
| | F3855 | Clear Maple | Woods | | | 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 |
| | F5488 | Smoky Brown Pear | Woods | | | Matte 58 |
| | F5493 | Arctic Blue | Colors | S 0510-R90B | | Matte 58 |
| | F5494 | Aquamarine | Colors | S 0510-B90G | | Matte 58 |
| | F5511 | Vosges Pear | Woods | | | Matte 58 |
| | F5513 | Redwood | Woods | | | Matte 58 |
| | F5530 | Savoy Beech | Woods | | | Matte 58 |
| | F5532 | Erable Whisky | Woods | | | Matte 58 |
| HALL BURNEY | F6050 | Barn Oak | Woods | | | Matte 58 |
| | F6051 | Mission Oak | Woods | | | Matte 58 |
| | F6052 | Cottage Oak | Woods | | | Matte 58 |
| | 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 |
| and the second second | F6063 | Rust Materia | Patterns | | | Matte 58 |
| | F6064 | Oxide Materia | Patterns | | | Matte 58 |
| a man and a state | F6065 | Bronze Materia | Patterns | | | Matte 58 |
| | F6067 | Steel Materia | Patterns | | | Matte 58 |
| | F6068 | Shadow Strié | Patterns | | | Matte 58 |
| | F6069 | Delta Strié | Patterns | | | Matte 58 |
| and the second | F6071 | Millsawn Stone | Patterns | | | Matte 58 |
| THE REPORT | F6074 | Millsawn Slate | Patterns | 0.0000.0001 | 0040 | Matte 58 |
| | F6901 | Vibrant Green | Colors | S 2060-G30Y | 6018 | Matte 58 |

Certificates

| 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 | Grades | Thicknesses |
|----------------------------|---|--------------------|
| (mm) | (EN 438-6) | (mm) |
| 3050 x 1300 3660 x 1525 | EDS Exterior grade, severe use, standard grade. EDF Exterior grade, severe use, flame-retardant grade B-s1,d0. | 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 \geq 6mm) Fire Retardant Certificate in accordance with European regulation EN 13501-1.
- VIVIX® panels are certified by the CE Mark to meet or exceed conformity with European consumer safety, health and environmental requirements.
- · Certificate Nº 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.



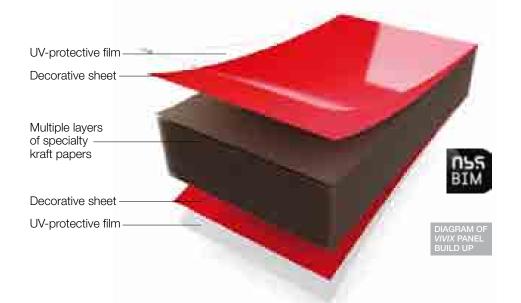
Please note, not all sizes of panel are available with all certifications.

Designs given in this publication have been matched as closely as printing conditions allow. We do recommend, however, that you order samples before final specification, fabrication or installation, as the colour samples in the brochure may differ in shade, hue, tone or brightness to the products purchased.

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

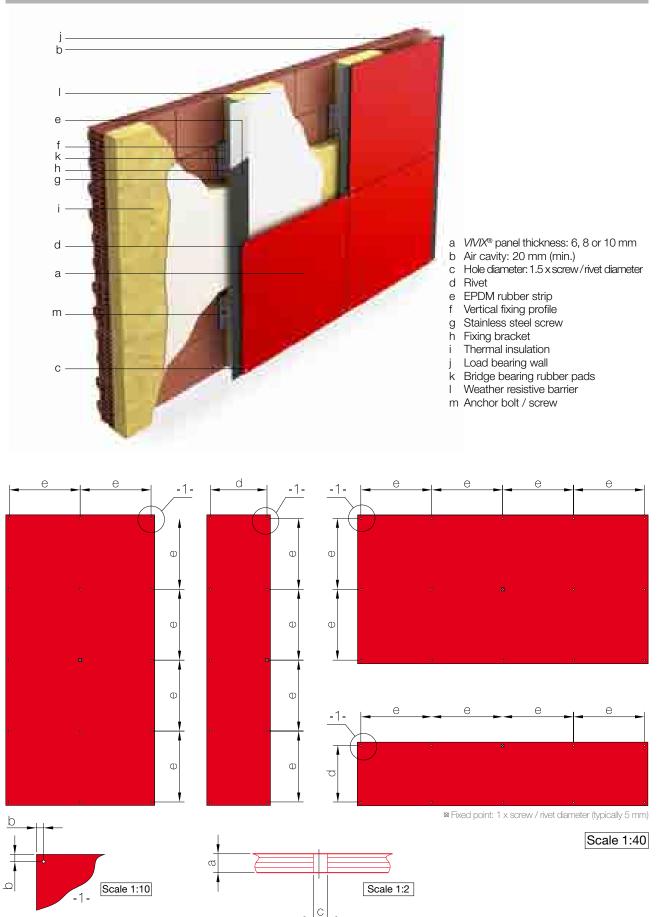
- Elements that attach panels to the substructure
- Thermal insulation
- *VIVIX* panel features and benefits:
 - Broad range of decorative panels
 - · Optimal modulation using different sized panels
 - UV resistant
 - Durability
 - Weather resistant
 - Impact resistant
 - VIVIX panels do not rot and are highly resilient against cracking
 - Mechanical and chemical properties unchanged in testing at 180 °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
 - · Limits heat loss in winter and the transmission of heat in summertime
 - · Overall lightweight substructure and façade

UV 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 28 & 29.

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 verifitated façades which are not shown in this brochure. Consideration needs to be given to local circumstances, for example climate, wind load and local bioliding regulations.

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

RAINSCREEN SYSTEM IN DETAIL WITH VISIBLE ATTACHMENTS



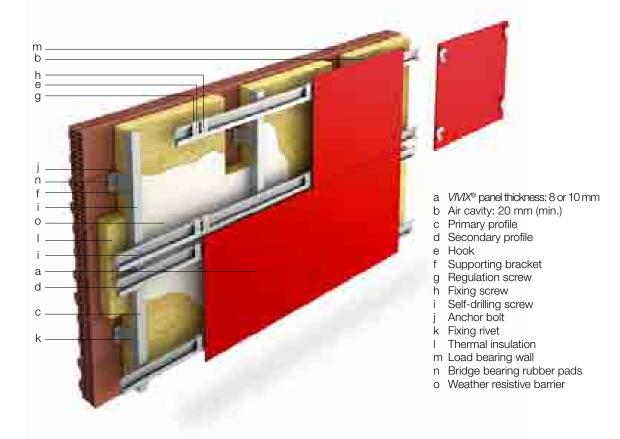
a VIVIX panel thickness: 6, 8 or 10 mm

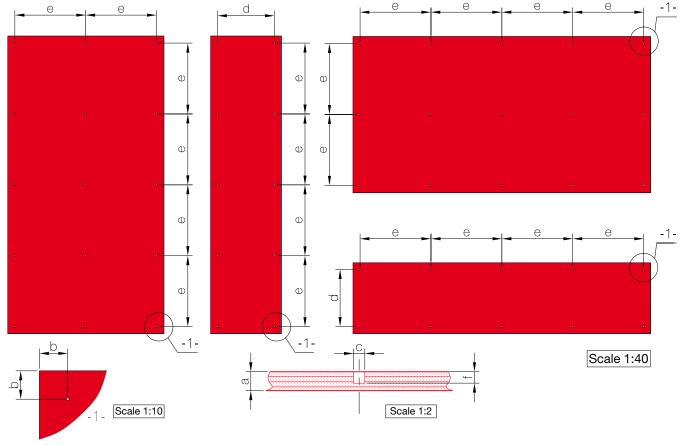
- b Typical edge distance: min 20 mm max see table on right
- c Hole diameter: 1.5 x screw / rivet diameter
- d Spacing: 450 mm, 600 mm, 750 mm (2 fixings in one direction)
- e Spacing: 600 mm, 750 mm, 900 mm (3 or more fixings in one direction)

| | d | d | е |
|------------------------------|--------------|--------|--------|
| VIVIX panel thickness: 6 mm | 60 mm (max) | 450 mm | 600 mm |
| VIVIX panel thickness: 8 mm | 80 mm (max) | 600 mm | 750 mm |
| VIVIX panel thickness: 10 mm | 100 mm (max) | 750 mm | 900 mm |

VIVIX®

RAINSCREEN SYSTEM IN DETAIL WITH CONCEALED ATTACHMENTS

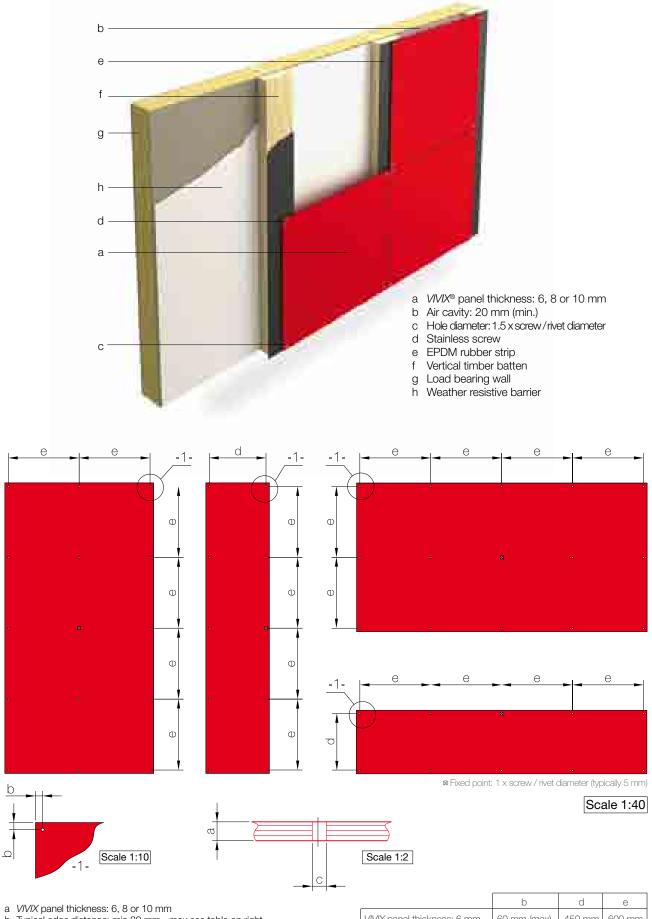




- a VIVIX panel thickness: 8 or 10 mm
- b Min 75 mm max see table on right
- c Diameter to suit fixing screw
 d Spacing: 600 mm, 750 mm (2 fixings in one direction)
 e Spacing: 750 mm, 900 mm (3 or more fixings in one direction)
- f Fixing screw depth: 6 mm

| | 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 |

RAINSCREEN SYSTEM IN DETAIL WITH VISIBLE ATTACHMENTS ON WOODEN SUBSTRUCTURE



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

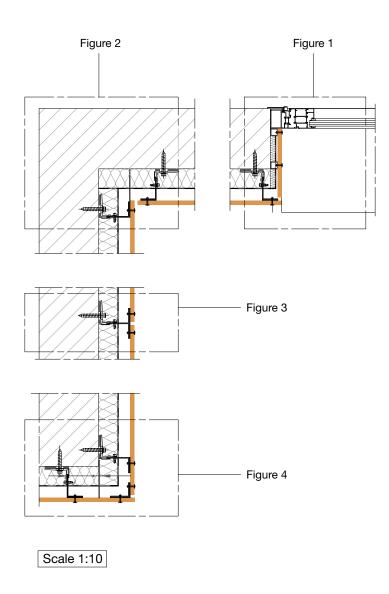
 VIVIX panel thickness: 8 mm
 80 mm (max)
 600 mm
 750 mm

 VIVIX panel thickness: 10 mm
 100 mm (max)
 750 mm
 900 mm

Construction details

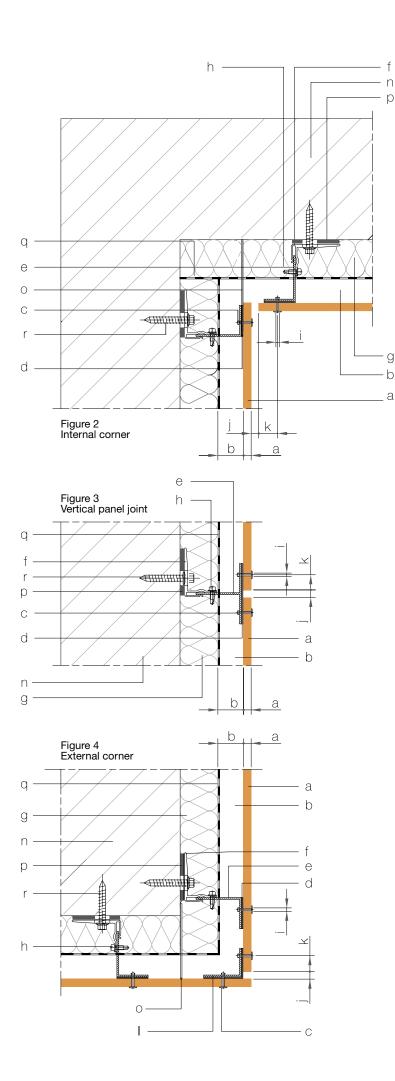
Metal substructure Visible attachment Horizontal cross-section

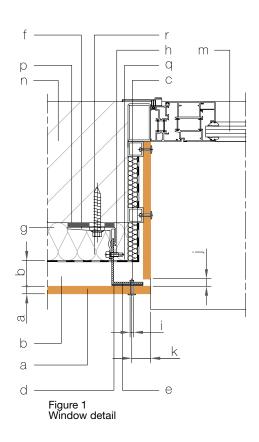
VIVIX® panels can be attached to a metal profile using rivets, screws and concealed attachments.



This drawing indicates a typical fixing arrangement on a metal supporting structure. Please contact your Formica Group representative for other possibilities. 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 VIVIX panels can be installed, there are other profiles and systems available in the market for ventilated façades whi ch are not shown in this brochure. Consideration needs to be given to local circumstances, for example climate, wind load and local building regulations.



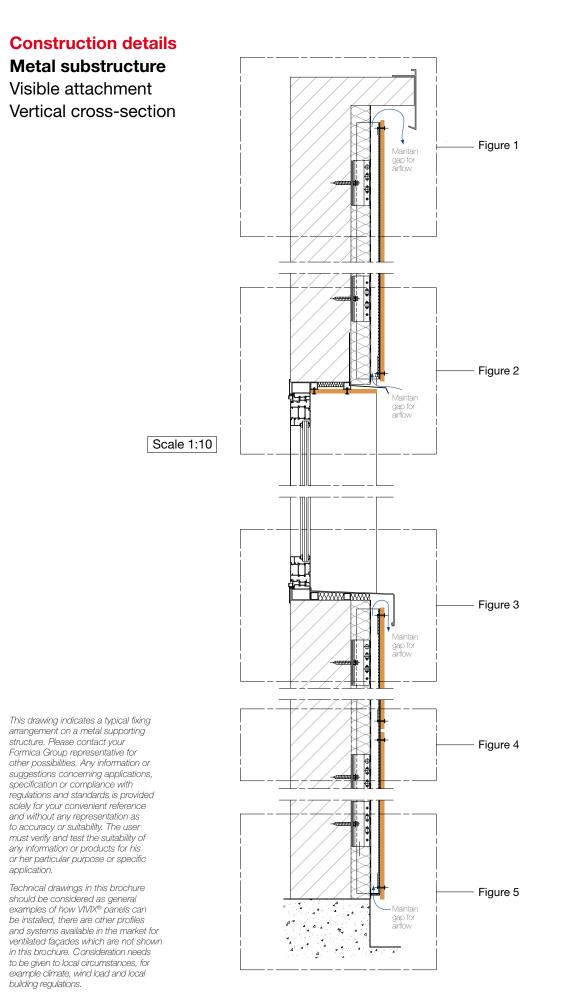


f

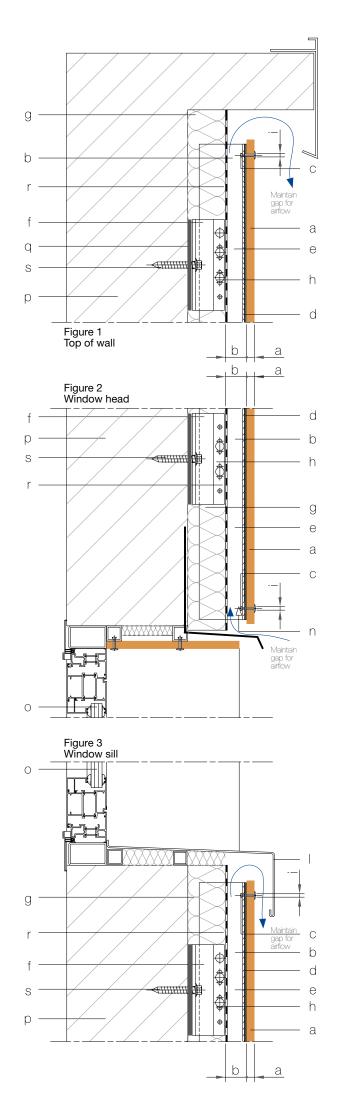
Scale 1:5

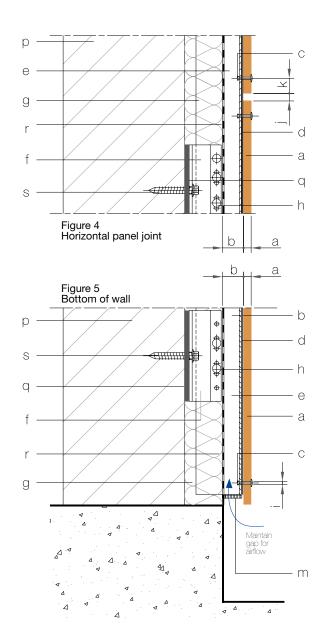
- a VIVIX® panel thickness: 6, 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Fixing rivet
- d EPDM rubber strip
- e Vertical fixing profile (L or T)
- f Fixing bracket
- g Thermal insulation
- h Stainless steel screw
- i Hole diameter: 1.5 x fixing rivet diameter
- j Min. joint dimension: 10 mm
- k Edge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

VIVIX®



52 VIVIX*





Scale 1:5

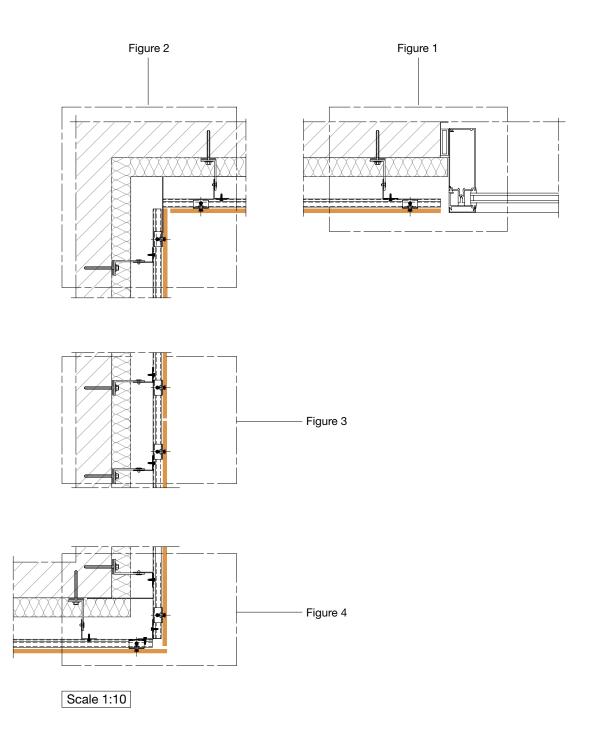
- a VIVIX® panel thickness: 6, 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Fixing rivet
- d EPDM rubber strip
- e Vertical fixing profile (L or T)
- f Fixing bracket
- g Thermal insulation
- h Stainless steel screw
- i Hole diameter: 1.5 x fixing rivet diameter
- j Min. joint dimension: 10 mm
- k Edge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

VIVIX®

Construction details

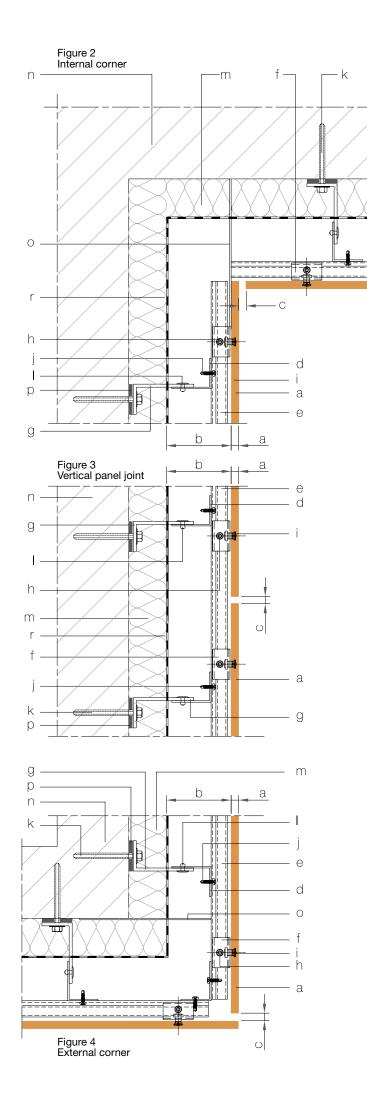
Metal substructure

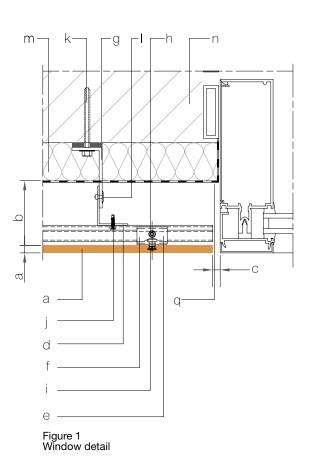
Concealed metal attachment Horizontal cross-section



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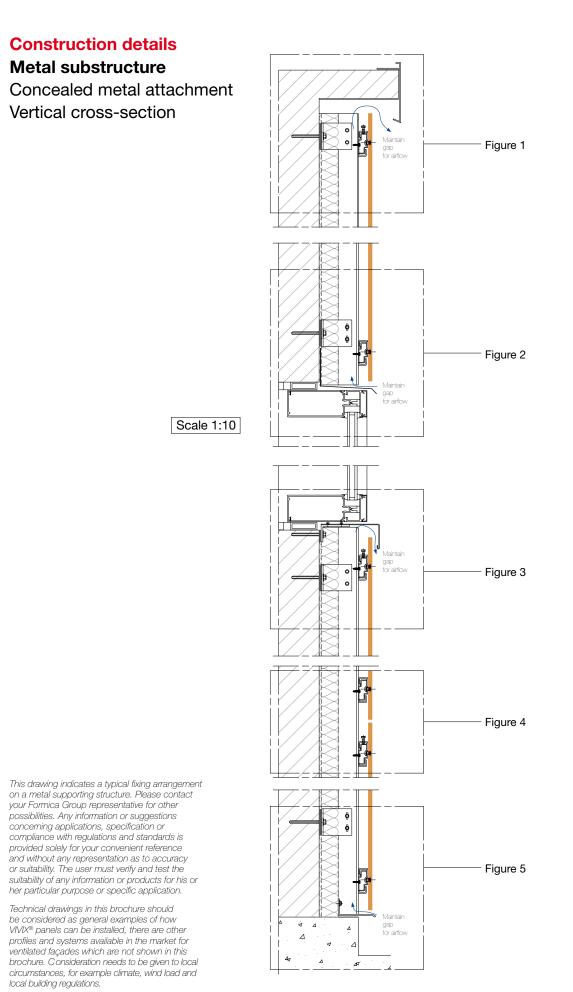
Technical drawings in this brochure should be considered as general examples of how VIVIX® panels can be installed, there are other profiles and systems available in the market for ventilated façades whi ch are not shown in this brochure. Consideration needs to be given to local circumstances, for example climate, wind load and local building regulations.

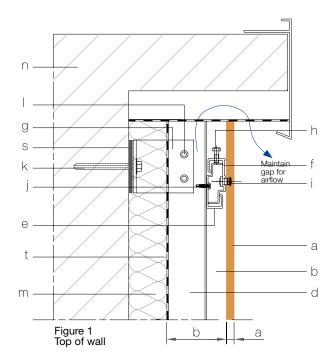


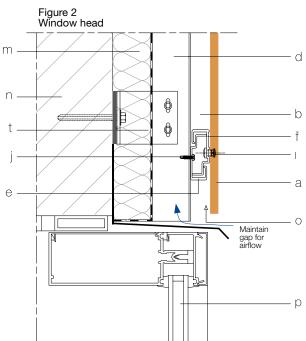


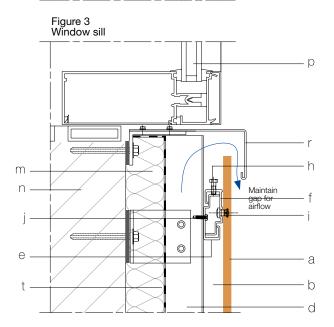
Scale 1:5

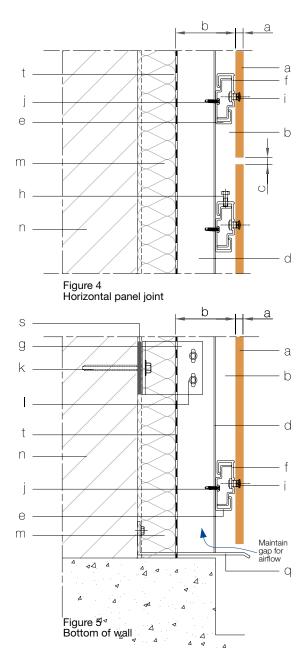
- a VIVIX® panel thickness: 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Min. joint dimension: 10 mm
- d Primary profile
- e Secondary profile
- f Hook
- g Supporting bracket
- h Regulation screw
- i Fixing screw
- j Self-drilling screw k Anchor bolt
- I Fixing bracket
- m Thermal insulation
- n Load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











Scale 1:5

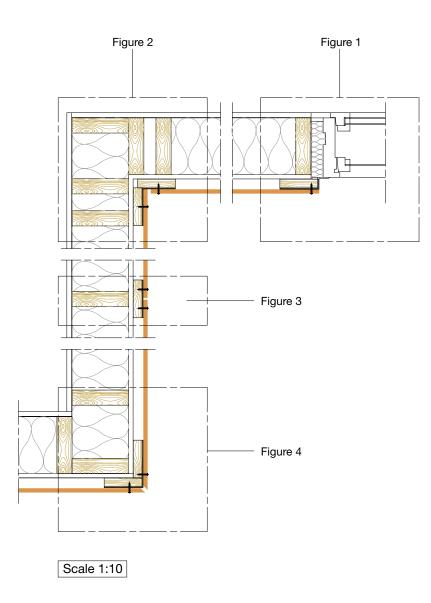
a VIVIX[®] panel thickness: 8 or 10 mm

- 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
- q Formed metal sheet
- r Formed metal sill flashing
- s Bridge bearing rubber pads
- t Weather resistive barrier

VIVIX®

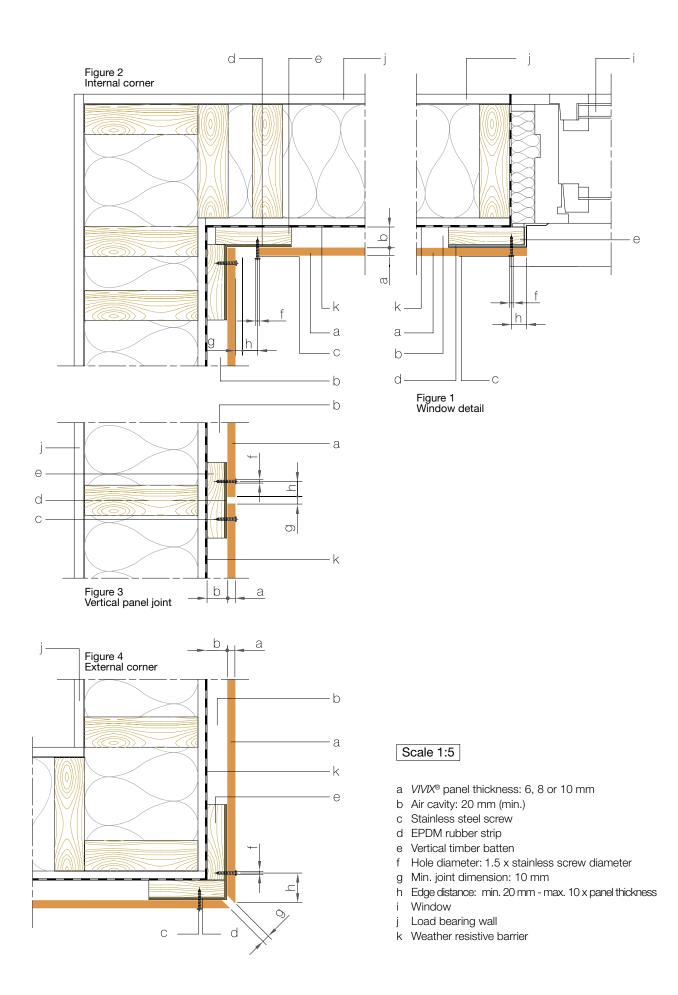
Construction details

Wooden substructure Visible attachment Horizontal cross-section



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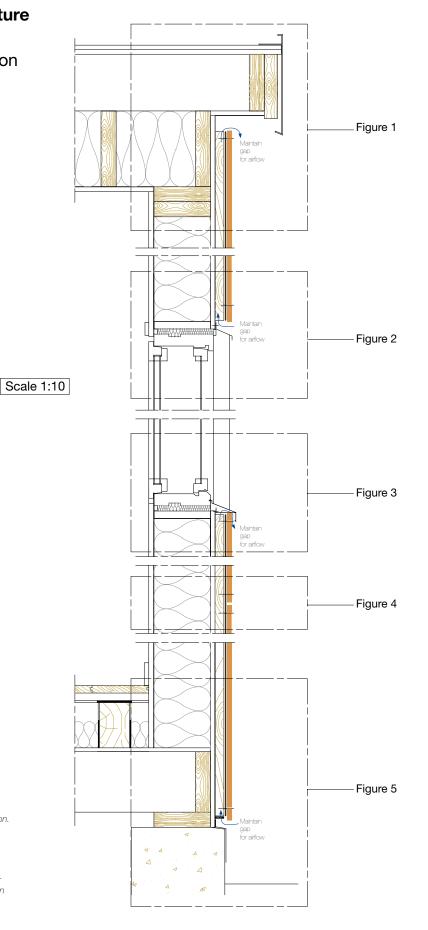
This drawing indicates a typical fixing arrangement on a wooden supporting structure. Please contact your Formica Group representative for other possibilities. Any information or suggestions concerning applications, specification or compliance with regulations and standards is provided solely for your 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.



Construction details

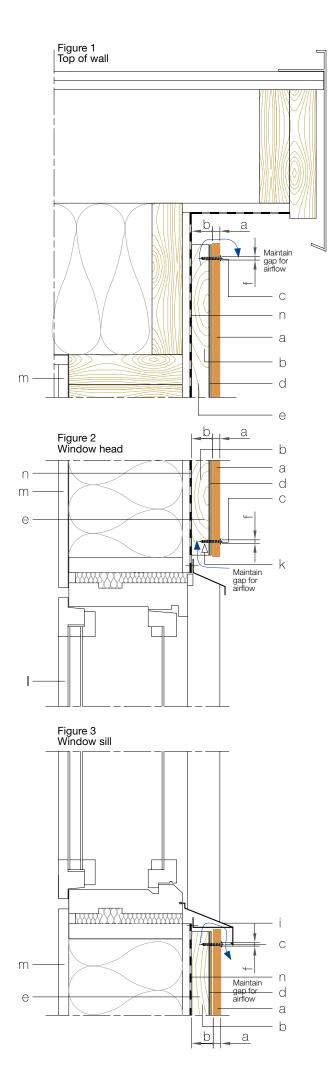
Wooden substructure Visible attachment

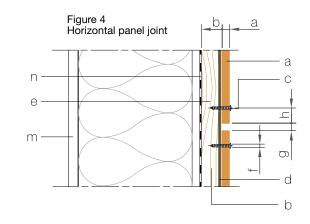
Vertical cross-section

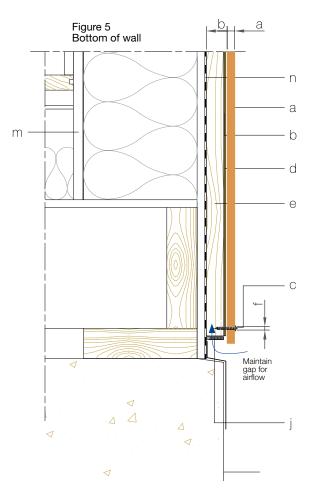


This drawing indicates a typical fixing arrangement on a wooden supporting structure. Please contact your Formica Group representative for other possibilities. Any information or suggestions concerning applications, specification or compliance with regulations and standards is provided solely for your 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.

Technical drawings in this brochure should be considered as general examples of how VIVIX® 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.







Scale 1:5

- a VIVIX® panel thickness: 6, 8 or 10 mm
- b Air cavity: 20 mm (min.)
- c Stainless 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 Formed metal sheet
- j Ventilation grille
- k Ventilation area: 50 cm²/m (min.)
- I Window
- m Load bearing wall
- n Weather resistive barrier

VIVIX®

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 mm | | |
|--|--------|--------|---------|---------|--|--|
| Weight per m ² | 6.5 kg | 8.7 kg | 11.6 kg | 14.5 kg | | |
| Note: EN438 minimum density is 1.35 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 mm | 8 mm | 10 mm |
|------------------------------------|--------|--------|--------|
| 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.

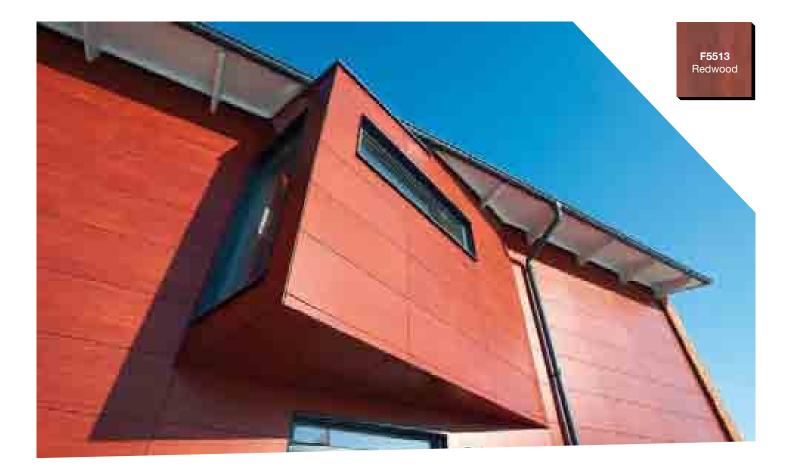
Lift the panels straight up, do not slide the panels against each other.

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

Physical properties

| Property | Standard | Standard Value | | | |
|--|---------------|---|--|--|--|
| | & Clause | EDF | EDS | | |
| | | Exterior grade, severe use, flame-retardant grade | Exterior grade, severe use, standard grade | | |
| Thickness Tolerance | EN 438-2-5 | | +/-0.4 mm | | |
| | | | +/-0.5 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 | +10 mm/-0 | | | |
| | LIN 400-2-0 | | | | |
| 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 | EN 438-2-21 | height 1800 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/m ² appearance min 4 after 650 MJ/m ² | | | |
| 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.







Påskagänget residential development. Portal Arkitekter. Sweden.

Surger State

A FRESH PERSPECTIVE IN ARCHITECTURAL PANELS by FORMICA GROUP

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