NVELOPE
MAKING CLADDING HAPPEN

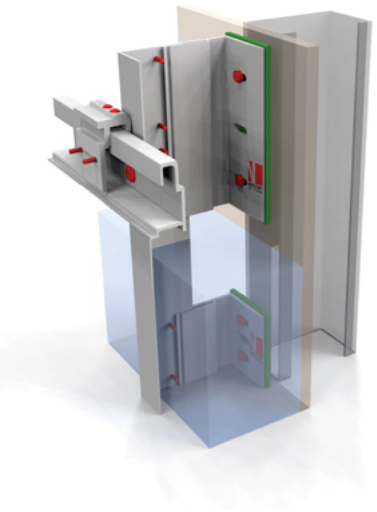
NVELOPE Installation Guide NV4 (TS200).

NV4

Trespa TS200. Hook on System.

NVELOPE profiles and components are designed to provide a vertical support framework only for Trespa Meteon HPL 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 NV4 (TS200) system.

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

NV4 (TS200) horizontal hanging profile carrier profile and adjustable / fixed cleats.

Min – Max Adjustment With Isolator

Bracket Size (mm)	Min (mm)	Max (mm)
NVELOPE 40	79	99
NVELOPE 60	94	134
NVELOPE 90	124	164
NVELOPE 120	154	194
NVELOPE 150	184	224
NVELOPE 180	214	254
NVELOPE 210	244	284
NVELOPE 240	274	314
NVELOPE 270	304	344
NVELOPE 300	334	374

Min – Max Adjustment Without Isolator

Bracket Size (mm)	Min (mm)	Max (mm)
NVELOPE 40	74	94
NVELOPE 60	89	129
NVELOPE 90	119	159
NVELOPE 120	149	189
NVELOPE 150	179	219
NVELOPE 180	209	249
NVELOPE 210	239	279
NVELOPE 240	269	309
NVELOPE 270	299	339
NVELOPE 300	329	369

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NVELOPE Primary Fixings.

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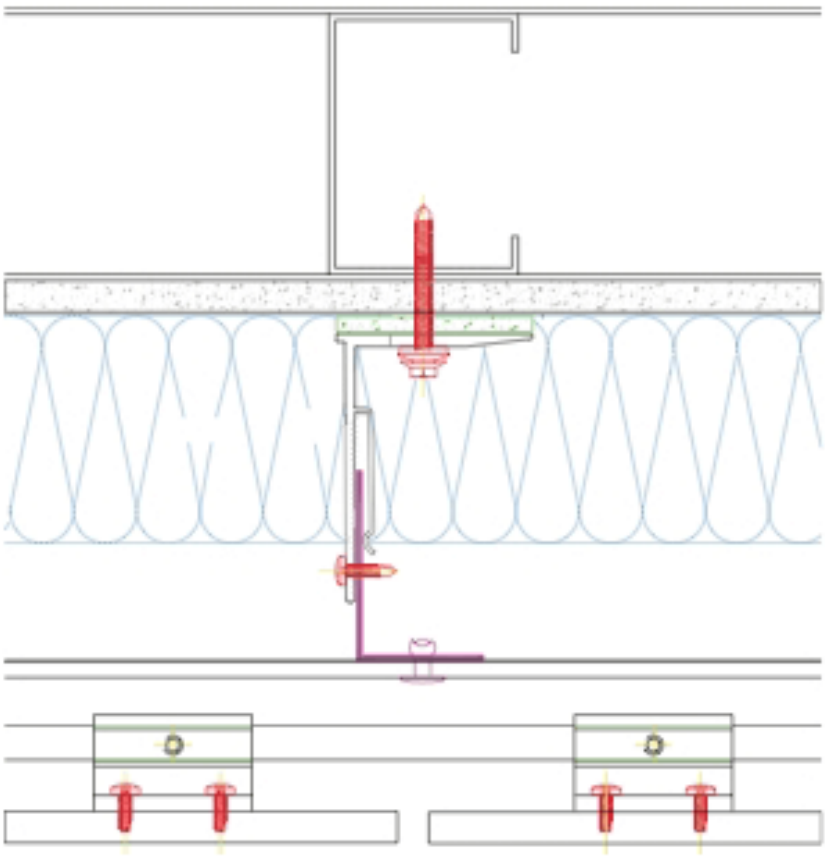
NVELOPE brackets are secured directly to a new or existing substrate of; concrete, brickwork or blockwork or steel frames. Suitable primary anchors are employed to position the brackets to a pre-determined grid to suit the panel layout – please liaise directly with preferred NVELOPE Primary Fixing supplier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

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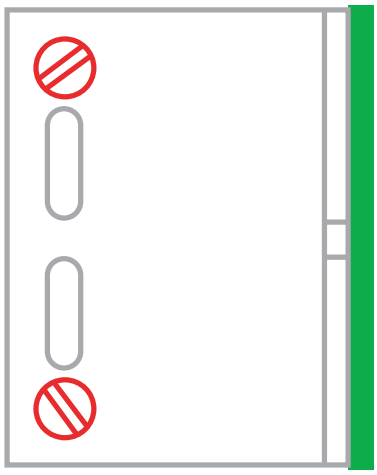
Vertical Rails

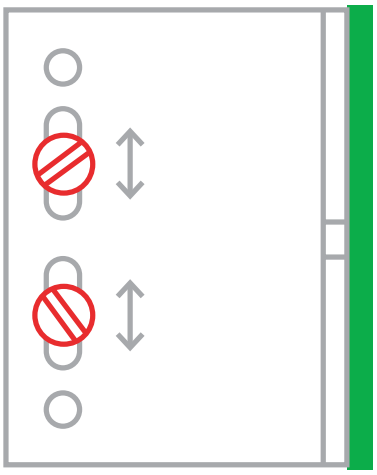
Once a line of vertical brackets is installed, a 60 x 40 'L' profile can be attached using the helping hand at each bracket position. (As the panels will follow any irregularity or miss-alignment of profiles, it is important that time is taken to align / level the framework to a high standard).

- 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 or rivets 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

FIXED POINT
Absorbs dead loads.



FLOATING POINT
Absorbs dynamic loads & expansion.



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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NVELOPE 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.

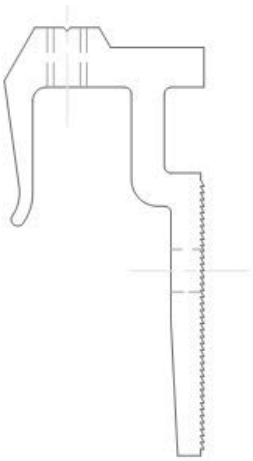
NV4 (TS200) Horizontal Rail

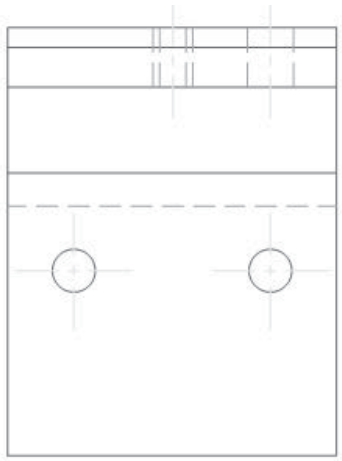
The position of the horizontal rails should align with the 'hook' clip fitted to the rear face of the panel. Horizontal datum lines should be projected across the elevation and the position of the profile should be marked on to the vertical rail. Then the profile can be screwed / riveted to their required 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.

NV4 (TS200) Clips

The clips come in adjustable with M6 adjusting screw and also have second plain hole to be used to lock a panel in the final position this should be in a central position or if only 2 cleats on a panel on a common side of the panel and fixed versions. Numbers of cleats are depending on panel thickness. Fixed cleats have no holes in the top face.





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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NVELOPE 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.
- Lower on to rails and check that all 'hooks' have engaged.
- 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) initial setting nom 6mm.
- 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 central top clip to retain panel from being lifted off or sliding (or common side if only 2 clips fitted).
- A 'lift' gap (see below) of no less than 20 mm needs to be left above the top panel for ease of removal / disengagement.
- If the locking screw cannot be fitted Sika 11FC adhesive can be used on one clip to the same arrangement as above.

Panel Removal (General)

- Working from top panel down – undo self-drilling self-tapping screw/s.
- Lift panel – a 'lift' of 15mm will allow the NV4 (TS200) clip to clear the NV4 (TS200) rail – therefore a 'lift' of c. 20mm should be allowed for when disengaging the panel.
- Repeated on next panels.

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NVELOPE Site Checklist.

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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

NV1 Also download / refer to NV1

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