

Visible (exposed) fixing with screws on a timber sub-frame

This system offers a cost effective solution for installing VIVIX+® panels in a large variety of panel dimensions.

VIVIX + panels with a minimum thickness of 6 mm may be fixed on a timber sub-frame, using powder coated screws.

This document is intended to provide general recommendations only. Formica Group provides these guidelines and all testing, code and design data for informational purposes only and strongly advises that the customer, project owner and architect seek independent advice from a certified construction professional and/or engineer regarding application and installation as well as compliance with design requirements, applicable codes, laws and regulations, and test standards. Please check your local codes and applicable design requirements for proper use.

General

In this document an overview of principles for fastening facade cladding is shown. These principles are generic and represent the state of the art. In cases where national standards do not directly link with the current building codes, special certificates can bridge this gap. Such certificates refer to facade cladding products as well as to fasteners or fixing elements in particular. Certificates are issued to the party that sells the most significant part of the fixing method. Both manufacturers as well as agents of the products in particular can hold a certificate. In cases where there are no specific standards, nor are there specific building codes or certificates, the local building authorities need to evaluate if the proposed fixing method does comply with the current regulations. Due to the nature of the product VIVIX+ and its application as drained and back-ventilated rain screen cladding and unrelated to any fixing method, there are three topics that need special attention:

Ventilation

The facade cladding needs to be ventilated at the rear of the panel to release migrated water vapour from the ambient rooms and to dry condensation at the inner parts of the wall construction. This requires a certain ventilation cavity depth and a certain dimension of the ventilation inlets and outlets.

Tension-free fastening

The facade cladding needs to be able to expand and shrink independently from its load-bearing sub-frame due to heat and moisture influences. This requires a certain free space in the fastening for movements. Also limitations in the maximum panel size as well as minimum dimensions of the joints in between panels and other construction parts are a result of this requirement.

Sub-frame

VIVIX + panels must be installed on a subframe of sufficient strength and permanent durability. Quality and/or treatment of the sub-frame must be in accordance with certificate holders' recommendations as well as applicable building standards and regulations.

Although most fixing methods are generic, there might be differences in the details as stated in national certificates. Such differences occur due to country specific building traditions; differences in national standards or different rules and assumptions for detailed calculations.

Following fixing methods are recognised by Formica Group:

- Visible fixing
- Deep cavity fixing

Cavity depth and ventilation

For a continuous ventilation behind the panel, Formica Group recommends the free air cavity depth between the rainscreen cladding and the insulation or wall construction to be between 20 and 50 mm, in order to allow for ambient air to flow through from the ventilation inlets and outlets. Ventilation inlets and outlets must be the equivalent of minimum 50 square cm per linear meter over the whole facade. Cavity depth as well as ventilation inlets and outlets must be in accordance with applicable building standards, regulations and certificates.

Sub-frame

VIVIX+ panels must be installed on a sub-frame of sufficient strength and permanent durability. Quality and/or treatment of the sub-frame must be in accordance with applicable building standards, regulations and certificates. Formica Group further recommends the use of a flat EPDM gasket to the full width of vertical battens of the subframe.

Fixing detail

VIVIX + panels with a thickness of 6 and 8 mm can be fixed on the sub-frame with fast fixing screws (contact Nordic Facade Solutions for more information). To retain panel position, each panel must have one fixed point in the centre of the panel.

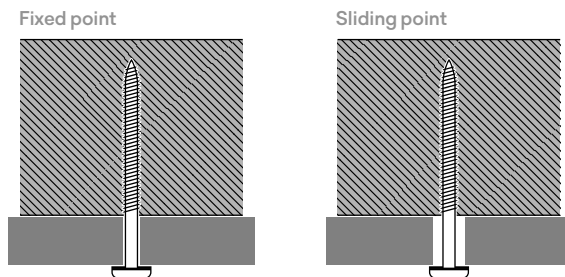
Fixed point – hole diameter:

- 5 mm for fast fixing screw
- equal to shank diameter for other screws

Sliding point – hole diameter:

- 8 mm for fast fixing screw
- shank diameter + 3 mm for other screws

Screws must always be centered in the holes and must not be over tightened.



Overview of technical installation details

The following gives a general overview of some of the most significant technical installation details and where this fixing system is commonly used.

In certain countries specific certification requirements may apply. Information given only contains advice as to the installation commonly used by VIVIX+ customers, as based on Formica Group's experience. For all countries Formica Group strongly advises that the customer, project owner and architect seek independent advice from a construction professional regarding the accordance to national and/or local building regulations of fixing systems.

Please visit www.nordicfacadesolutions.info for the latest information

Joint width:

10 mm

Based on applicable building standards, regulations or certificates, wider joints may be permissible.

Minimum dimension timber battens:

Intermediate / End battens 50 x 28 mm

Jointing battens 95 x 28 mm

Edge clearance to fixings:

Min 20 mm

Max 10x panel thickness

VIVIX+ panel weights:

6mm: 8.8kg / m²

8mm: 11.7kg / m²

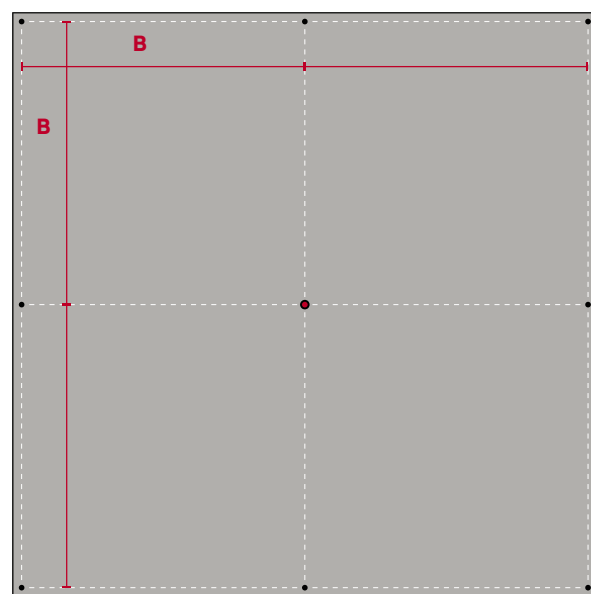
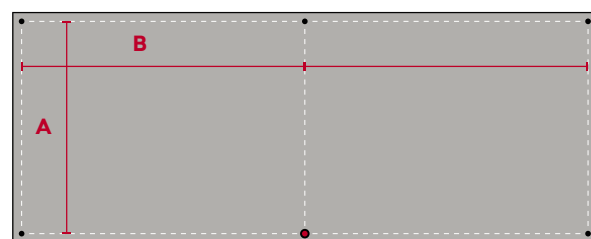
Recommended maximum fixing distances

| Max fixing distance* | Thickness: 6 mm | 8 mm |
|---------------------------------------|-----------------|--------|
| A. 2 fixings in one direction | 450 mm | 600 mm |
| B. 3 or more fixings in one direction | 600 mm | 750 mm |

* Fixing distances for soffit application must be multiplied by 0.75.

The maximum permitted fixing distances shown have been designed with a maximum (wind) load of 600 N/ m² and maximum deflection of L/200.

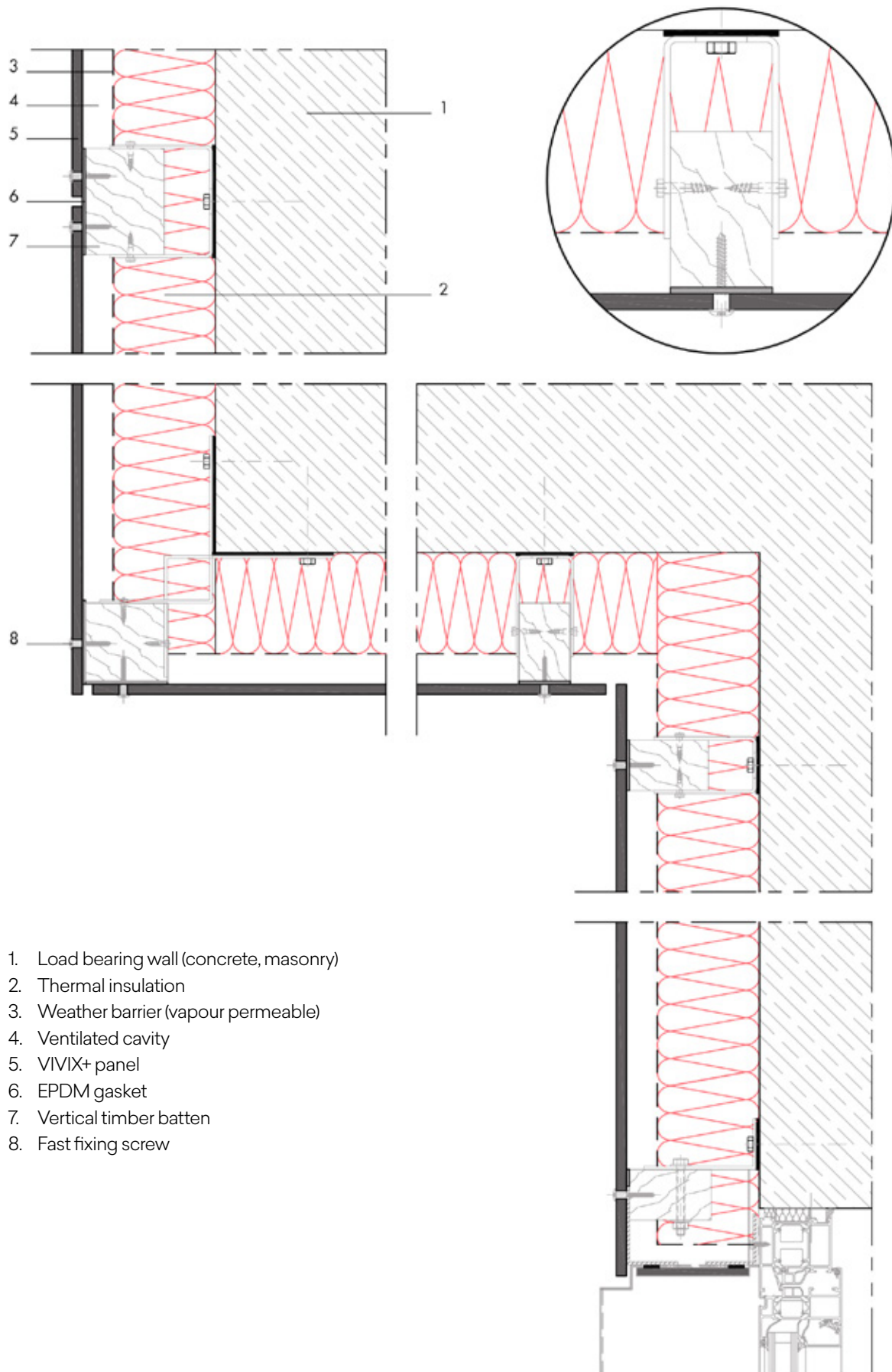
Fixing distances must be calculated in accordance with applicable local standards, regulations and certificates and should be verified by a structural engineer.

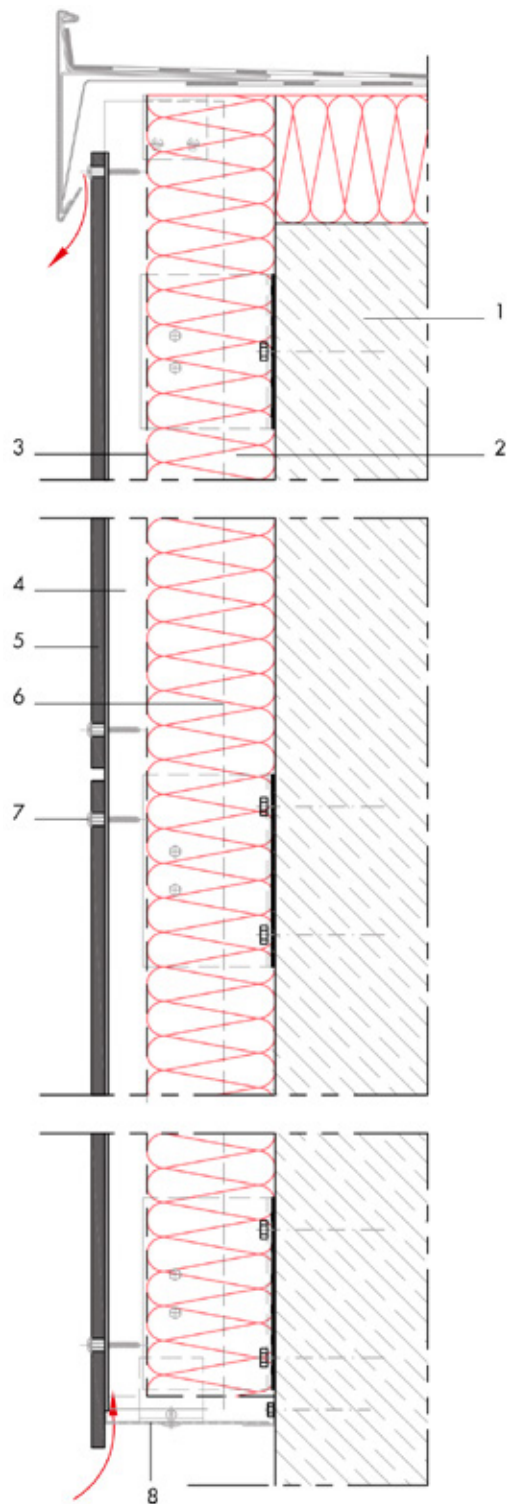


• Sliding point

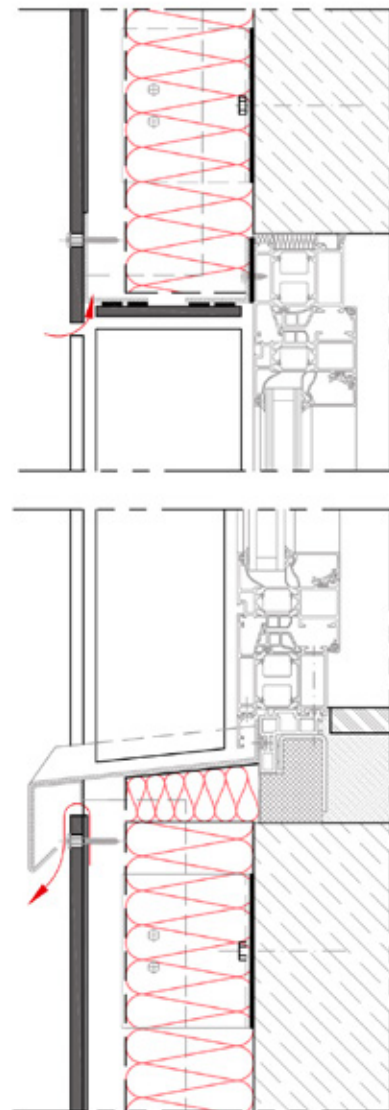
• Fixed point (in centre of panel)

Please visit www.nordicfacadesolutions.info for more information about deflection and wind loads





1. Load bearing wall (concrete, masonry)
2. Thermal insulation
3. Weather barrier (vapour permeable)
4. Ventilated cavity and vertical timber batten
5. VIVIX + panel
6. Vertical timber batten
7. Fast fixing screw
8. Ventilation profile



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