

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.

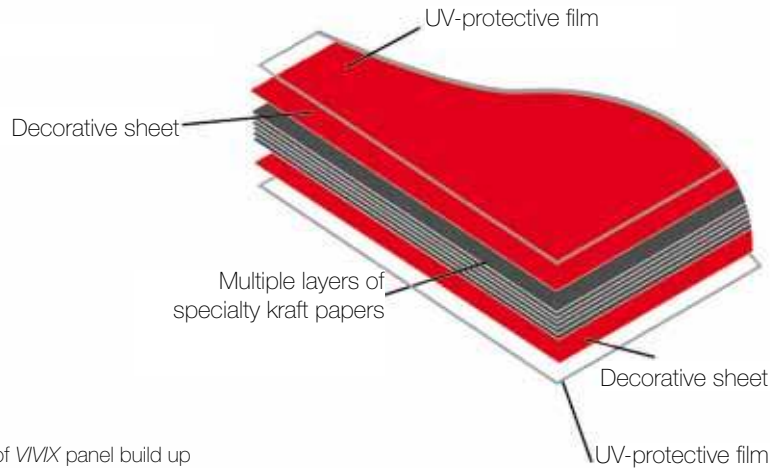


Figure 1.- Diagram of VIVIX panel build up

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
- Air cavity
- Thermal insulation
- Substructure, which transmits load to the structural wall
- Elements that attach panels to the substructure

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

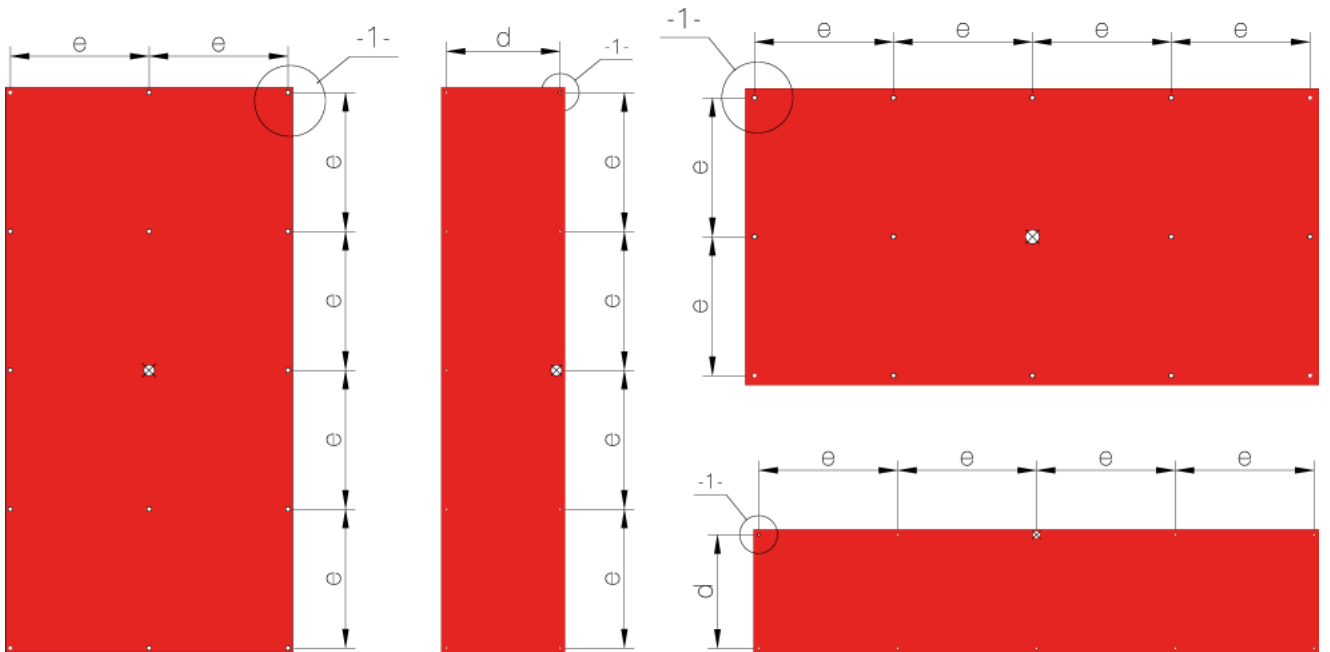
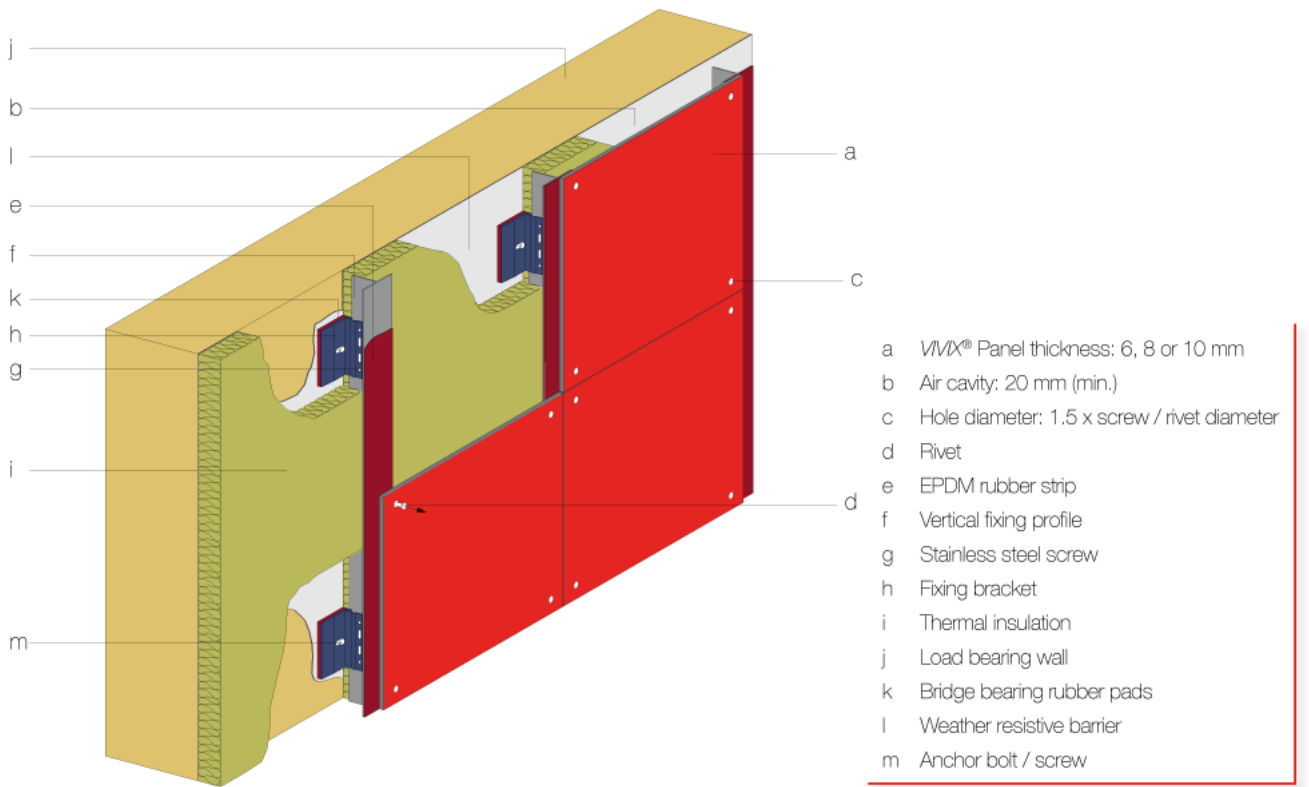
All features and benefits are subject to fair wear and tear and wilful damage, misuse or negligence by the buyer or user.

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.

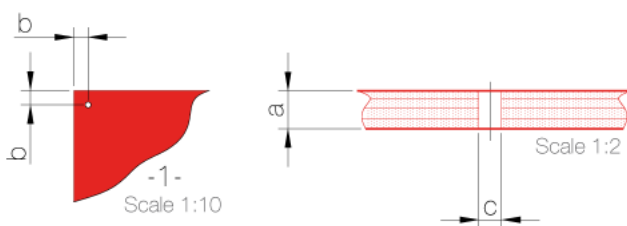
Technical drawings in this brochure should be considered as general examples of how VIVIX panels can be installed, there are other profiles and systems available in the market for ventilated façades which are not shown in this brochure. Consideration needs to be given to local circumstances, for example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

Figure A.- Rainscreen system in detail with visible attachments



⊗ Fixed point: 1 x screw / rivet diameter (typically 5 mm)

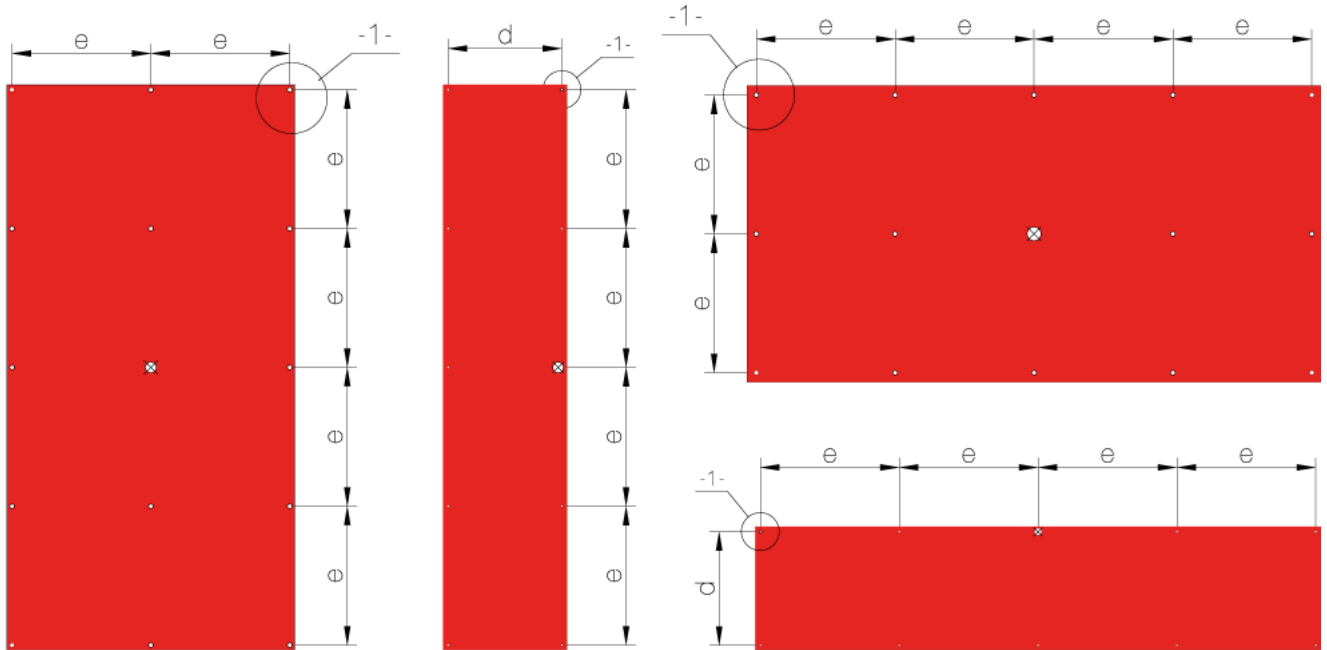
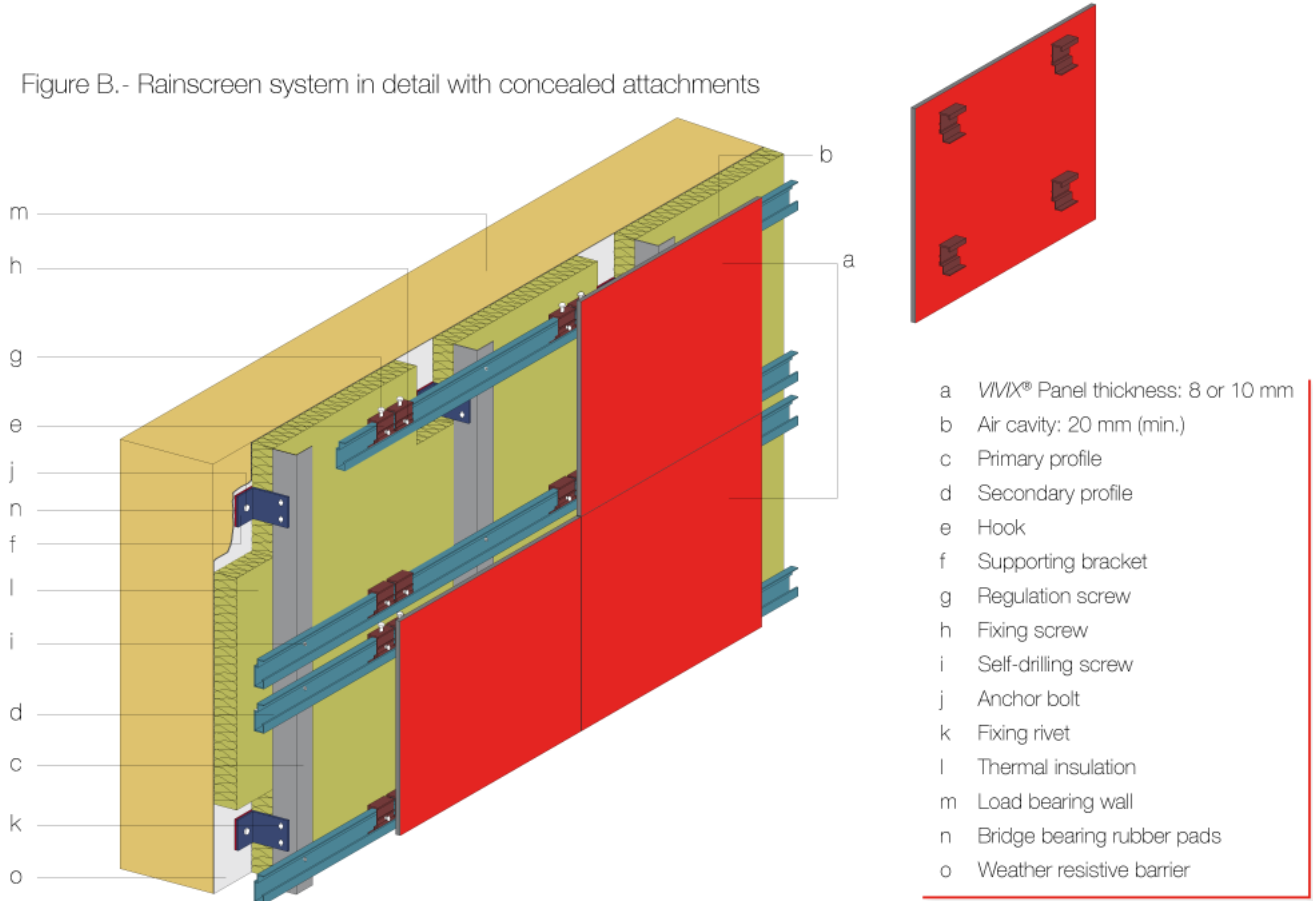
Scale 1:30



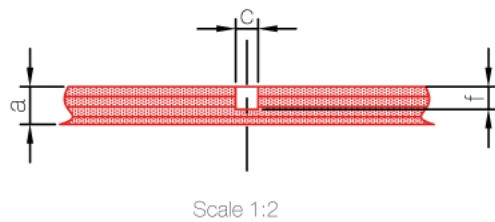
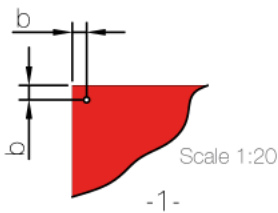
- a VVX Panel thickness: 6, 8 or 10 mm
- b Typical edge distance: min 20 mm - max see table on right
- c Hole diameter: 1.5 x screw / rivet diameter
- d Spacing: 450 mm, 600 mm, 750 mm (2 fixings in one direction)
- e Spacing: 550 mm, 750mm, 900 mm (3 or more fixings in one direction)

	b	d	e
VVX Panel thickness: 6 mm	60 mm (max)	450 mm	550 mm
VVX Panel thickness: 8 mm	80 mm (max)	600 mm	750 mm
VVX Panel thickness: 10 mm	100 mm (max)	750 mm	900 mm

Figure B. - Rainscreen system in detail with concealed attachments



※ Fixed point: 1 x screw / rivet diameter (typically 5 mm)

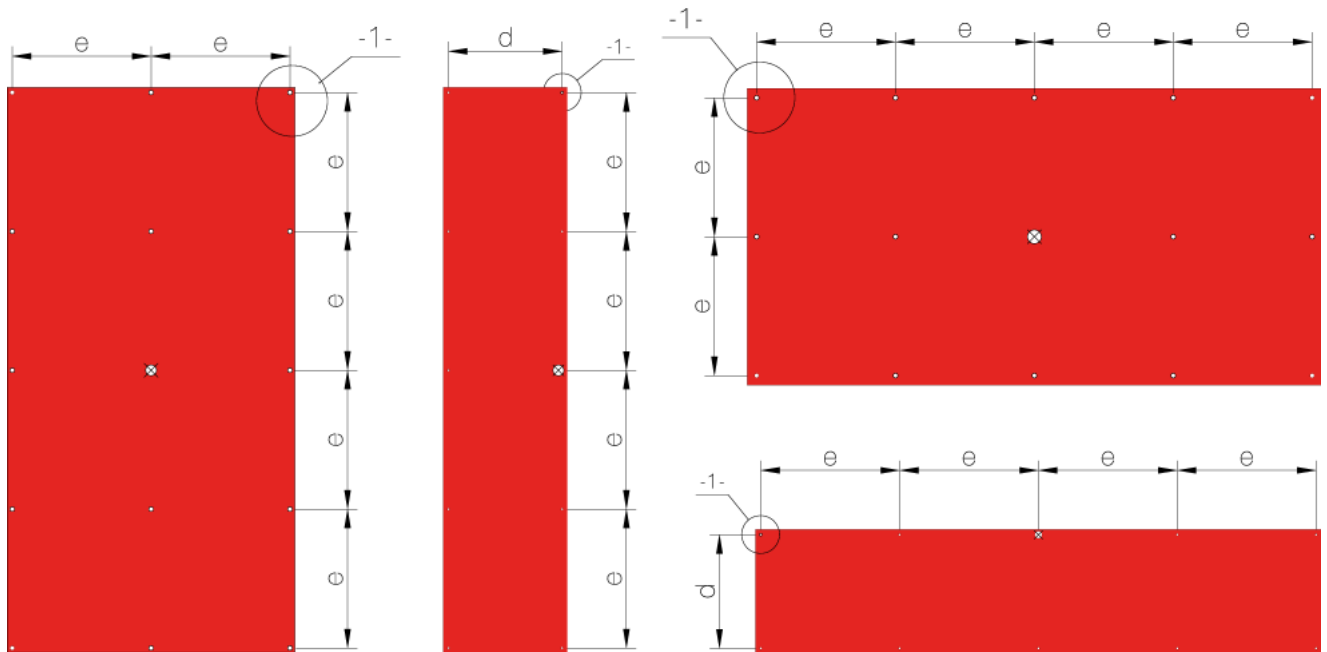
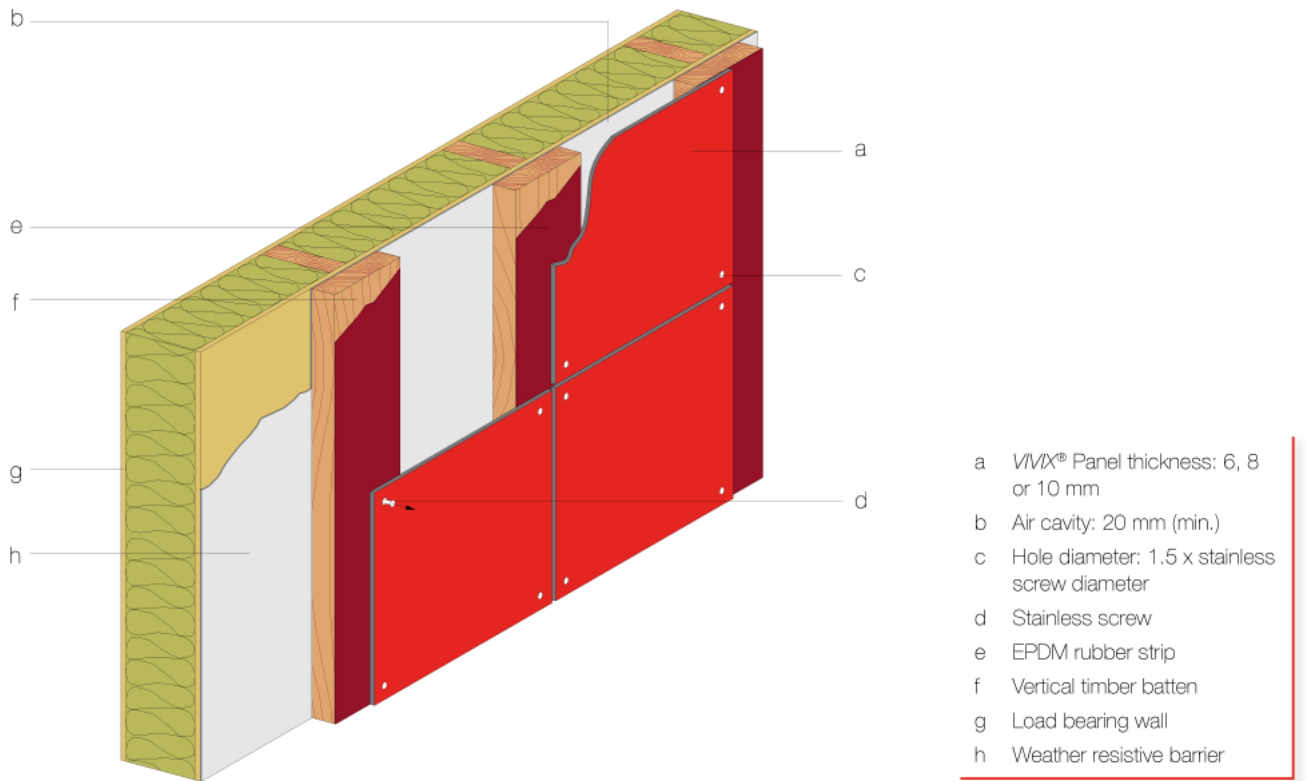


Scale 1:30

- 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: 750 mm, 900 mm (2 fixings in one direction)
- e Spacing: 600 mm, 750mm (3 or more fixings in one direction)
- f Fixing screw depth: 6 mm

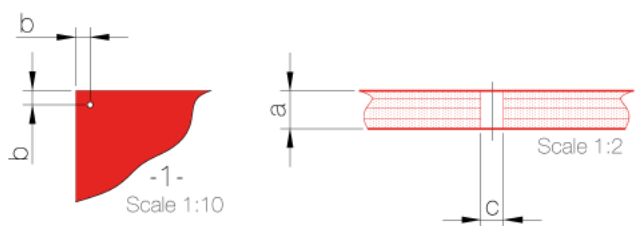
	b	d	e
VIVIX Panel thickness: 8 mm	80 mm (max)	600 mm	750 mm
VIVIX Panel thickness: 10 mm	100 mm (max)	750 mm	900 mm

Figure C.- Rainscreen system in detail with visible attachments on wooden substructure



✳ Fixed point: 1 x screw / rivet diameter (typically 5 mm)

Scale 1:30



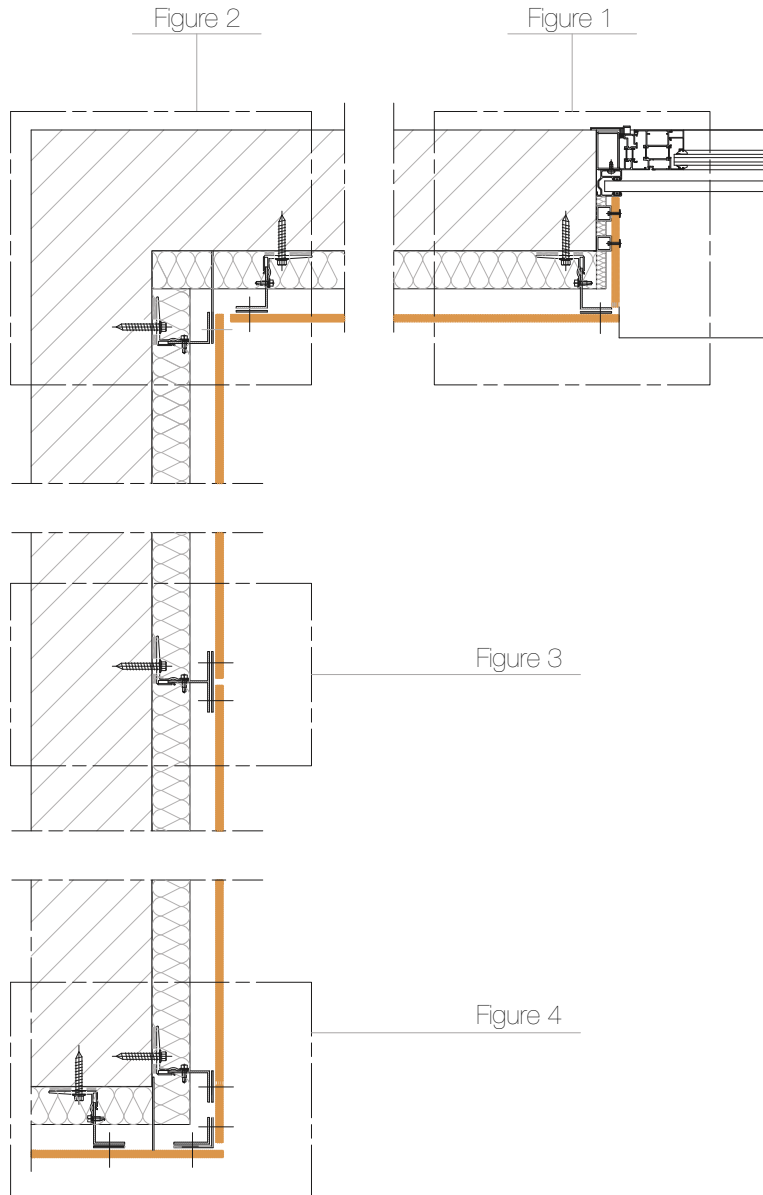
- a VVIX Panel thickness: 6, 8 or 10 mm
- b Typical edge distance: min 20 mm - max see table on right
- c Hole diameter: 1.5 x screw / rivet diameter
- d Spacing: 450 mm, 600 mm, 750 mm (2 fixings in one direction)
- e Spacing: 550 mm, 750mm, 900 mm (3 or more fixings in one direction)

	b	d	e
VVIX Panel thickness: 6 mm	60 mm (max)	450 mm	550 mm
VVIX Panel thickness: 8 mm	80 mm (max)	600 mm	750 mm
VVIX Panel thickness: 10 mm	100 mm (max)	750 mm	900 mm

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

Construction details
 Metal substructure
 Visible attachment
 Horizontal cross-section

Scale 1:10



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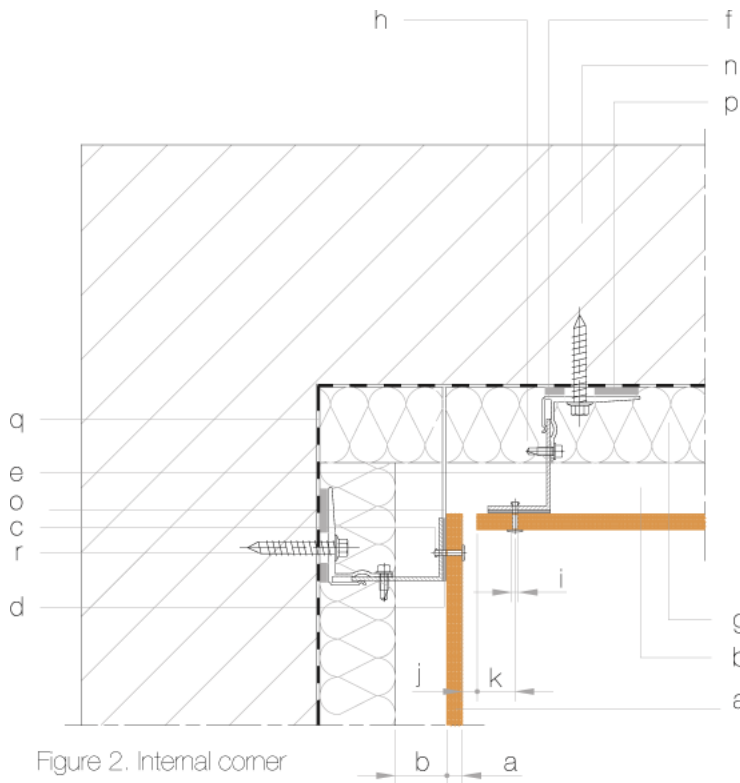


Figure 2. Internal corner

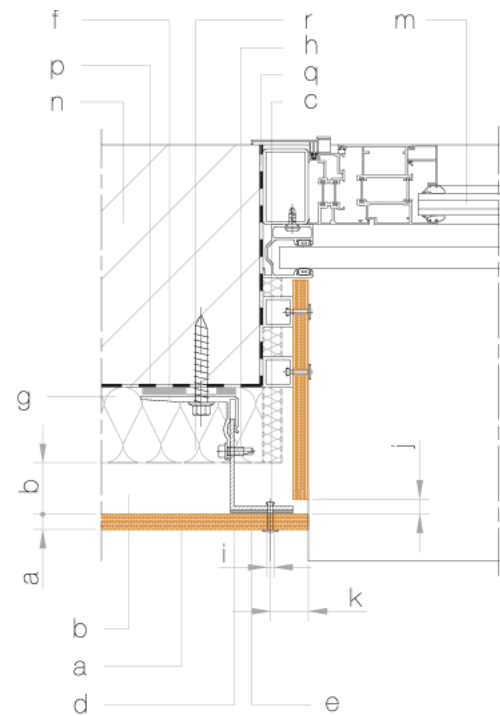


Figure 1. Window detail

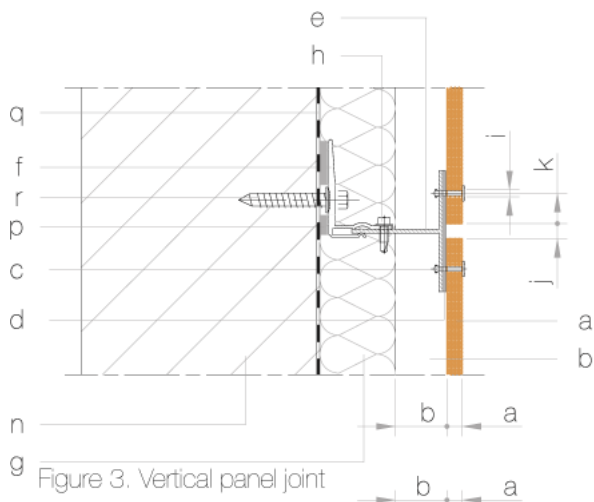


Figure 3. Vertical panel joint

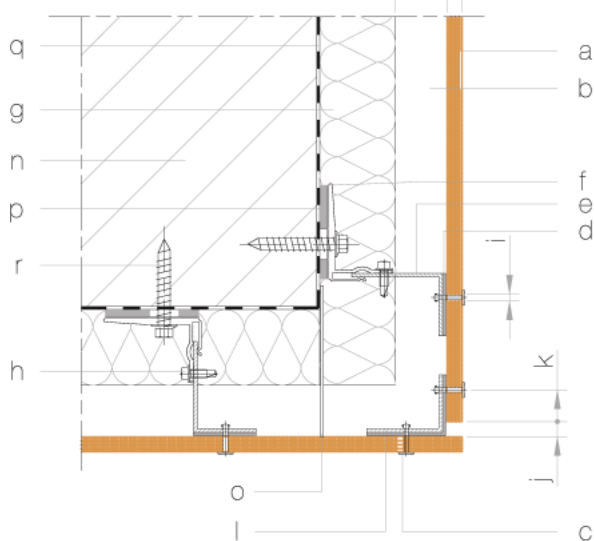


Figure 4. External corner

Scale 1:5

- a VVIX® 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

Construction details
 Metal substructure
 Visible attachment
 Vertical cross-section

Scale 1:10

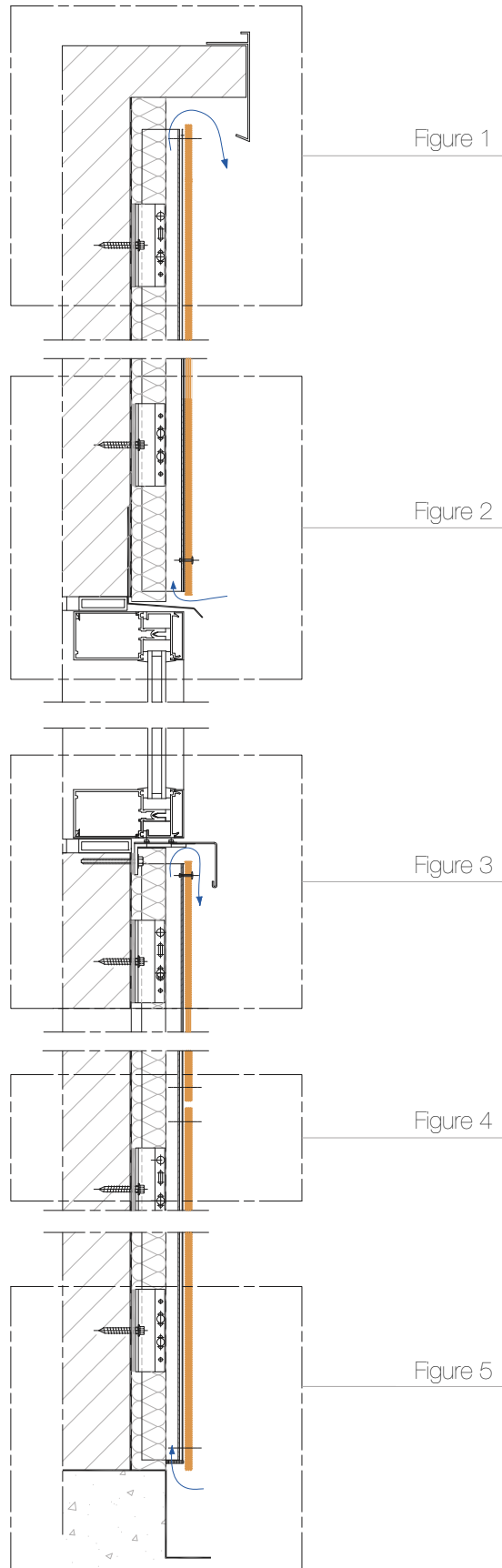


Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

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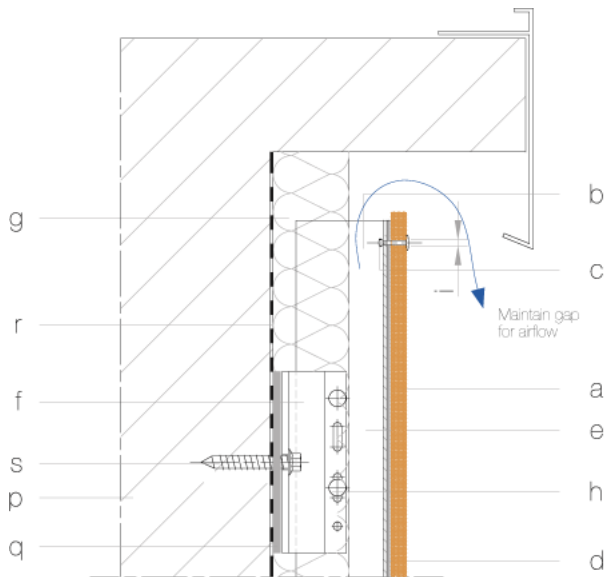


Figure 1. Top of wall

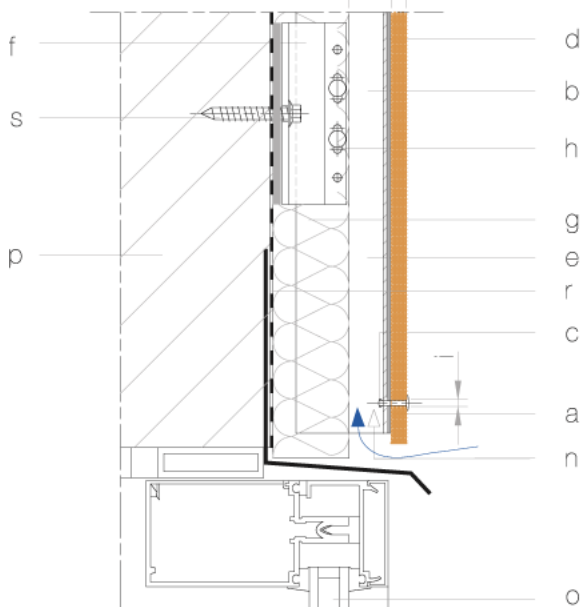


Figure 2. Window head

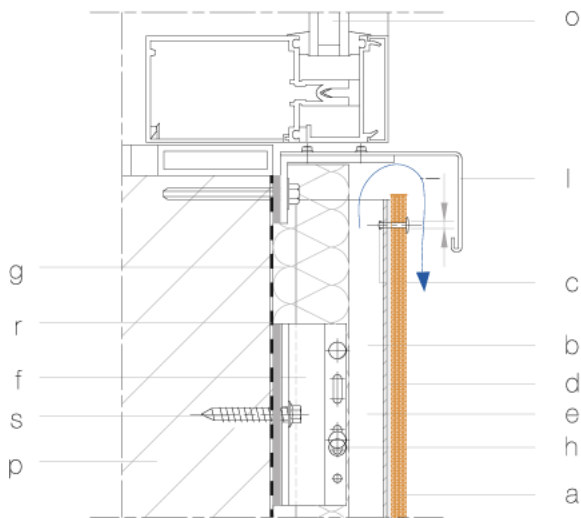


Figure 3. Window sill

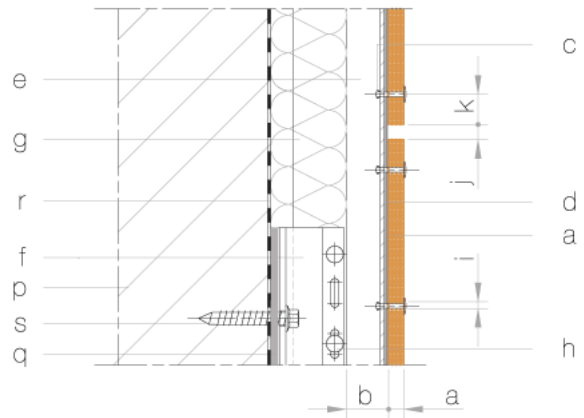


Figure 4. Horizontal panel joint

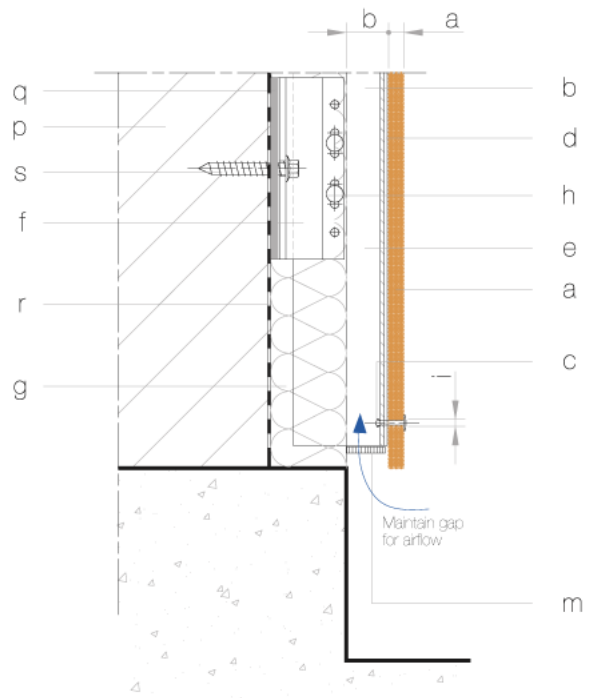


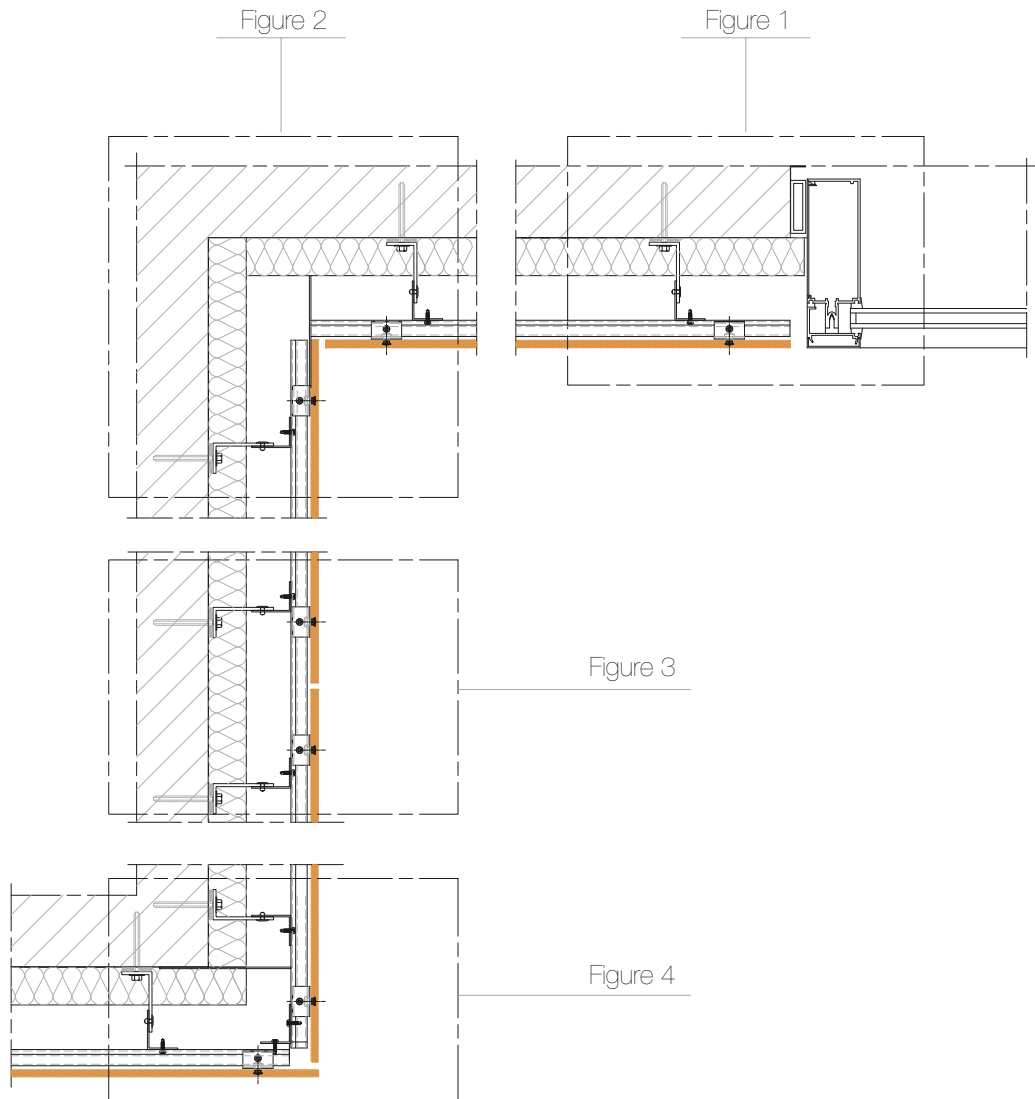
Figure 5. Bottom of wall

Scale 1:5

- a VVX® 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 Formed metal sheet
- m Ventilation grille
- n Ventilation distance: 50 cm²/m (min.)
- o Window
- p Load bearing wall
- q Bridge bearing rubber pads
- r Weather resistive barrier
- s Anchor bolt / screw

Construction details
 Metal substructure
 Concealed metal attachment
 Horizontal cross-section

Scale 1:10



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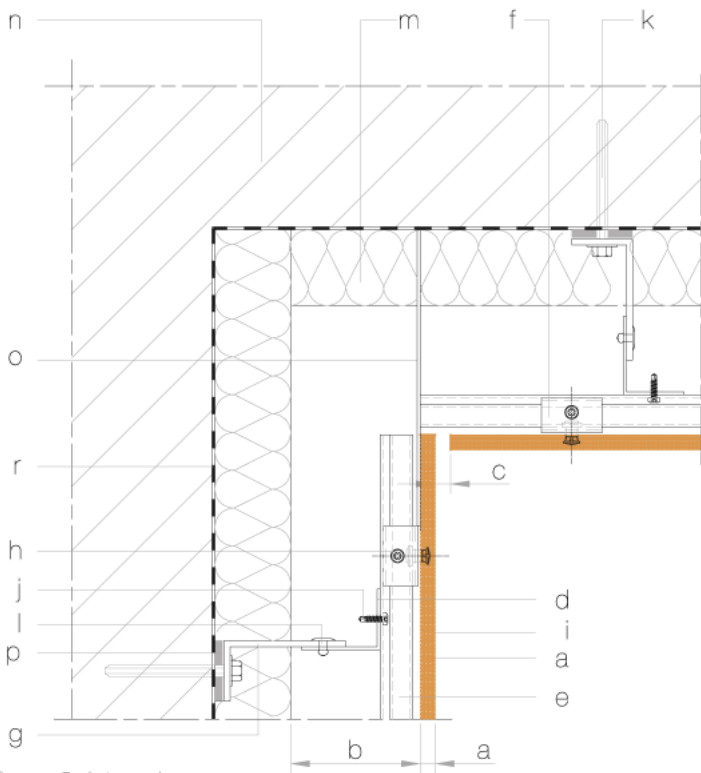


Figure 2. Internal corner

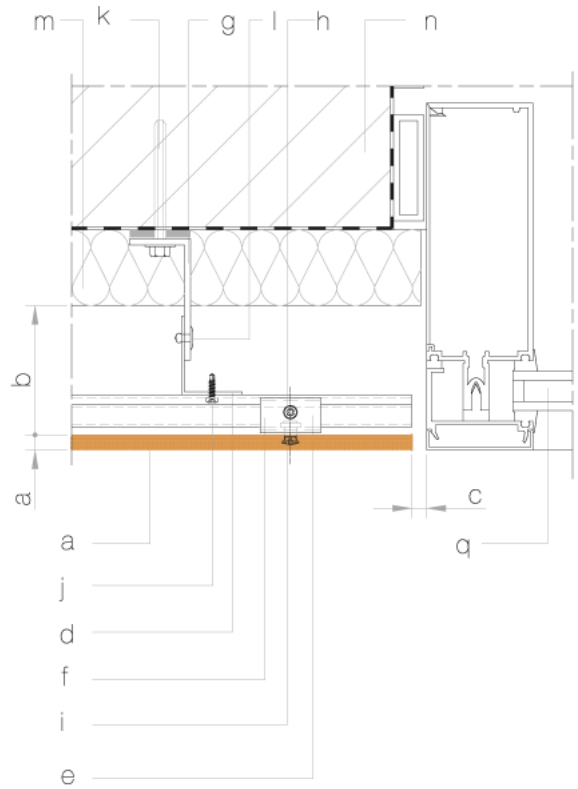


Figure 1. Window detail

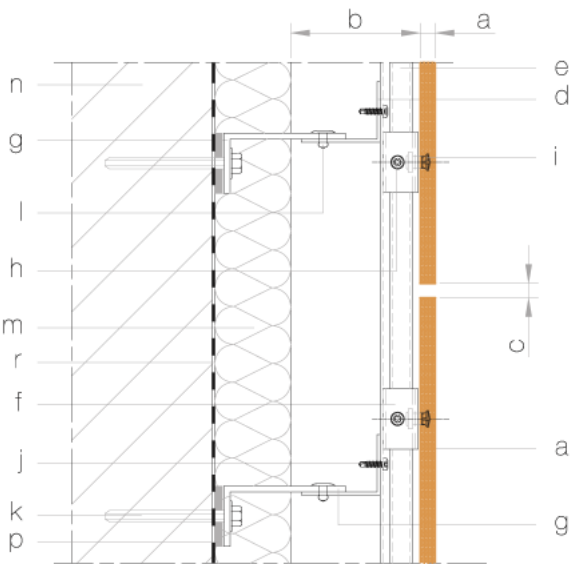


Figure 3. Vertical panel joint

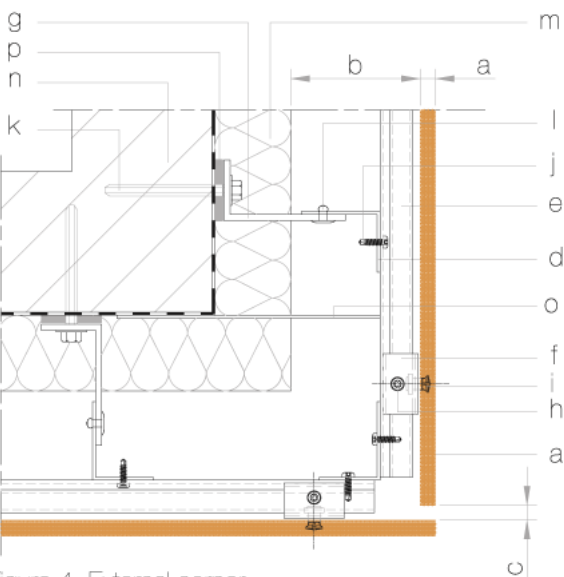


Figure 4. External corner

Scale 1:5

- a VWIX® 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
- l 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

Construction details
 Metal substructure
 Concealed metal attachment
 Vertical cross-section

Scale 1:10

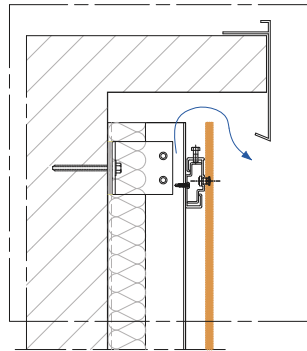


Figure 1

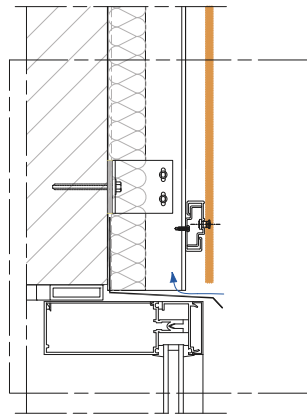


Figure 2

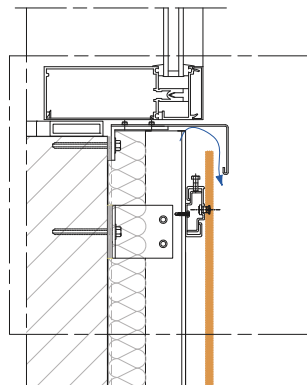


Figure 3

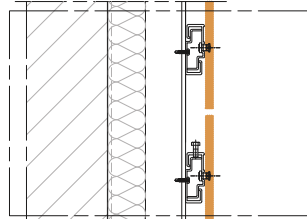


Figure 4

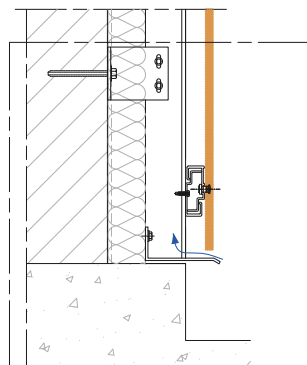


Figure 5

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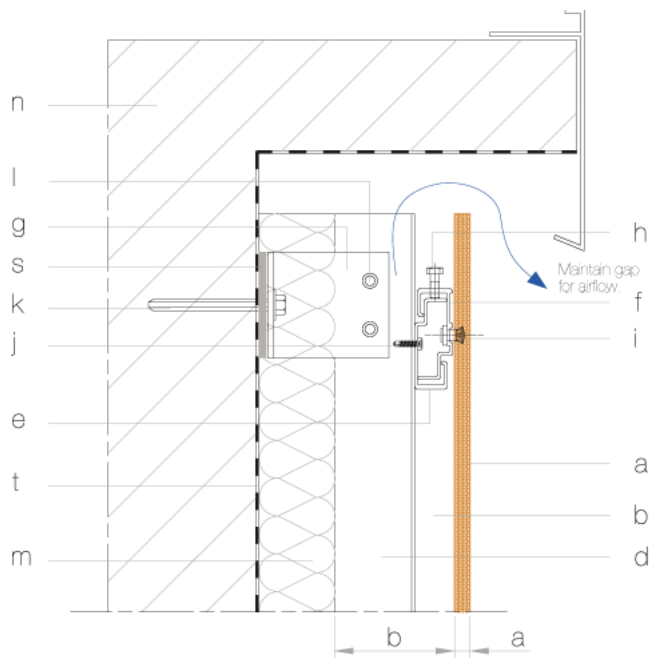


Figure 1. Top of wall

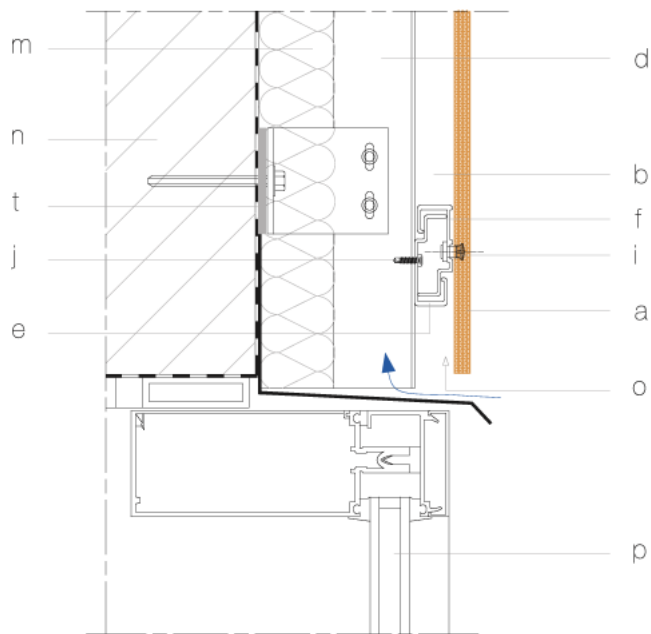


Figure 2. Window head

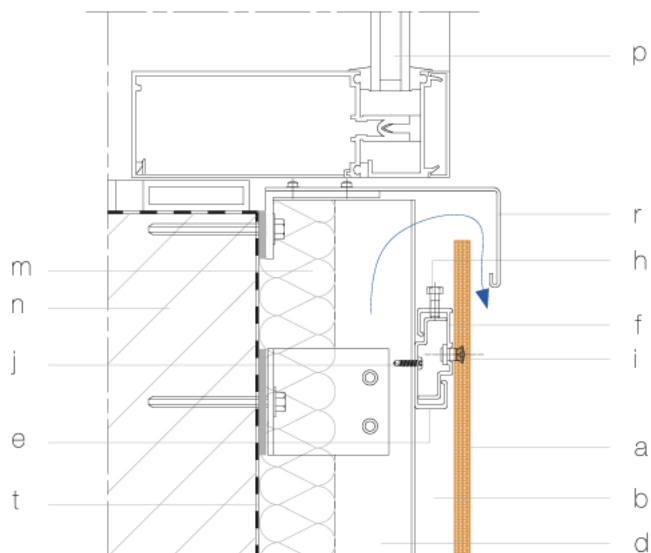


Figure 3. Window sill

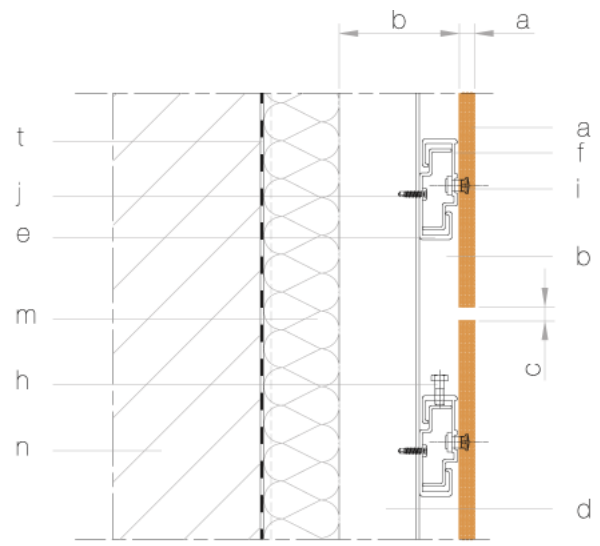


Figure 4. Horizontal panel joint

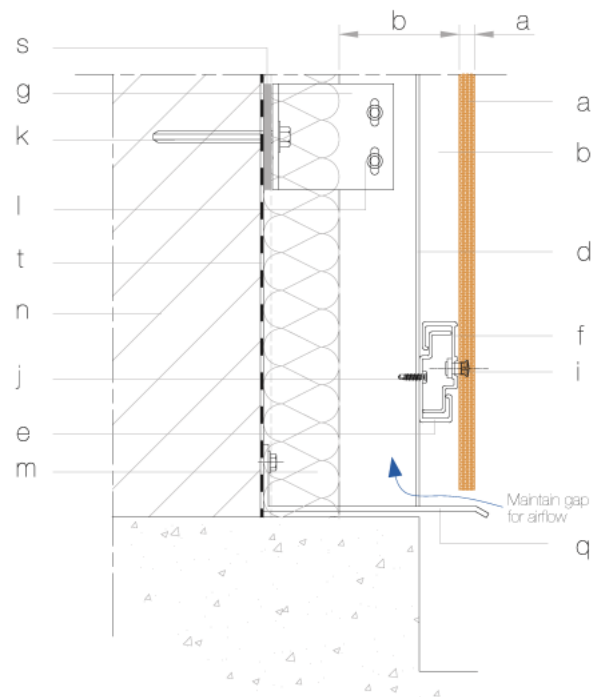


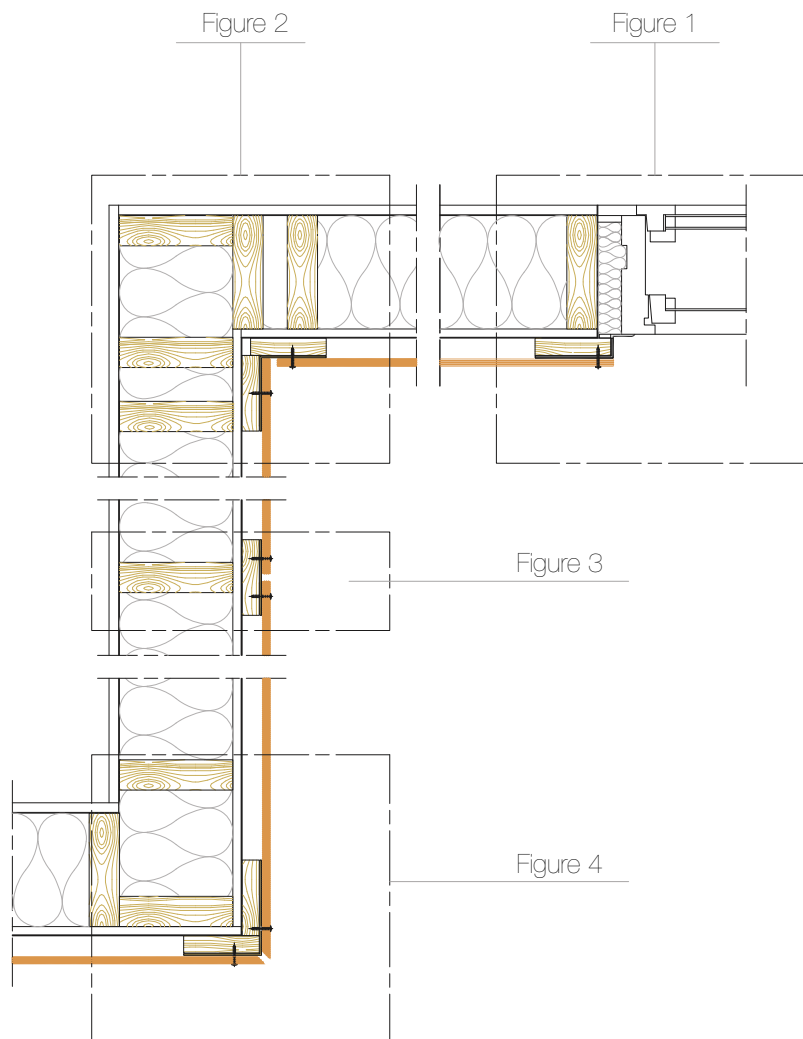
Figure 5. Bottom of wall

Scale 1:5

- a VVIX® 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
- l Fixing bracket
- m Thermal insulation
- n Load bearing wall
- o Ventilation distance: 50 cm²/m (min.)
- p Window
- q Formed metal sheet
- r Formed metal sill flashing
- s Bridge bearing rubber pads
- t Weather resistive barrier

Construction details
 Wooden substructure
 Visible attachment
 Horizontal cross-section

Scale 1:10



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.

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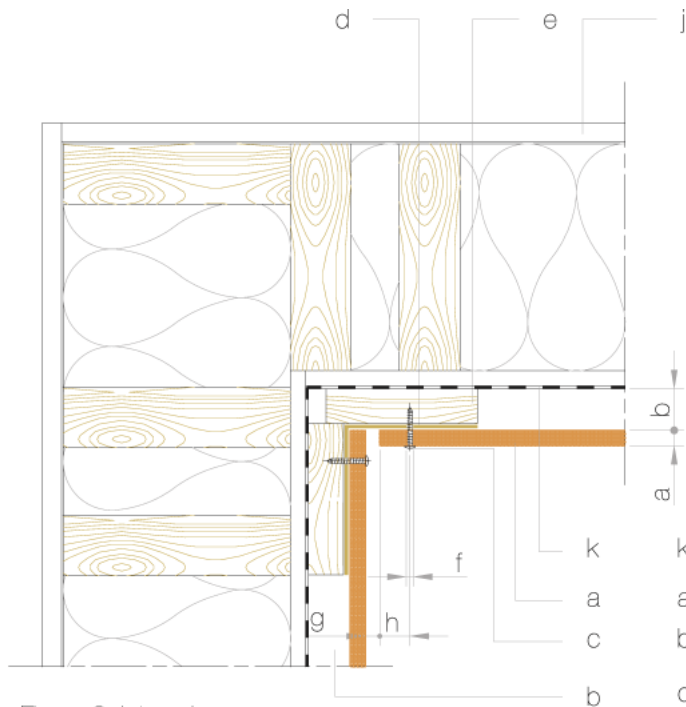


Figure 2. Internal corner

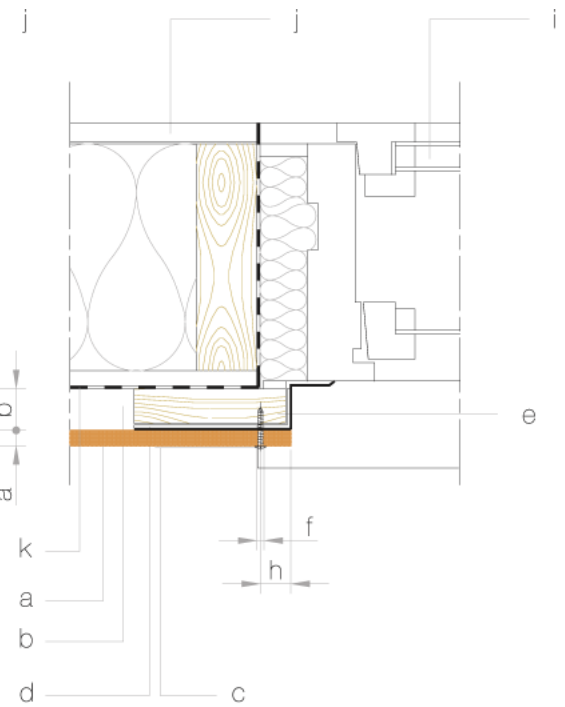


Figure 1. Window detail

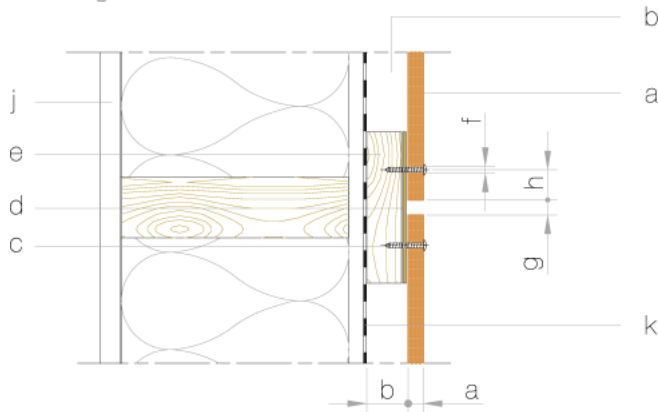


Figure 3. Vertical panel joint

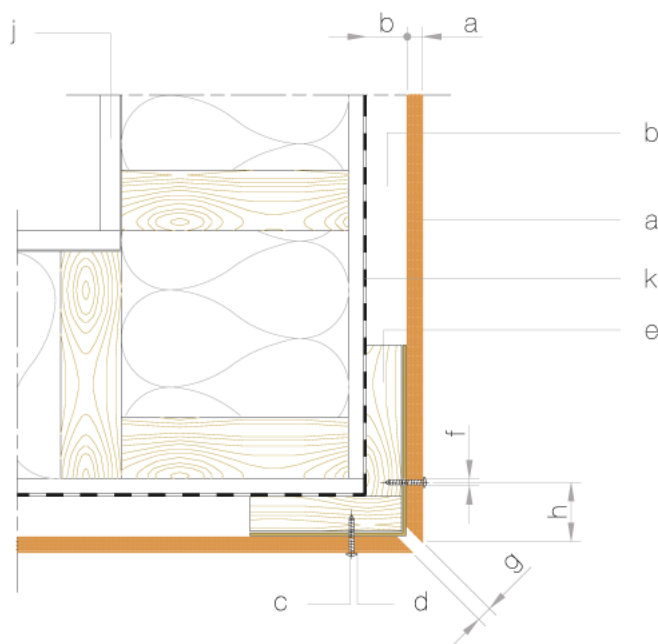


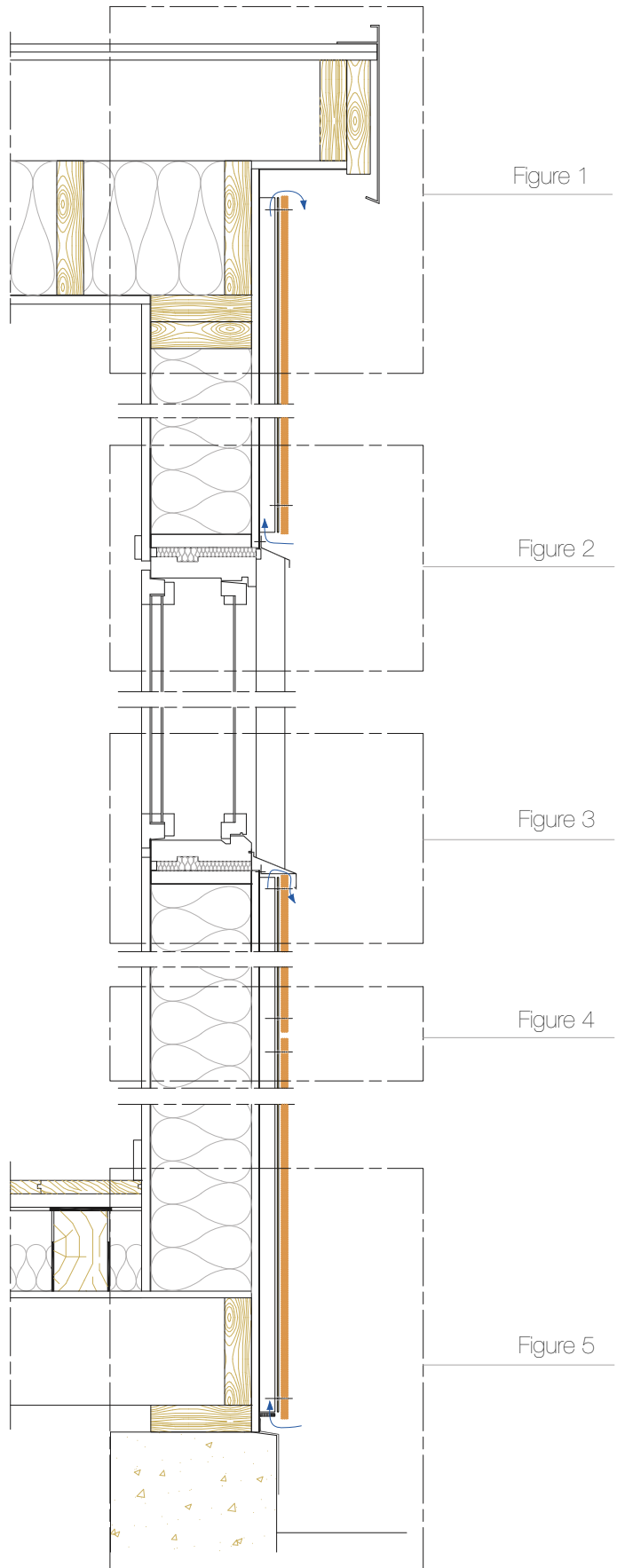
Figure 4. External corner

Scale 1:5

- a VVIX® 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

Construction details
 Wooden substructure
 Visible attachment
 Vertical cross-section

Scale 1:10



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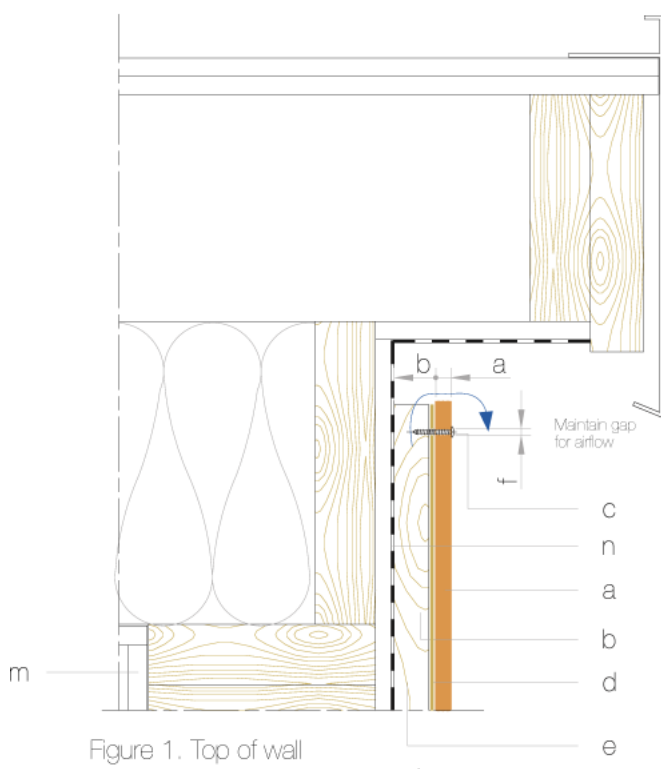


Figure 1. Top of wall

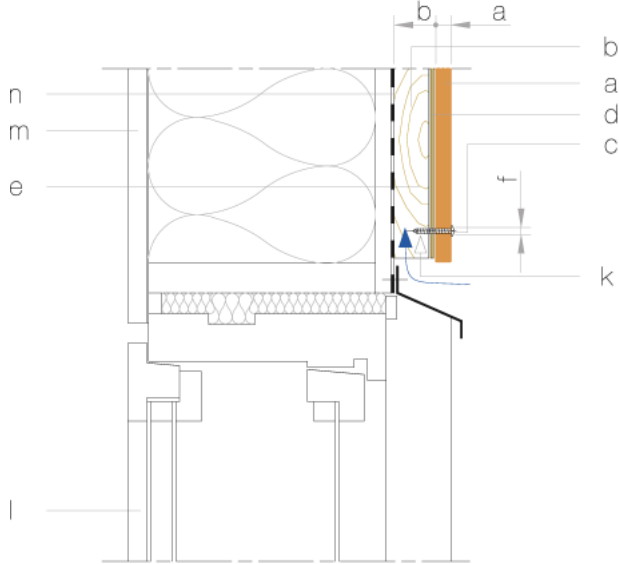


Figure 2. Window head

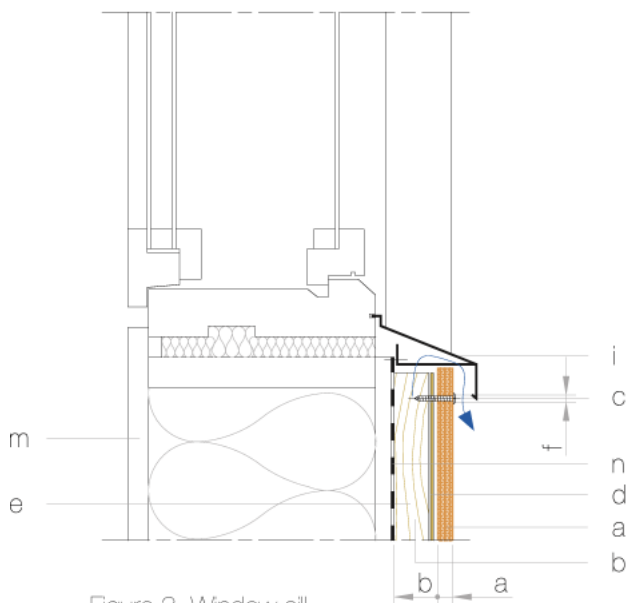


Figure 3. Window sill

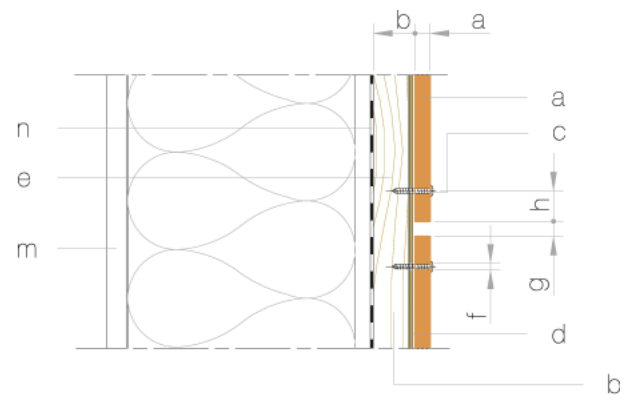


Figure 4. Horizontal panel joint

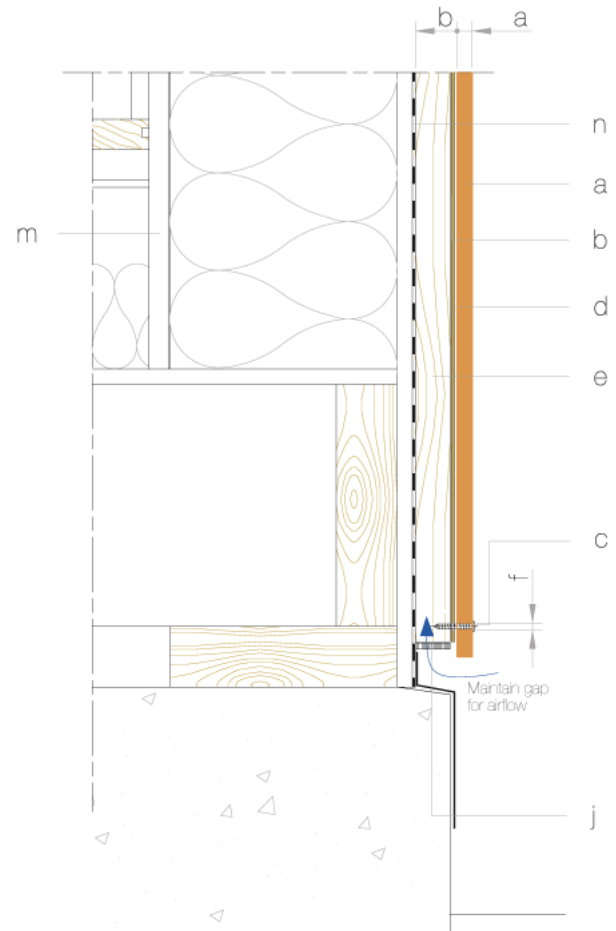


Figure 5. Bottom of wall

Scale 1:5

- a VIVX® 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 distance: 50 cm²/m (min.)
- l Window
- m Load bearing wall
- n Weather resistive barrier

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 33 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/cm³.

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	550 mm	750 mm	900 mm

- VIVIX panels in 4.5mm 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.

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.

Certificates

Avis Technique (Technical Opinion) N° 2/03-984-985, Centre Scientifique et Technique du Bâtiment (CSTB).

Document for Technical Suitability (DIT), Eduardo Torroja.

Euroclass B-s1,d0 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 N° E203388 for Quality Management Systems, (ISO 9001:2000), Lloyd's Register Quality Assurance Limited.

GreenGuard Air Quality Certification for Low Emitting Products, GreenGuard® Environmental Institute.

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.



EN438-6



ISO 14001:2004

ISO 9001:2000

N° 0402

The mark of responsible forestry

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

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.

Physical properties

Property	Standard & Clause	Standard Value	
		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	+10 mm/-0	
Straightness of Edge Tolerance	EN 438-2-7	1.5 mm/m max deviation	
Flexural Modulus	EN ISO 178	9000 MPa (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/cm ³ (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	D-s2,d0
Oxygen Index	ISO 4589-2	45% (min)	
Thermal Conductivity	EN 12524	0.3 w/mk	