

NVELOPE Installation Guide NV3.



Hook on System.

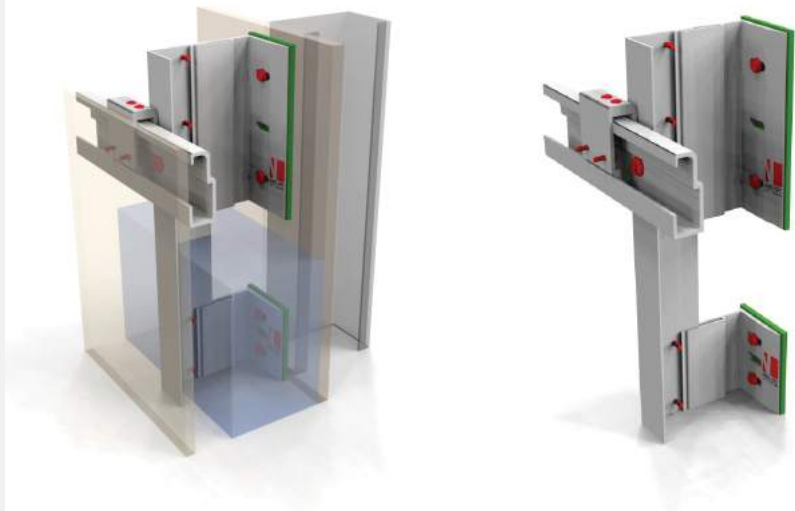
NVELOPE profiles and components are designed to provide a vertical support framework for a number of different types of flat boards / panels, to any suitable building façade. These profiles are anchored to the building using a purpose-designed bracket that allows final alignment and adjustment.

*For further information,
please see:*

www.nvelope.com

Also download / refer to:

NV1



NVELOPE Brackets

NVELOPE brackets are supplied in different sizes ranging from 40mm - 300mm (see table for cavity depths that can be formed) with the NV3 system.

The brackets are available with hole-sizes 11mm or 6.5mm depending on the diameter of the primary anchor (11mm - Block / Masonry - 6.5mm - Steel / Timber).

NV3 horizontal hanging profile carrier profile and adjustable / fixed cleats.

Min - Max Adjustment With Isolator

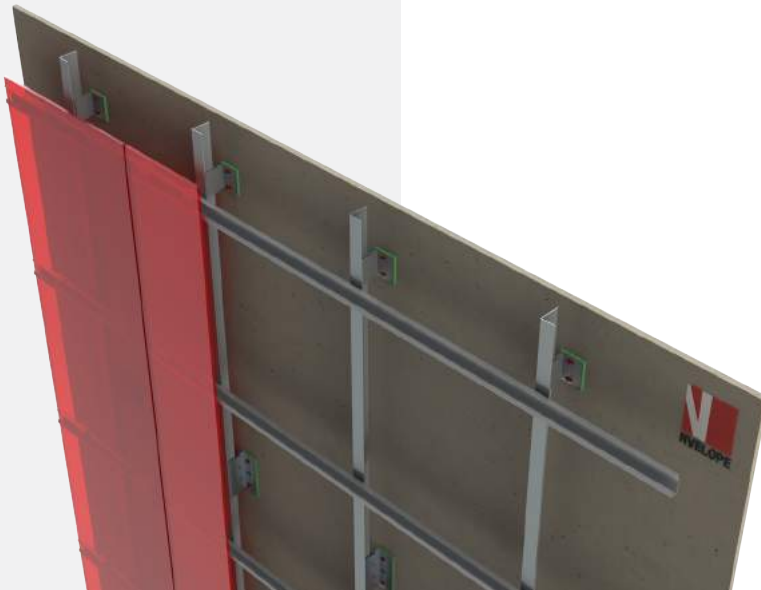
Bracket Size (mm)	Min (mm)	Max (mm)
NVELOPE 40	73	93
NVELOPE 60	88	128
NVELOPE 90	118	158
NVELOPE 120	148	188
NVELOPE 150	178	218
NVELOPE 180	208	248
NVELOPE 210	238	278
NVELOPE 240	268	308
NVELOPE 270	298	338
NVELOPE 300	328	368

Min - Max Adjustment Without Isolator

Bracket Size (mm)	Min (mm)	Max (mm)
NVELOPE 40	68	88
NVELOPE 60	83	123
NVELOPE 90	113	153
NVELOPE 120	143	183
NVELOPE 150	173	213
NVELOPE 180	203	243
NVELOPE 210	233	273
NVELOPE 240	263	303
NVELOPE 270	293	333
NVELOPE 300	323	363

NVELOPE Primary Fixings.

NV3



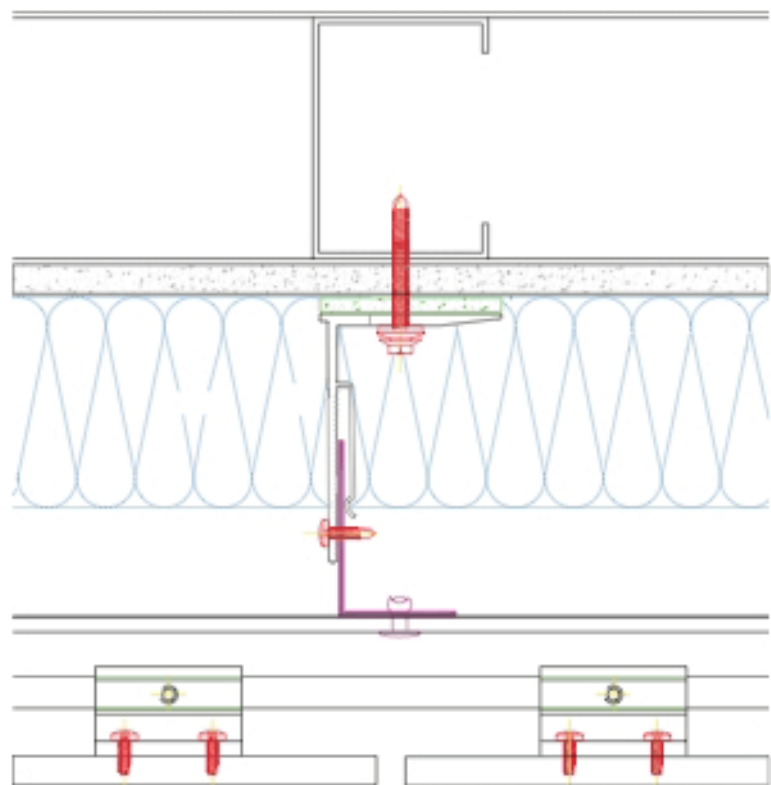
NVELOPE brackets are secured directly to a new or existing substrate of; concrete, brickwork or blockwork or steel frames. Suitable primary anchors are employed to position the brackets to a pre-determined grid to suit the Panel layout - please liaise directly with preferred NVELOPE Primary Fixing supplier re pull-out.



In addition, if there is no sheathing board, the isolation of two different metals must be considered for two reasons; 1: bimetallic corrosion 2: thermal bridging. The use of NVELOPE isolator pad will achieve this.

Please see:
www.nvelope.com/documents/Nvelope_Isolator_M

Or please liaise with NVELOPE
Technical Department:
project@nvelope.com



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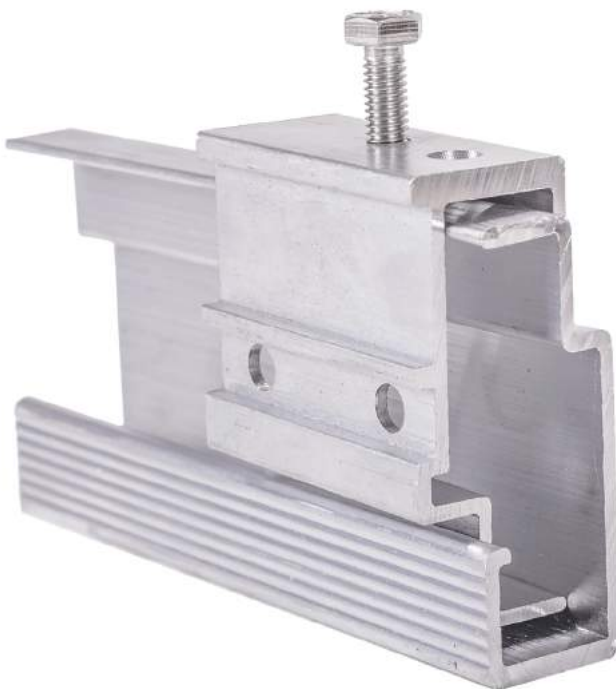
Vertical Rails.


 NV3

Vertical Rails

Once a line of vertical brackets is installed, a 60 x 40 'L' profile can be attached using the helping hand at each bracket position. (As the panels will follow any irregularity or miss-alignment of profiles, it is important that time is taken to align / level the framework to a high standard).

- Each 'L' profile should be cut to the required length.
- Place the profiles in each of the brackets using the helping hand.
- Move the profile into its vertical position - allowing 10mm 'expansion' between profiles.
- The profile can then be eased outwards to form the specified cavity depth.
- Check for line and level.
- Secure the profile using screws in the 'holes' or 'slots'**. The correct combination or 'mix' of single brackets / double brackets may be determined by our response to a completed 'Project Builder' (see www.nvelope.com) which will differentiate between single / double brackets / fixed point / sliding point fixing and horizontal / vertical bracket positioning - speak to NVELOPE Technical: project@nvelope.com



Important

Generally, profiles are cut to lengths that reflect the height of the panel(s) that are going to be hung on them. Typically storey-height profiles are cut so that the panel(s) are located on one set of vertical profiles and does not 'bridge' an expansion gap between two profiles.

**As each profile is secured to the brackets ONE, near the centre of the profile, MUST be connected with fixings going through the HOLES. (Fixed point) ALL other brackets should then be fixed in the SLOTS (sliding point).

For precise fixed point and sliding points - speak to NVELOPE for a project specific static calculation to be prepared.



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Rails, Clips & Panels.


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Once all brackets and profiles are installed to an area of cladding, final checks should be carried out:

- On the primary anchor torque settings.
- To the line and level of the NVELOPE profiles in relation to each other.
- To the number of screws and their position in each NVELOPE bracket.

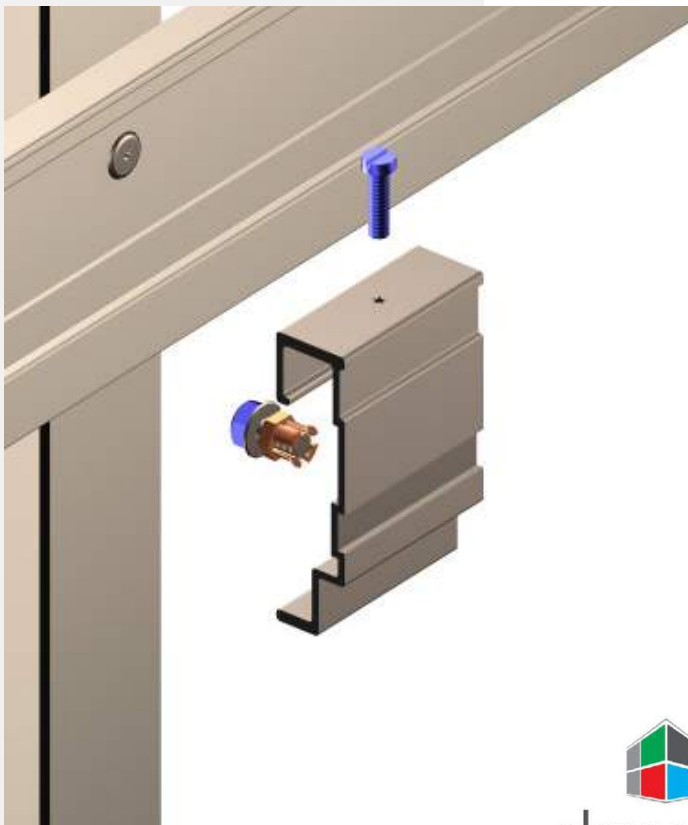
NV3 Horizontal Rail

The position of the rails should align with the 'hook' clip fitted to the rear face of the panel. Horizontal datum lines should be projected across the elevation and the position of the profile should be marked on to the vertical rail.

Then the profile can be screwed / riveted to their required position. Rails can run past the last vertical support by 300mm max if a rail needs jointing off cuts of the rail (200mm length) can be used back to back. Please allow room for expansion.

NV3 Clips

The clips come in adjustable and fixed versions and also have second plain hole. Numbers of cleats are depending on panel material and fixing type to be used. "Keil" anchors are to be used with concrete / stone panels (please ask for details) or PTS screws for use with HPL boards. NVELOPE system also compatible with Ficsher and Tergo fixing.



Panels

The number of "hook" clips and their vertical position will be specified to suit the size and material of the panels and the dynamic wind pressures (positive and negative). The top row of clips should be the adjustable type fitted with height adjustment screw and additional locking hole - this gives the ability to adjust the level and height of each panel individually the subsequent rows of clips are non adjustable.

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Installation & Removal.


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Insulation

Where insulation is specified, it should be cut and tightly butted around the brackets and secured with the appropriate fixings. Sufficient insulation fixings should be provided to ensure that the insulation cannot block the ventilated cavity.

Panel Installation (General)

- Check profile positions in relation to actual panel clips.
- Raise the panel and support in vertical position.
- Adjust level and height of panel before fitting next panel above. If the screw adjustment raises the panel too high remove panel and adjust the main rail to suit (max adjustment 12mm).
- Repeated on next panels.
- Panel joints should follow the manufactures recommendations re joint gaps horizontal and vertical.
- Raise the panel and support in vertical position.
- On final fixing, top row of panels should have self-drilling self-tapping screws fixed through plain hole in top of the clip to retain panel from being lifted off or sliding.
- A 'lift' gap (see below) of no less than 20 mm needs to be left above the top panel for ease of removal / disengagement.

Panel Removal (General)

- Working from top panel down - undo self-drilling self-tapping screw/s.
- Raise the panel and support in vertical position.
- Check profile positions in relation to actual panel clips.
- Raise the panel and support in vertical position.
- Lift panel - a 'lift' of 15mm will allow the NV3 clip to clear the NV3 rail - therefore a 'lift' of c. 20mm should be allowed for when disengaging the panel.
- Repeated on next panels.



NVELOPE Site Checklist.

NV3

Site Checklist

To help with a smooth installation of our rainscreen support systems there are a few things to be taken into account.
Please see check list below:



Has a project specific project builder been completed?

➤ www.nvelope.com/project-builder-landing



If you or colleagues are new to our system, have you requested a tool box talk?

➤ www.nvelope.com/nvelope-contact-us



Have you referred to our data sheets and installation guides available on our website?

➤ www.nvelope.com/nvelope-our-downloads-system-guide



Has a successful pull out test been completed?

➤ www.nvelope.com



Once these tasks have been completed and installation starts you can send our team a photo of a selection of brackets for technical to sign off or advise.

➤ sitesupport@nvelope.com

➤ 01707 333 396

NVELOPE Rainscreen Systems Ltd.

Unit 10 Blenheim Court
Brownfields
Welwyn Garden City
Herts
AL7 1AD

T: +44 (0)1707 333 396

www.nvelope.com

We reserve the right to change technical modifications. No responsibility is taken for detail changes or printing mistakes of the details provided.

NV1

Also download / refer to NV1



elemental
Architectural Cladding Specialists
www.elemental.ie
Tel: (01) 293 8951

Panel Installation Checklist [General]

- Check Profile positions in relation to actual Panel clips.
 - Raise the Panel and support in vertical position.
 - Lower on to rails and check that all 'hooks' have engaged.
 - Adjust panels up by 5mm-6mm with the top row of hangers with the M6 screws to lift lower hangers above the rail this allows the panel to expand. Follow panel manufactures recommendations re max panel heights.
 - Adjust level and height of panel before fitting next panel above. If the screw adjustment raises the panel too high remove panel and adjust the main rail to suit. (max adjustment 12mm).
 - Repeated on next panels.
 - Panel joints should follow the manufactures recommendations re joint gaps horizontal and vertical
 - On final fixing top row of panels should have self-drilling self-tapping screws fixed through plain hole in top of the clip to retain panel from being lifted off or walking, only one fixing per panel is required.
 - A 'lift' gap of no less than 20 mm needs to be left above the top panel for ease of removal / disengagement.
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