



SFS



NVELOPE Thermally Broken Cladding Support Systems

Essential to architects and installers

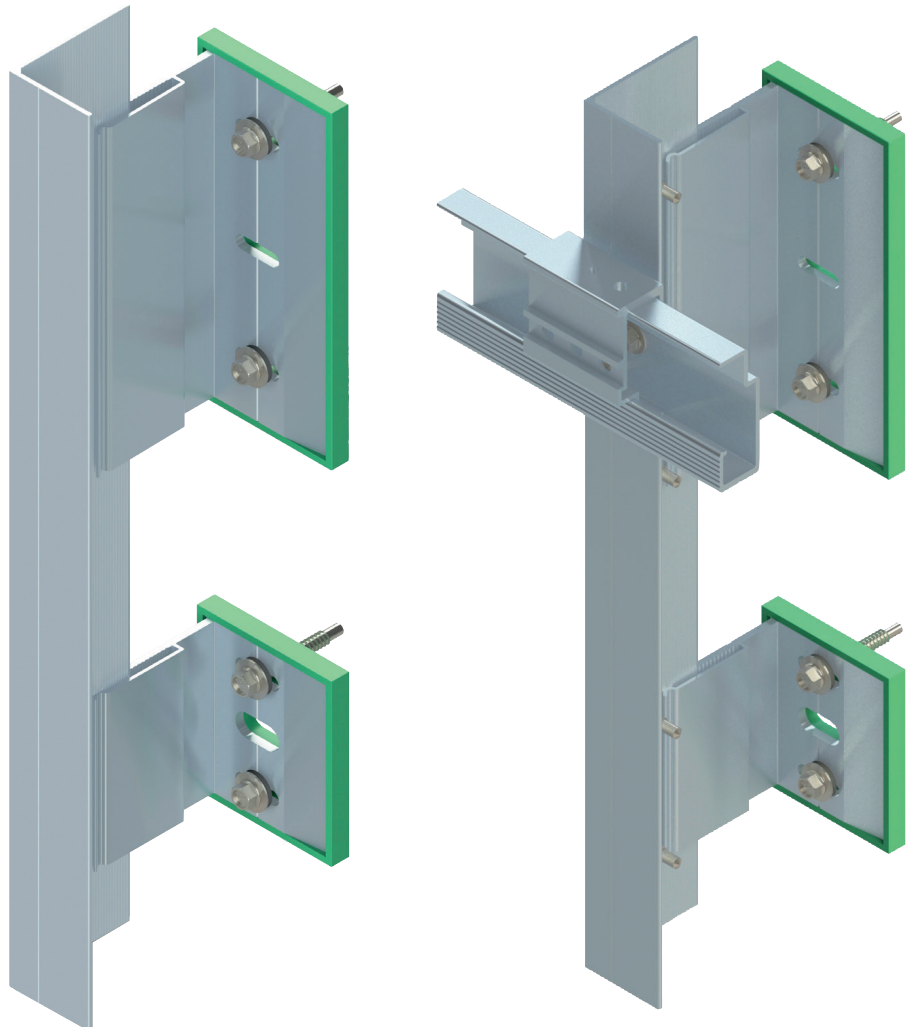
NVELOPE thermally broken rainscreen support systems

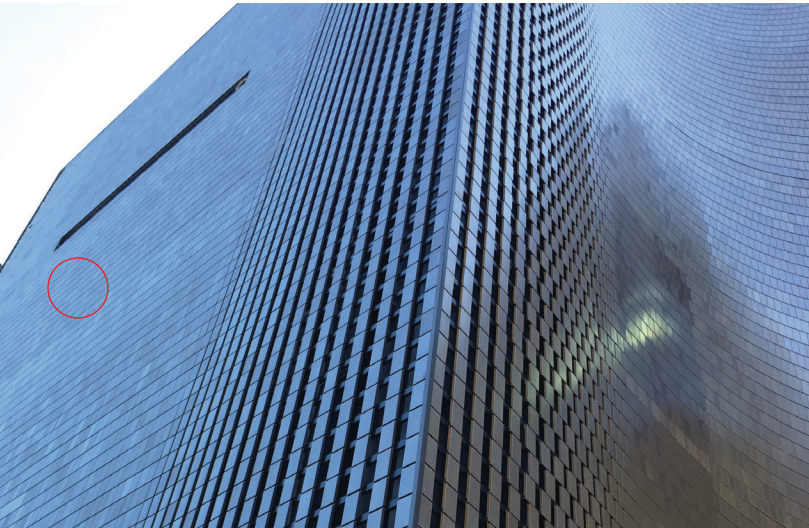
There are many characteristics that any cladding support system must have to meet today's building requirements. Demanding energy standards and building codes that need to be met create design problems to overcome.

With NVELOPE thermally broken cladding support systems, you can:

Tick all the boxes

- ✓ Structurally sound
- ✓ Thermally predictable
- ✓ Safe in a fire
- ✓ Suitable for most cladding types
- ✓ Easy to install/adjust
- ✓ Cost effective
- ✓ Wide range of cavity depths





Sustainability

Our green credentials

Bridging the thermal gap

Emphasis on the performance of the building details and additional losses through linear thermal bridging is paramount. Thermal bridging is the coupling of wall elements that work to transfer valuable energy into and out of the system. Since the attachment of ventilated cladding must go through the thermal insulation into the substrate, this cannot be avoided.

NVELOPE NV and NH brackets provide for the thermal decoupling of the substructure from the ventilated facade through thermal separation layers. The brackets are pre-assembled with thermal isolators which help reduce thermal bridging. In addition, Nvelope isolators prevent a chemical reaction from occurring between the aluminum brackets and the lime in the concrete frame as well as bimetallic corrosion between steel and aluminum.



Aluminum

All of our brackets are produced from sustainable aluminum and are fully recyclable.

Performance in fire

NVELOPE cladding support brackets and rails are made of non-combustible, sustainable aluminum, which does not burn.

NVELOPE cladding attachment systems will not detract from approved NFPA 285 wall designs. Evaluation conducted by independent third party.

Environmental Product Declaration (EPD)

NVELOPE products have been awarded an Environmental Product Declaration (EPD) on mill-finish aluminum brackets and rails. This verified Life Cycle Assessment recognizes our commitment to sustainability and environmental responsibility in all aspects of our business.

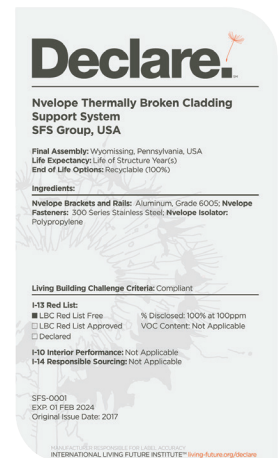
The EPD provides detailed information on the environmental impact of our aluminum bracket and rail products focusing on the manufacturing process, cradle-to-grave. The life cycle assessment was undertaken by BRE to EN 15804 + A1 involving a thorough assessment of products and processes, which demonstrates our commitment to transparency and accountability in our operations.

NVELOPE Isolator

- Featured as standard on all NVELOPE brackets
- Pre-fastened isolators enable quick bracket assembly
- Flame retardant polypropylene copolymer
- Recyclable/ecologically friendly
- Low thermal conductivity passive house application

Red List Free

NVELOPE thermally broken cladding support system is Red List Free. Visit the International Living Future Institute (ILFI), for the complete NVELOPE Declare label details.



NVELOPE brackets, rails and systems

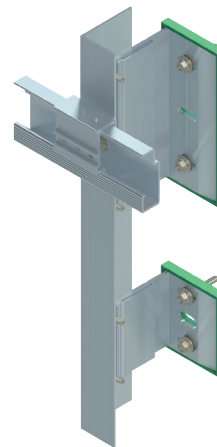
NV1 – Vertically running rail system

Adjustable main support system for horizontally-attached rainscreen cladding applications. Mechanical face fastened panels.



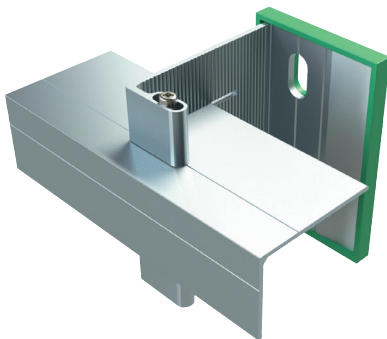
NV3 – Hidden mechanical fastened system

Adjustable system for hidden fastened applications. Cladding panels mechanically attached.



NH3 – Horizontally running rail system

Subframe system used to support vertical elements. Mechanical face fastened panels.



NVF2F – Floor to floor system

Brackets and rails provide a vertical back frame system for floor to floor spanning.



Brackets

The system's backbone

NVELOPE vertical brackets are the backbone of all NVELOPE cladding systems. Available in standard height dimensions of 40–300 mm (1.85" to 13"), there are two size categories – single and double. Single brackets allow the facade to "float" on the sub-construction by absorbing wind load and allowing for expansion and contraction. Double brackets support both vertical weight loads and horizontal wind loads. Brackets are specifically designed for attachment to steel, concrete or wood substructures.

Bracket features

Adjustability

Bracket "helping hand" allows for rail insertion depth up to 1.5" max, which ensures that facade panels are plumb and true, thus eliminating the need for shims.

Fast & easy to install

The "helping hand" bracket holds the rail in place to allow up to 50% faster install.

Thermal efficient

Thermal spacer provides thermal break to reduce energy loss through wall assembly.

Basic specs

Material

Manufactured from extruded aluminum alloy 6005A-T6

Material spacer

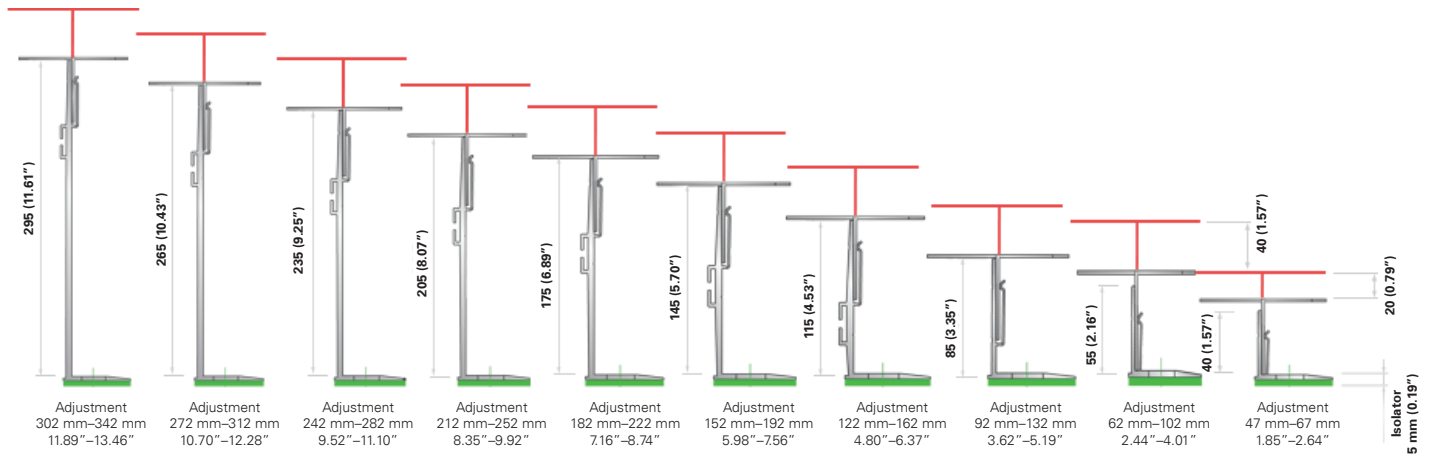
Polypropylene (green)

Approvals

British Board of Agreement (BBA) – 09/4678



NV Bracket range



NV Bracket selection

Single bracket

For steel, wood, concrete or filled CMU substrate - 2 x 6.5 mm slot, 1 x 11 mm slot

Material No.	Size	Product Code	Range of Adjustment (Single/Double)				2 x 6.5 mm slot 1 x 11 mm slot
			Minimum		Maximum		
			mm	in	mm	in	
1582505*	40	NV-VB040S	47	1.85	67	2.64	
1582506	60	NV-VB060S	62	2.44	102	4.01	
1582508	90	NV-VB090S	92	3.62	132	5.19	
1582509	120	NV-VB120S	122	4.80	162	6.37	
1582510	150	NV-VB150S	152	5.98	192	7.56	
1582511	180	NV-VB180S	182	7.16	222	8.74	
1582512	210	NV-VB210S	212	8.35	252	9.92	
1582514	240	NV-VB240S	242	9.52	282	11.10	
1582517	270	NV-VB270S	272	10.70	312	12.28	
1582520	300	NV-VB300S	302	11.89	342	13.46	

*No isolator included; see accessories

NV Double bracket

For steel or wood substrate - 3 x 6.5 mm slot

Material No.	Size		Product Code	Range of Adjustment (Single/Double)				3 x 6.5 mm slot
	mm	in		Minimum		Maximum		
				mm	in	mm	in	
1521239*	40	1.57	NV-VB040D-6.5	47	1.85	67	2.64	
1521247	60	2.36	NV-VB060D-6.5	62	2.44	102	4.01	
1521255	90	3.54	NV-VB090D-6.5	92	3.62	132	5.19	
1521263	120	4.72	NV-VB120D-6.5	122	4.80	162	6.37	
1521273	150	5.90	NV-VB150D-6.5	152	5.98	192	7.56	
1521282	180	7.08	NV-VB180D-6.5	182	7.16	222	8.74	
1521291	210	8.26	NV-VB210D-6.5	212	8.35	252	9.92	
1521300	240	9.44	NV-VB240D-6.5	242	9.52	282	11.10	
1521309	270	10.62	NV-VB270D-6.5	272	10.70	312	12.28	
1521317	300	11.81	NV-VB300D-6.5	302	11.89	342	13.46	

NV Double bracket

For concrete/filled CMU substrate - 3 x 11 mm slot

Material No.	Size		Product Code	Range of Adjustment (Single/Double)				3 x 11 mm slot
	mm	in		Minimum		Maximum		
				mm	in	mm	in	
1521238*	40	1.57	NV-VB040D-11	47	1.85	67	2.64	
1521246	60	2.36	NV-VB060D-11	62	2.44	102	4.01	
1521254	90	3.54	NV-VB090D-11	92	3.62	132	5.19	
1521262	120	4.72	NV-VB120D-11	122	4.80	162	6.37	
1521272	150	5.90	NV-VB150D-11	152	5.98	192	7.56	
1521281	180	7.08	NV-VB180D-11	182	7.16	222	8.74	
1521290	210	8.26	NV-VB210D-11	212	8.35	252	9.92	
1521299	240	9.44	NV-VB240D-11	242	9.52	282	11.10	
1521308	270	10.62	NV-VB270D-11	272	10.70	312	12.28	
1521316	300	11.81	NV-VB300D-11	302	11.89	342	13.46	

*No isolator included; see accessories

NH3 System

Speed

80% fewer fasteners than NH2

The new NH3 system needs just 3 fasteners which means it is quick to install, getting the job done faster and saving you time and money.

Fast adjustment for line and level

Easy and simple design allows for fast easy alignment. Vertical levels can be easily and speedily achieved thanks to the slotted primary fastening holes. The clever "helping hand" slot enables the L and T profile to be aligned, and then secured, using just one fastener per bracket.

Overlay and optimized cutting service

The NH3 system further improves efficiencies through the overlay and optimized cutting service – reducing time and material waste on site by cutting rails to specific lengths you need.

Less brackets per sq. ft. due to high load capacity

The high load capacity of the NH3 system can reduce the number of brackets per sq. ft. saving time on installation and materials.

Pre-installed isolator

The NH3 bracket is supplied with a pre-fitted isolator, meaning there is no need to find and attach the isolator prior to installation – saving you time and money.

Simplicity

One piece bracket

The elegant design means that, unlike the NH2 system, no adapter is required.

Only 4 components for install

This simple design means that there are only 4 components required to install a bracket. This makes installing the system easy and fast. No hunting for different fasteners and components makes inventory on site much easier to control.

Only 9 brackets to span the full range of cladding zones

The full range of cladding spanning ranges can be accommodated by just 9 bracket lengths. This is one of the most compact bracket length ranges on the market that is capable of spanning from 77 mm (3.03"–13.47"). This means less complexity and greater flexibility during the design phase.

All information is non-binding and without guarantee. Before using the products, all specifications and calculations must be checked by a suitably qualified person and local regulations must be observed. This document is subject to revision. We reserve the right to make technical changes.

Strength

Exceptional vertical loading across the full range of spanning zones

The high load capacity of the NH3 system brackets provides exceptional reassurance when attaching high mass façades.

This high load capacity also enables efficient bracket layout designs which realize fewer brackets per sq. ft., leading to savings on time and cost.

Made from durable extruded aluminum

The NVELOPE product range is manufactured from 6005A T6 grade aluminum which provides exceptional strength and durability.

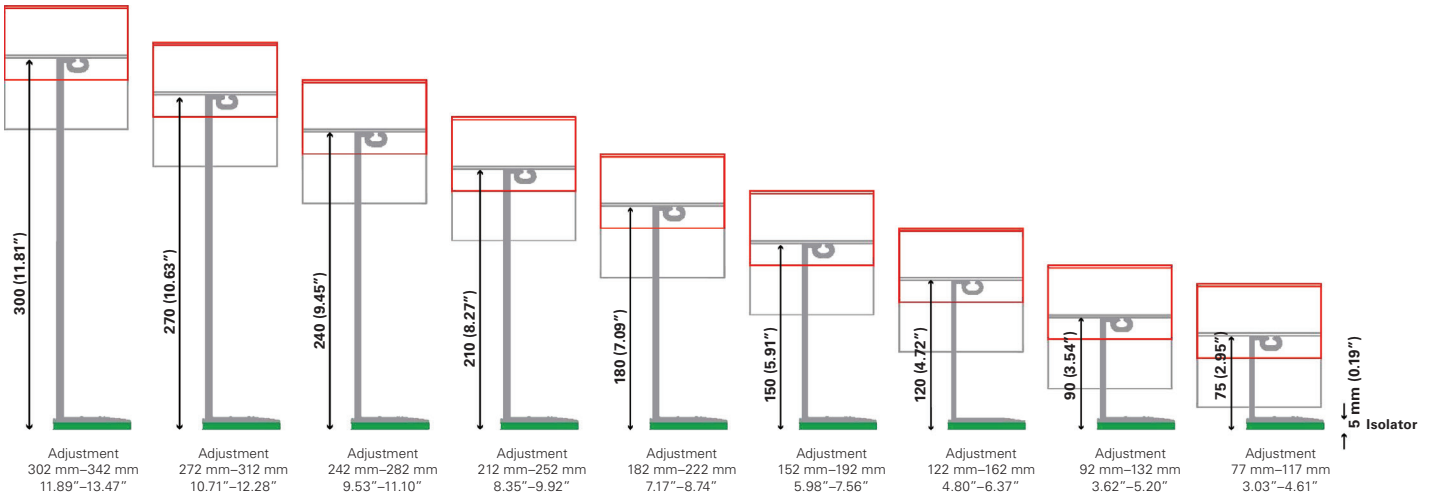
Fixed and sliding fastening points

Unlike other systems which use just fixed points to attach the profile, the NVELOPE NH3 system has been designed to utilize both fixed and sliding fixing points. By utilizing this method the normal expansion and contraction that occurs within the rainscreen and subframe can be accommodated reducing the risk of buckling or warping of the façade.



NH3 Bracket range

Cavity depths



NH3 Bracket

Bracket Size	Min system		Max system		For steel or wood 6.5 mm slots	For brick, block and concrete 11 mm slots	2 x 6.5 mm slots 2 x 11 mm slots
	mm	in	mm	in			
75	77	3.03"	117	4.61"	1602052	1602050	
90	92	3.62"	132	5.20"	1602054	1602053	
120	122	4.80"	162	6.37"	1602057	1602056	
150	152	5.98"	192	7.56"	1602059	1602058	
180	182	7.17"	222	8.74"	1602062	1602061	
210	212	8.35"	252	9.92"	1602064	1602063	
240	242	9.53"	282	11.10"	1602066	1602065	
270	272	10.71"	312	12.28"	1602068	1602067	
300	302	11.89"	342	13.47"	1602070	1602069	

Rails and hangers

The cladding support system

L rails

Material No.	Product Code	Description
1521357	NV-L60-40-2.2-3000	L Profile 60 × 40 × 2.2 × 3000 mm (118.11")
1521375	NV-L60-40-2.2-6000	L Profile 60 × 40 × 2.2 × 6000 mm (236.22")



T rails

Material No.	Product Code	Description
1521413	NV-T40-100-2.2-3000	T Profile 40 × 100 × 2.2 × 3000 mm (118.11")
1521417	NV-T40-100-2.2-6000	T Profile 40 × 100 × 2.2 × 6000 mm (236.22")
1521418	NV-T60-080-2.2-3000	T Profile 60 × 80 × 2.2 × 3000 mm (118.11")
1521422	NV-T60-080-2.2-6000	T Profile 60 × 80 × 2.2 × 6000 mm (236.22")
1521423	NV-T60-100-2.2-3000	T Profile 60 × 100 × 2.2 × 3000 mm (118.11")
1521434	NV-T60-100-2.2-6000	T Profile 60 × 100 × 2.2 × 6000 mm (236.22")
1521440	NV-T60-120-2.2-3000	T Profile 60 × 120 × 2.2 × 3000 mm (118.11")
1521444	NV-T60-120-2.2-6000	T Profile 60 × 120 × 2.2 × 6000 mm (236.22")
1521445	NV-T60-140-2.2-3000	T Profile 60 × 140 × 2.2 × 3000 mm (118.11")
1521447	NV-T60-140-2.2-6000	T Profile 60 × 140 × 2.2 × 6000 mm (236.22")



Omega rails

Material No.	Product Code	Description
1521393	NV-OM-25-120-2.4-3000	25 mm Omega 25 × 120 × 2.4 × 3000 mm (118.11")
1521394	NV-OM-25-120-2.4-6000	25 mm Omega 25 × 120 × 2.4 × 6000 mm (236.22")
1521396	NV-OM-40-140-2.4-3000	40 mm Omega 40 × 140 × 2.4 × 3000 mm (118.11")
1521397	NV-OM-40-140-2.4-6000	40 mm Omega 40 × 140 × 2.4 × 6000 mm (236.22")



Z rails

Material No.	Product Code	Description
1521448	NV-Z25-45-30-2.4-3000	25mm Zed 45 × 25 × 30 × 2.4 × 3000 mm (118.11")
1521449	NV-Z25-45-30-2.4-6000	25mm Zed 45 × 25 × 30 × 2.4 × 6000 mm (236.22")
1521450	NV-Z25-55-30-2.4-3000	40mm Zed 45 × 40 × 30 × 2.4 × 3000 mm (118.11")
1521451	NV-Z25-55-30-2.4-6000	40mm Zed 45 × 40 × 30 × 2.4 × 6000 mm (236.22")



Black powder coating or anodizing available upon request.

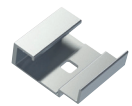
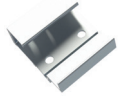
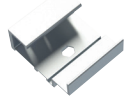
NV3 rails and hangers

Material No.	Product Code	Description
1521331	NV-CP-NV3-3000	Carrier Profile NV3 System × 3000 mm (118.11")
1521334	NV-CP-NV3-6000	Carrier Profile NV3 System × 6000 mm (236.22")



Black powder coating or anodizing available upon request.

Material No.	Product Code	Description	Hole
TUF-S*			
1549012	NV-NV3-TUF-S-ADJF-3.5MM	NV3 leveling/locking hanger 3.5 mm thick	3 round holes 6.5 mm
1549015	NV-NV3-TUF-S-STAT-3.5MM	NV3 static hanger 3.5 mm thick	3 round holes 6.5 mm
1549046	NV-NV3-TUF-S-ADJF-5MM	NV3 leveling/locking hanger 5 mm thick	3 round holes 6.5 mm
1549047	NV-NV3-TUF-S-STAT-5MM	NV3 static hanger 5 mm thick	3 round holes 6.5 mm
Keil**			
1521454	NV-NV3-KEIL-ADJF	NV3 leveling/locking hanger	1 Keil anchor hole
1521456	NV-NV3-KEIL-STAT	NV3 static hanger	1 Keil anchor hole
PTS**			
1521457	NV-NV3-PTS-ADJF	NV3 fixed leveling hanger	2 PTS 6.5 mm holes
1521459	NV-NV3-PTS-STAT	NV3 static hanger for HPL	2 PTS 6.5 mm holes
Tergo**			
1521464	NV-NV3-TER-80-ADJF	NV3 leveling/locking hanger 80 mm	2 Tergo (square) holes
1521465	NV-NV3-TER-ADJF	NV3 leveling/locking hanger	1 Tergo (square) hole
1521468	NV-NV3-TER-STAT	NV3 static hanger	1 Tergo (square) hole
Tergo Plus**			
1521469	NV-NV3-TER-TEC-ADJF	NV3 leveling/locking hanger	1 Tergo plus (round) hole
1521470	NV-NV3-TER-TEC-STAT	NV3 static hanger	1 Tergo plus (round) hole



*Anchors available from SFS.

**Anchors not available from SFS.

Accessories

Material no.	Product code	Description
1521187	NV-EX-PC-150	Extension piece double 150 mm
1521188	NV-EX-PC-75	Extension piece single 75 mm
1521322	NV-VB-40-D-ISO	Thermal isolators for 40 mm double bracket
1521323	NV-VB-40-S-ISO	Thermal isolators for 40 mm single bracket

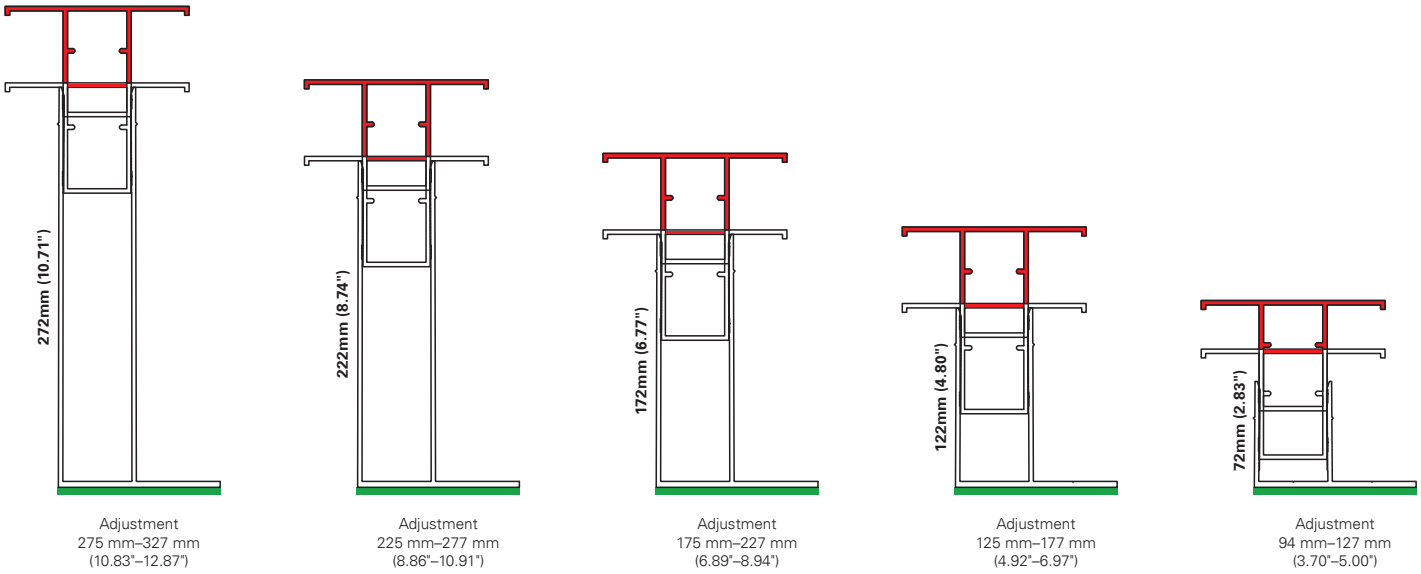
NVF2F Floor to floor

NVF2F features

- NVF2F is a vertical back frame system for floor to floor spanning.
- Floor to floor (mullion) box 'T' profiles are fixed using support brackets. Our brackets absorb wind loading and allow for expansion and contraction, and vertical dead loads.
- Bracket spacing is determined by factors such as the dimensions and weight of the façade cladding, local wind loads and cladding zone.
- Manufactured from extruded aluminum alloys conforming to EN 573-3 (material) and EN 755 production standards.
- NVELOPE brackets allow adjustment between the face of the primary support to outer face of vertical profile.
- Hard PVC thermal isolators are assembled as standard (located between the bracket and the primary structural support system).



NVF2F Bracket range



NVF2F brackets and components

Component	Material No.	Bracket height		Range of Adjustment				2 x 12.5 mm slot
		mm	in	Minimum		Maximum		
				mm	in	mm	in	
Floor to floor bracket 72 mm with isolator	1600061	72	2.83	94	3.70	127	5.00	
Floor to floor bracket 122 mm with isolator	1600062	122	4.80	125	4.92	177	6.97	
Floor to floor bracket 172 mm with isolator	1600063	172	6.77	175	6.89	227	8.94	
Floor to floor bracket 222 mm with isolator	1600065	222	8.74	225	8.86	277	10.91	
Floor to floor bracket 272 mm with isolator	1649538	272	10.71	275	10.83	327	12.87	
Floor to floor box rail 3600 mm (transom/mullion)	1600066							
Floor to floor box rail 6000 mm (transom/mullion)	1600069							
Floor to floor box T rail 3600 mm (mullion)	1600072							
Floor to floor box T rail 6000 mm (mullion)	1600074							
Floor to floor 40x40 mm spigot 200 mm	1600076							
Floor to floor end plate/transom cleat - horizontal	1600077							
Floor to floor fastener kit including 1 bolt, 1 nut, & 4 washers	1600079							



Orange County Museum of Art (OCMA)
NV1 System

System fasteners

Fastener	Material No.	Application	Diameter	Length	Material	Head style/drive	Point	
	1673590	Bracket to steel substrate	1/4"	2"	304SS bi-metal	HWH 3/8"	SD2	
	1123138	Bracket to wood substrate	#14	2-1/6"	304SS bi-metal	HWH 5/16"	SD2	
	1677827	Bracket to concrete substrate	3/8"	3"	304SS bi-metal	HWH 9/16"	Type B	
	1205146	Bracket to concrete, masonry and brick (only option for NVF2F)	3/8"	3-3/8"	316SS bi-metal	13 mm Hex	Type B	
	1507572	NV1 Rail to rail / bracket to rail	#12	7/8"	316SS	HWH 5/16"	SD3	
	1645134	NH3 Rail to rail / bracket to rail	#12	1-3/4"	316SS	HWH 5/16"	SD3	
	1134478	NV3 hanger to rail panel locking	#12	1-5/8"	304SS bi-metal	HWH 5/16"	SD3	
	1521489	NV3 hanger to rail panel adjustment	M6	20 mm	304SS	10 mm Hex	Type B	
	1354231	NVF2F Spigot to box	#14	1-1/8"	304SS bi-metal	HWH 5/16"	SD2	
	1600079	NVF2F fastener kit includes M8 Bolt, M8 Washer, Nylon M8 Washer, M8 Nylon Nut						

Design and installation support



For Architects

Quality and innovation

Quality. Safety. Economy. Choice. NVELOPE understands the modern architect. We develop systems for the ever changing face of facade design. NVELOPE products cope with your demands for more flexible and economical cladding solutions. Easy to specify and able to support most key facade manufacturers' materials, our products provide the solutions you need with new build, renovation, steel, wood and concrete substructures, to any height.

- Design details
- Component drawings
- 3-part CSI Specifications
- Structural, fire and thermal reports
- Declare label red list free – living building challenge

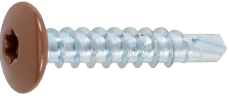



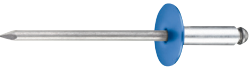

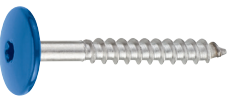

For Installers

Delivering a complete cladding systems service

Service. Fast. Experience. Price. We understand and empathize with the modern installer of cladding systems and the building envelope. Knowledge acquired from our years of service has enabled us to establish a full support program specifically for rainscreen cladding installers using our products. Our support staff is always available and able to assist with current stock availability, price and technical information.

- Installation guides
- Animated configuration videos
- Project cost estimating
- On-site startup support and training available

Fasteners for cladding attachment

Fastener	Description	Application	Diameter	Length	Material	Head style/drive	Point
	SX3-D12 Self-drill	Cladding panels to aluminum or steel	#12	1-3/16"–2-1/8"	304SS bi-metal	Dome head T25W	SD2
	SX3-D16 Self-drill	Cladding panels to aluminum or steel	#12	1-3/16"	304SS bi-metal	Dome head T25W	SD2
	#10-12 Bi-Met 300° Self-drill	Cladding panels to aluminum or steel	#10	1-1/8"	304SS	Pan head T20W	SD1
	TDA-S-D16 Self-tapping	Cladding panels to aluminum or steel	#12	1"–1-1/8"	304SS	Dome head T25W	Type A
	AP16 Rivet	Cladding panels to aluminum	0.20"	16 mm–21 mm	Aluminum body/SS mandrel	Dome head	–
	SSO-D15 Rivet	Cladding panels to aluminum, metal, or stainless steel	0.20"	14 mm–22 mm	316SS	Dome head	–
	TW-S-D12 Self-tapping	Cladding panels to wood	#10	1"–3"	304SS	Dome head T20W	Type A
	TU/TUF/TUC Hidden fastener	Fastener for HPL, fiber cement, or fiber concrete panels	0.236"	7 mm–13 mm	316SS	HWH 5/16"	–





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(08/2023, V1.02)

