

Certificate

Certificate No.

R40530-1

Issue date

9th October 2019

Expiration date

8th October 2028



This is to acknowledge that

RJ Facade Systems Ltd

Rainscreen Cladding Support Systems

Helping Hand Wall Brackets
Vertical and Horizontal Rail Types
Horizontal Carrier Rail Systems

Evaluated and meets the requirements of the certification scheme

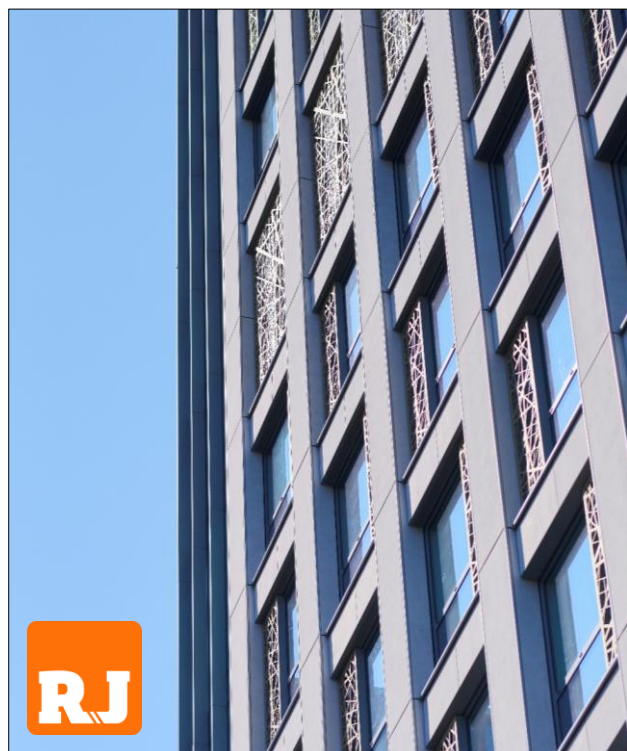
BSFO - Performance of Cladding and Cladding Supports Systems for use in the United Kingdom

**Certificate for the UL Mark – Performance of Cladding and Cladding Supports Systems
for use in the United Kingdom**

Section 1 – Certificate Details

Customer Name:	RJ Facade Systems Ltd	Certification Body:	UL International (UK) Ltd
Customer Address:	Unit 36c Inchmuir Road Whitehill Industrial Estate Bathgate EH48 2EP	Certification Body Address:	Halesfield 2 Telford Shropshire TF7 4QH
UL Scheme:	BSFO - Performance of Cladding and Cladding Supports Systems for use in the United Kingdom V3.0	Certificate Number:	R40530-1 Rev 7
Date of Certification Commencement:	9th October 2019	Date of Certification Expiry:	8th October 2028
Certificate Compiled by:	Mark Swanborough Certification Leader	Certificate Approved by:	Michael Wass Engineering Manager
Signed:		Signed:	

Section 2 – Product covered by this Certificate



System Name	System Type
RJ Facade Systems	Rainscreen Cladding Support System
This Certification Covers • A detailed overview of the certified products. • Technical Specifications of the products. • An initial assessment of the certified company's factory production control systems. • Design considerations. • A review of the products documentation to help demonstrate compliance with the applicable requirements of the UL Scheme. • An assessment of the certified products contribution to any key requirements of the building regulations. • An overview of the certified companies product installation requirements and procedures. • An overview of all supporting test documentation used for the product evaluation. • Ongoing surveillance of the certified company's factory production control system and procedures. • The conditions under which this product certification is valid.	

Section 3 – Product Specification and full description of the certified product

3.1 General Description

RJ Facade Systems supply into the UK market, Facade Support Systems for all the façade materials used in ventilated facades designed and manufactured in partnership with other manufacturers in the UK.

This UL certification covers the range a brackets and components listed below. The certified companies head office is situated in Bathgate, West Lothian, with the Facades Division based in Guildford, Surrey. The aluminium EVT brackets and components are manufactured and fabricated in the UK at UL audited manufacturing sites.

All products are dispatched/transported to the RJ UK warehouse in Bathgate prior to distribution to the client. The certificate incorporates the UK distribution of RJ Facade Systems Ltd cladding support systems with their UL approved supply chain.

3.1 Summary of Certified Products

Helping Hand Wall Brackets

- EVT II Aluminium FPH & SPH, for Concrete and SFS Standard L Brackets
- EVT II Stainless Custom FPH & SPH, for Concrete and SFS Standard L Brackets
- EVT II U Brackets - Aluminium FPH, SPH, & Combi, slots for Concrete and SFS Performance Brackets
- EVT II U Brackets - Stainless FPH, SPH, & Combi, slots for Concrete and SFS Performance Brackets
- EVT II Horizontal Adaptor - Aluminium FPH & SPH

Vertical and Horizontal Rail Types

- L Profiles for L brackets
- T Profiles for L brackets
- Floorspan profiles for U brackets
- Structural Tophats & C Channels for spanning SFS
- Tophat & Z Profiles for façade panels

Horizontal Carrier Rail Systems

- System SF1
- System SF2
- System Kerf
- System SFC

Suitable fixing types – not UL certified and subject to project approval

- Concrete Screws for fixing to concrete and blockwork - ETA approved for cracked and non-cracked concrete applications
- Through bolt for fixing to concrete only - ETA approved for cracked and non-cracked concrete applications
- Self drilling fixings for fixing to aluminium and steel of various thicknesses - ETA approved

3.3 Independent Technical Approval Authorities acceptable to NHBC, April 2022

NHBC has worked with numerous organisations, trade bodies, manufacturers and building industry bodies to help establish, assess and or recognise different certification schemes for different elements of the building structure, with critical and non-critical functions. Certification by these bodies can be used to help demonstrate performance. The following are examples of the schemes that NHBC currently accepts:

For curtain walling and cladding systems – Agrément or UL Enhanced Mark ‘Performance of Curtain Walling and Rainscreen Cladding Support Systems’

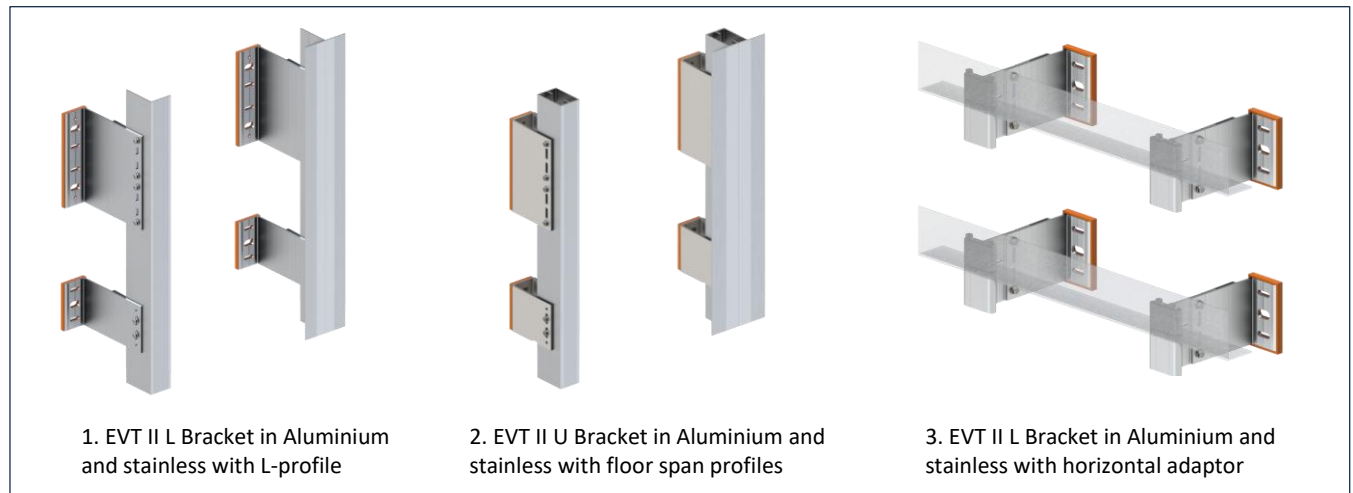
3.3 EVT II Facade Support Systems for typical facade materials used in ventilated



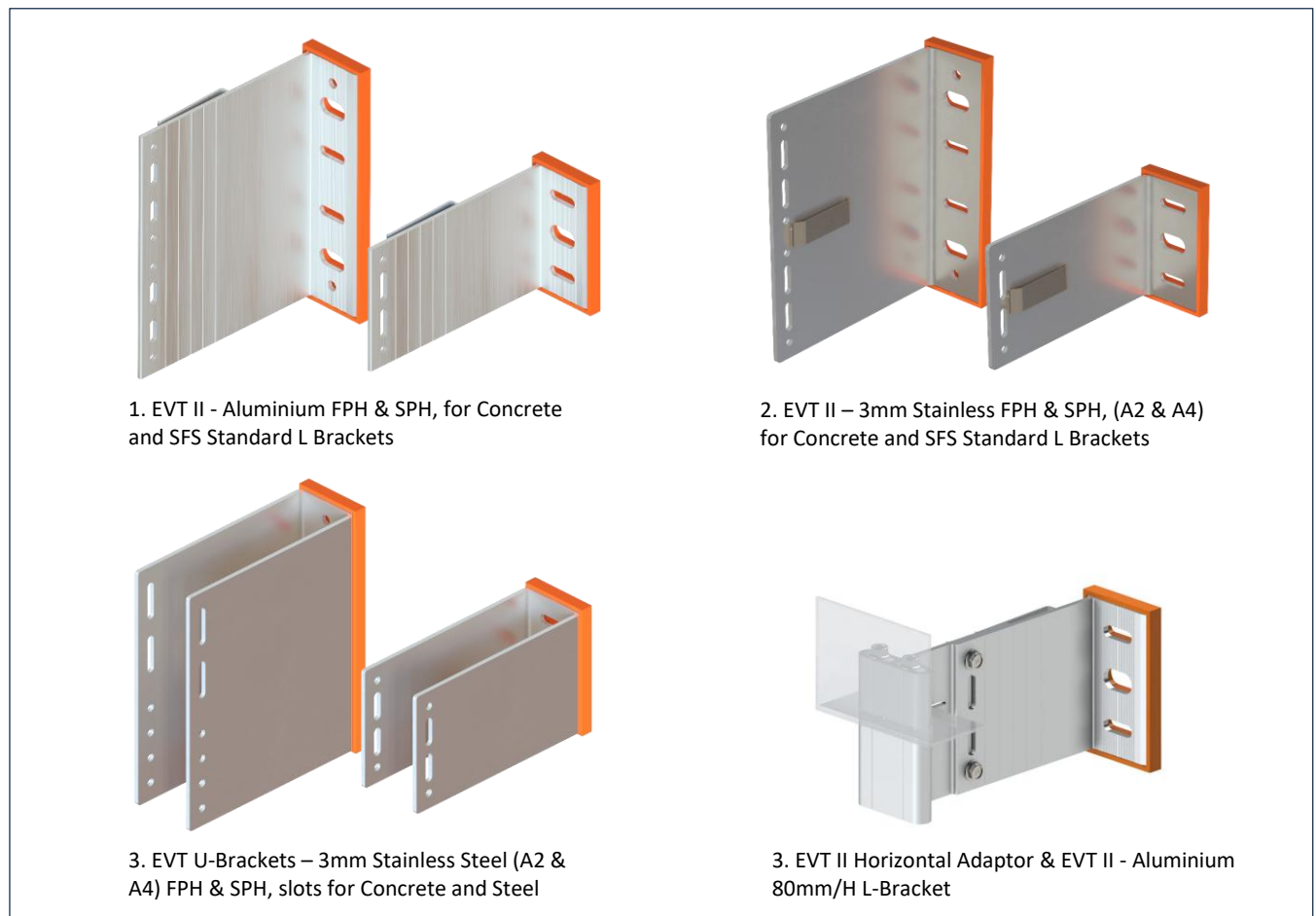
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3.4 The RJ Facade Systems EVT II support structure overview

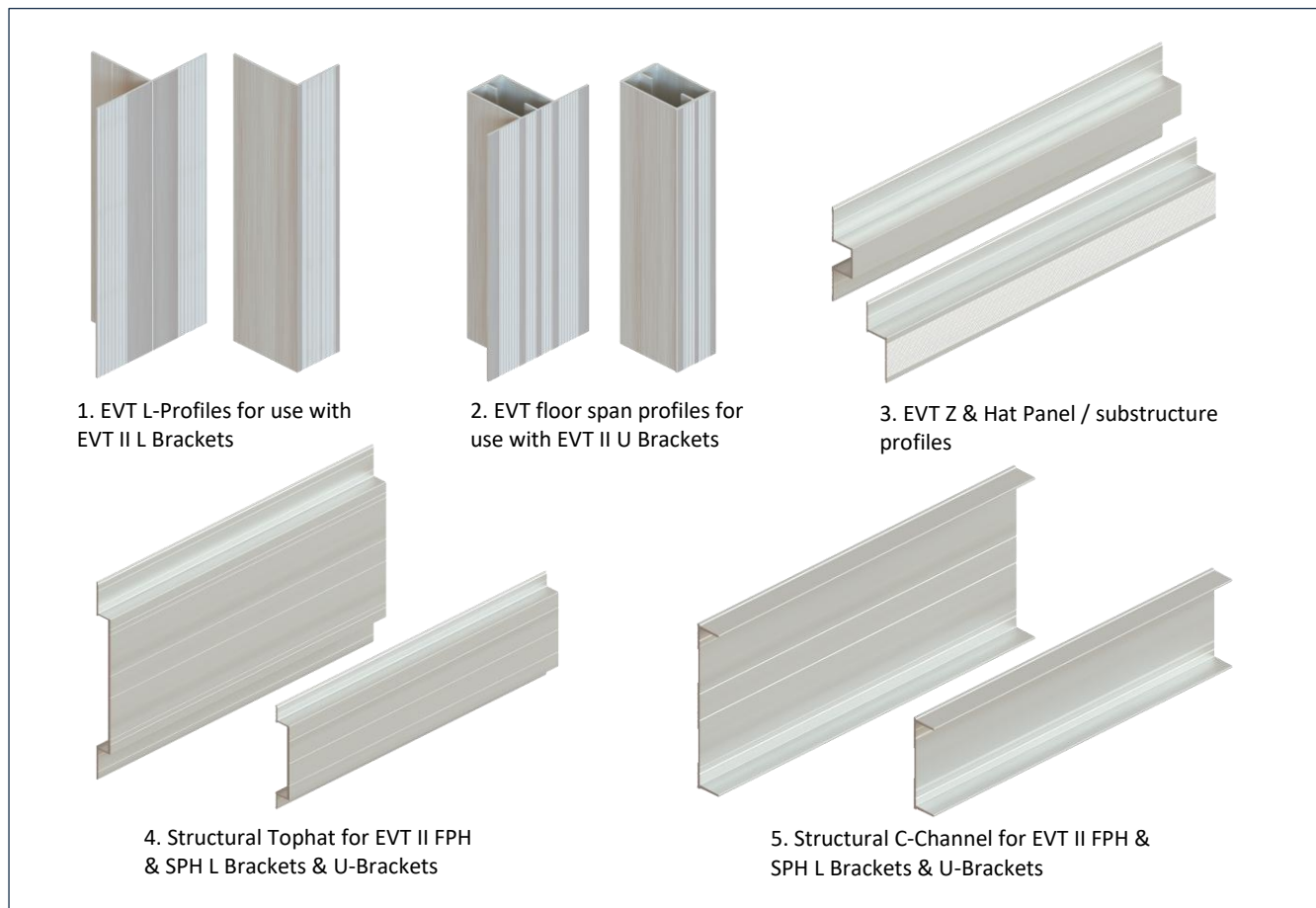
The relevant parts for RJ Facades system include EVTII Helping Hand Wall Brackets, EVT Vertical and Horizontal Rail Types, & suitable fixings for aluminium component assembly and aluminium supports to building substrates



Typical RJ Façade System - EVT II support structure assemblies for supporting Briklok profiles.

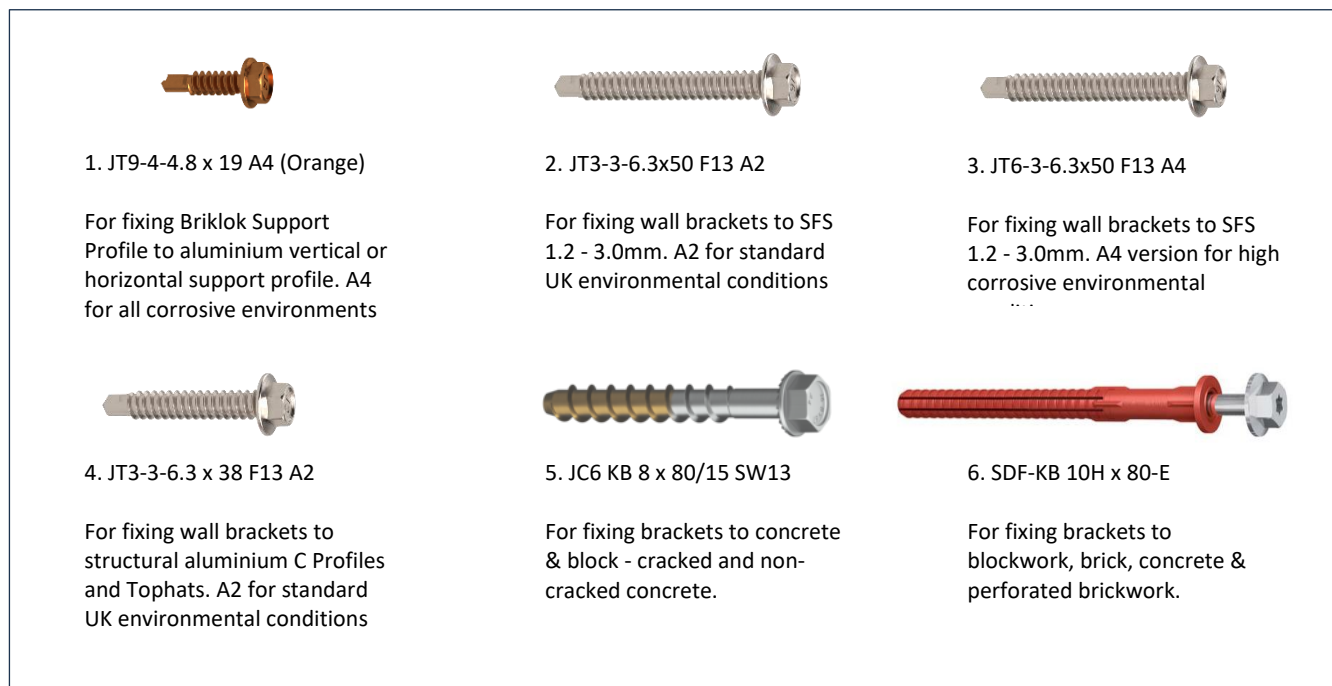


EVT II wall bracket examples.



EVT system profile examples.

The below references are frequently specified methods to fix to standard building substrates, please always refer to the RJ Facades calculation for confirmation.



EVT II System ETA fixing examples for steel, concrete & masonry.

Section 4 – Certified Product Specifications

EVT II - Aluminium FPH & SPH, for Concrete and SFS Standard L Brackets

Code	Description	Design Resistance (kN)	
		Vertical	Horizontal
130170	EVT II L Bracket Thermal AL - 80 x 40mm	5.06	2.75
130171	EVT II L Bracket Thermal AL - 80 x 60mm	3.53	2.75
130172	EVT II L Bracket Thermal AL - 80 x 80mm	1.87	1.95
130173	EVT II L Bracket Thermal AL - 80 x 100mm	1.69	2.04
130174	EVT II L Bracket Thermal AL - 80 x 120mm	1.28	2.09
130175	EVT II L Bracket Thermal AL - 80 x 140mm	1.06	2.04
130176	EVT II L Bracket Thermal AL - 80 x 160mm	0.96	1.95
130177	EVT II L Bracket Thermal AL - 80 x 180mm	1.18	2.00
130178	EVT II L Bracket Thermal AL - 80 x 200mm	1.07	2.00
130179	EVT II L Bracket Thermal AL - 80 x 220mm	0.85	2.00
130180	EVT II L Bracket Thermal AL - 80 x 240mm	0.88	1.95
130181	EVT II L Bracket Thermal AL - 80 x 260mm	0.81	2.00
130182	EVT II L Bracket Thermal AL - 80 x 280mm	0.66	2.01
130183	EVT II L Bracket Thermal AL - 80 x 300mm	0.68	1.94
130184	EVT II L Bracket Thermal AL - 80 x 320mm	0.64	1.94
130185	EVT II L Bracket Thermal AL - 160 x 40mm	10.12	6.00
130186	EVT II L Bracket Thermal AL - 160 x 60mm	9.57	4.54
130187	EVT II L Bracket Thermal AL - 160 x 80mm	6.70	3.77
130188	EVT II L Bracket Thermal AL - 160 x 100mm	4.91	3.77
130189	EVT II L Bracket Thermal AL - 160 x 120mm	4.12	3.77
130190	EVT II L Bracket Thermal AL - 160 x 140mm	3.46	3.77
130191	EVT II L Bracket Thermal AL - 160 x 160mm	3.00	3.77
130192	EVT II L Bracket Thermal AL - 160 x 180mm	2.75	3.81
130193	EVT II L Bracket Thermal AL - 160 x 200mm	2.59	3.81
130194	EVT II L Bracket Thermal AL - 160 x 220mm	2.39	4.02
130195	EVT II L Bracket Thermal AL - 160 x 240mm	2.06	3.81
130196	EVT II L Bracket Thermal AL - 160 x 260mm	1.99	3.81
130197	EVT II L Bracket Thermal AL - 160 x 280mm	1.75	3.81
130198	EVT II L Bracket Thermal AL - 160 x 300mm	1.62	3.81
130199	EVT II L Bracket Thermal AL - 160 x 320mm	1.42	3.81

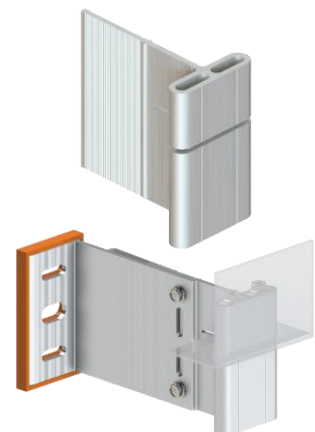
Above references include Thermal Pad, also available without Thermal Pad



EVT II Horizontal Adaptor - aluminium

Code	Description	Design Resistance (kN)	
		Vertical	Horizontal
522161	EVT II Horizontal Adaptor		
522161 +	EVT II L Thermal AL- 80x40mm + Adaptor	1.92	2.80
522161 +	EVT II L Thermal AL - 80x80mm + Adaptor	1.92	2.75
522161 +	EVT II L Thermal AL - 80x100mm + Adaptor	1.87	1.95
522161 +	EVT II L Thermal AL - 80x120mm + Adaptor	1.69	2.04
522161 +	EVT II L Thermal AL - 80x140mm + Adaptor	1.28	2.09
522161 +	EVT II L Thermal AL - 80x160mm + Adaptor	1.06	2.04
522161 +	EVT II L Thermal AL - 80x180mm + Adaptor	0.96	1.95
522161 +	EVT II L Thermal AL - 80x200mm + Adaptor	1.18	2.00
522161 +	EVT II L Thermal AL - 80x220mm + Adaptor	1.07	2.00
522161 +	EVT II L Thermal AL - 80x240mm + Adaptor	0.85	2.00
522161 +	EVT II L Thermal AL - 80x260mm + Adaptor	0.88	1.95
522161 +	EVT II L Thermal AL - 80x280mm + Adaptor	0.81	2.00
522161 +	EVT II L Thermal AL - 80x300mm + Adaptor	0.66	2.01
522161 +	EVT II L Thermal AL - 80x320mm + Adaptor	0.68	1.94

Use code 522161 with relevant EVT II bracket code.



EVT II – 3mm Stainless FPH & SPH, (A2 & A4) for Concrete and SFS Standard L Brackets

Code	Description	Design Resistance (kN)	
		Vertical	Horizontal
300408	EVT II L Bracket A2 - 80 x 40mm	3.03	2.47
300409	EVT II L Bracket A2 - 80 x 60mm	1.81	2.47
300410	EVT II L Bracket A2 - 80 x 80mm	1.28	2.47
300411	EVT II L Bracket A2 - 80 x 100mm	1.00	2.31
300412	EVT II L Bracket A2 - 80 x 120mm	0.82	2.31
300414	EVT II L Bracket A2 - 80 x 140mm	0.69	2.31
300415	EVT II L Bracket A2 - 80 x 160mm	0.59	2.31
300416	EVT II L Bracket A2 - 80 x 180mm	0.52	2.31
300417	EVT II L Bracket A2 - 80 x 200mm	0.47	2.31
300418	EVT II L Bracket A2 - 80 x 220mm	0.42	2.31
300419	EVT II L Bracket A2 - 80 x 240mm	0.39	2.31
300421	EVT II L Bracket A2 - 80 x 260mm	0.35	2.31
300422	EVT II L Bracket A2 - 80 x 280mm	0.33	2.31
300423	EVT II L Bracket A2 - 80 x 300mm	0.31	2.31
300424	EVT II L Bracket A2 - 80 x 320mm	0.28	2.31
			
300427	EVT II L Bracket A2 - 160 x 40mm	14.21	4.83
300428	EVT II L Bracket A2 - 160 x 60mm	8.76	4.83
300429	EVT II L Bracket A2 - 160 x 80mm	6.24	4.83
300430	EVT II L Bracket A2 - 160 x 100mm	4.88	4.83
300431	EVT II L Bracket A2 - 160 x 120mm	3.99	4.83
300433	EVT II L Bracket A2 - 160 x 140mm	3.99	4.83
300434	EVT II L Bracket A2 - 160 x 160mm	2.93	4.78
300435	EVT II L Bracket A2 - 160 x 180mm	2.62	4.78
300436	EVT II L Bracket A2 - 160 x 200mm	2.35	4.78
300437	EVT II L Bracket A2 - 160 x 220mm	2.12	4.78
300438	EVT II L Bracket A2 - 160 x 240mm	1.92	4.78
300440	EVT II L Bracket A2 - 160 x 260mm	1.77	4.78
300441	EVT II L Bracket A2 - 160 x 280mm	1.65	4.78
300442	EVT II L Bracket A2 - 160 x 300mm	1.54	4.78
300443	EVT II L Bracket A2 - 160 x 320mm	1.43	4.78
			
EVT II stainless available in A2 & A4			
130530	EVT II Thermal pad 80 x 42mm		
130531	EVT II Thermal pad 160 x 42mm		

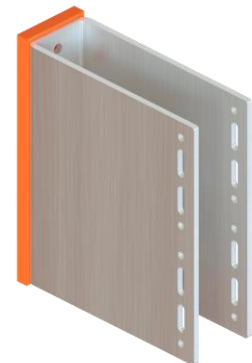
EVT II Soffit Hanger – 2mm & 3mm Aluminium, slots for Concrete

Code	Description	Design Resistance (kN)	
		Vertical	Horizontal
553350	EVT II L Soffit Thermal AL - 80 x 60 x 3/4mm	2.47	n/a
553351	EVT II L Soffit Thermal AL - 160 x 60 x 3/4mm	4.55	n/a
Available without thermal pad			



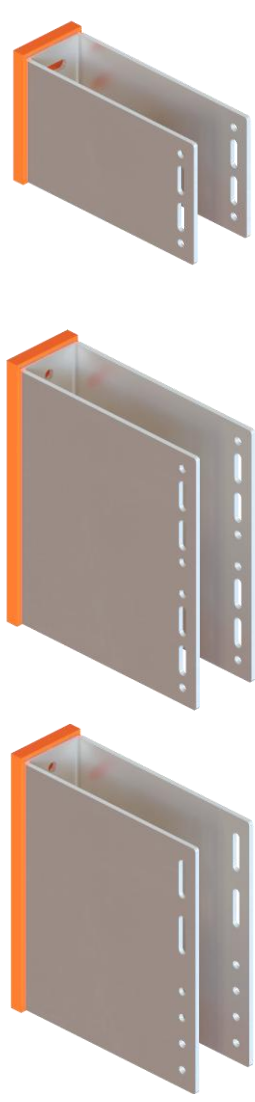
EVT II U Brackets – 4mm Aluminium FPH & SPH & Combi, slots for Concrete and SFS Performance Brackets

Code	Description	Design Resistance (kN)	
		Vertical	Horizontal
300495	EVT II U Bracket AL - 80 x 40mm	4.88	4.35
300496	EVT II U Bracket AL - 80 x 60mm	2.92	4.35
300497	EVT II U Bracket AL - 80 x 80mm	2.07	4.35
300498	EVT II U Bracket AL - 80 x 100mm	1.59	3.57
300499	EVT II U Bracket AL - 80 x 120mm	1.30	3.57
300500	EVT II U Bracket AL - 80 x 140mm	1.10	3.57
300501	EVT II U Bracket AL - 80 x 160mm	0.96	3.57
300502	EVT II U Bracket AL - 80 x 180mm	0.84	3.57
300503	EVT II U Bracket AL - 80 x 200mm	0.73	3.57
300504	EVT II U Bracket AL - 80 x 220mm	0.65	3.57
300505	EVT II U Bracket AL - 80 x 240mm	0.59	3.57
300506	EVT II U Bracket AL - 80 x 260mm	0.54	3.57
300507	EVT II U Bracket AL - 80 x 280mm	0.49	3.57
300508	EVT II U Bracket AL - 80 x 300mm	0.45	3.57
300509	EVT II U Bracket AL - 80 x 320mm	0.42	3.57
300478	EVT II U Bracket AL - 160 x 40mm	21.23	9.08
300479	EVT II U Bracket AL - 160 x 60mm	13.88	9.08
300480	EVT II U Bracket AL - 160 x 80mm	9.93	9.08
300481	EVT II U Bracket AL - 160 x 100mm	7.75	9.08
300482	EVT II U Bracket AL - 160 x 120mm	6.37	9.08
300483	EVT II U Bracket AL - 160 x 140mm	5.42	9.08
300484	EVT II U Bracket AL - 160 x 160mm	4.71	9.08
300485	EVT II U Bracket AL - 160 x 180mm	4.11	7.01
300486	EVT II U Bracket AL - 160 x 200mm	3.62	7.01
300487	EVT II U Bracket AL - 160 x 220mm	3.12	7.01
300488	EVT II U Bracket AL - 160 x 240mm	2.95	7.01
300489	EVT II U Bracket AL - 160 x 260mm	2.70	7.01
300490	EVT II U Bracket AL - 160 x 280mm	2.49	7.01
300491	EVT II U Bracket AL - 160 x 300mm	2.30	7.01
300492	EVT II U Bracket AL - 160 x 320mm	2.29	7.01
300512	EVT II U Bracket Combi AL - 160 x 40mm	21.23	9.08
300513	EVT II U Bracket Combi AL - 160 x 60mm	13.88	9.08
300514	EVT II U Bracket Combi AL - 160 x 80mm	9.93	9.08
300515	EVT II U Bracket Combi AL - 160 x 100mm	7.75	9.08
300516	EVT II U Bracket Combi AL - 160 x 120mm	6.37	9.08
300517	EVT II U Bracket Combi AL - 160 x 140mm	5.42	9.08
300518	EVT II U Bracket Combi AL - 160 x 160mm	4.71	9.08
300519	EVT II U Bracket Combi AL - 160 x 180mm	4.11	7.01
300520	EVT II U Bracket Combi AL - 160 x 200mm	3.62	7.01
300521	EVT II U Bracket Combi AL - 160 x 220mm	3.12	7.01
300522	EVT II U Bracket Combi AL - 160 x 240mm	2.95	7.01
300523	EVT II U Bracket Combi AL - 160 x 260mm	2.70	7.01
300524	EVT II U Bracket Combi AL - 160 x 280mm	2.49	7.01
300525	EVT II U Bracket Combi AL - 160 x 300mm	2.30	7.01
Use with Floor Spanning Vertical Profiles only.			
130530	EVT II Thermal pad 80 x 42mm		
130531	EVT II Thermal pad 160 x 42mm		



EVT U-Brackets – 3mm Stainless Steel (A2 & A4) FPH & SPH, slots for Concrete and Steel

Code	Description	Design Resistance (kN)	
		Vertical	Horizontal
300529	EVT II U Bracket A2 - 80 x 40mm	6.82	4.63
300530	EVT II U Bracket A2 - 80 x 60mm	4.10	4.63
300531	EVT II U Bracket A2 - 80 x 80mm	2.92	4.58
300532	EVT II U Bracket A2 - 80 x 100mm	2.26	4.58
300533	EVT II U Bracket A2 - 80 x 120mm	1.84	4.58
300534	EVT II U Bracket A2 - 80 x 140mm	1.57	4.58
300535	EVT II U Bracket A2 - 80 x 160mm	1.35	4.58
300536	EVT II U Bracket A2 - 80 x 180mm	1.19	4.58
300537	EVT II U Bracket A2 - 80 x 200mm	1.08	4.58
300538	EVT II U Bracket A2 - 80 x 220mm	0.98	4.58
300539	EVT II U Bracket A2 - 80 x 240mm	0.87	4.58
300540	EVT II U Bracket A2 - 80 x 260mm	0.81	4.58
300541	EVT II U Bracket A2 - 80 x 280mm	0.75	4.58
300542	EVT II U Bracket A2 - 80 x 300mm	0.70	4.58
300543	EVT II U Bracket A2 - 80 x 320mm	0.65	4.58
300546	EVT II U Bracket A2 - 160 x 40mm	27.67	9.37
300547	EVT II U Bracket A2 - 160 x 60mm	16.62	9.37
300548	EVT II U Bracket A2 - 160 x 80mm	11.82	9.37
300549	EVT II U Bracket A2 - 160 x 100mm	9.23	9.37
300550	EVT II U Bracket A2 - 160 x 120mm	7.59	9.37
300551	EVT II U Bracket A2 - 160 x 140mm	6.46	9.37
300552	EVT II U Bracket A2 - 160 x 160mm	5.61	9.37
300553	EVT II U Bracket A2 - 160 x 180mm	5.14	9.37
300554	EVT II U Bracket A2 - 160 x 200mm	4.42	9.37
300555	EVT II U Bracket A2 - 160 x 220mm	4.01	9.37
300556	EVT II U Bracket A2 - 160 x 240mm	3.68	9.37
300557	EVT II U Bracket A2 - 160 x 260mm	3.42	9.37
300558	EVT II U Bracket A2 - 160 x 280mm	3.09	9.37
300559	EVT II U Bracket A2 - 160 x 300mm	2.93	9.26
300560	EVT II U Bracket A2 - 160 x 320mm	2.73	9.26
300563	EVT II U Bracket Combi A2 - 160 x 40mm	27.67	9.37
300564	EVT II U Bracket Combi A2 - 160 x 60mm	16.62	9.37
300565	EVT II U Bracket Combi A2 - 160 x 80mm	11.82	9.37
300566	EVT II U Bracket Combi A2 - 160 x 100mm	9.23	9.37
300567	EVT II U Bracket Combi A2 - 160 x 120mm	7.59	9.37
300568	EVT II U Bracket Combi A2 - 160 x 140mm	6.46	9.37
300569	EVT II U Bracket Combi A2 - 160 x 160mm	5.61	9.37
300570	EVT II U Bracket Combi A2 - 160 x 180mm	5.14	9.37
300571	EVT II U Bracket Combi A2 - 160 x 200mm	4.42	9.37
300572	EVT II U Bracket Combi A2 - 160 x 220mm	4.01	9.37
300573	EVT II U Bracket Combi A2 - 160 x 240mm	3.68	9.37
300574	EVT II U Bracket Combi A2 - 160 x 260mm	3.42	9.37
300575	EVT II U Bracket Combi A2 - 160 x 280mm	3.09	9.37
300576	EVT II U Bracket Combi A2 - 160 x 300mm	2.93	9.26



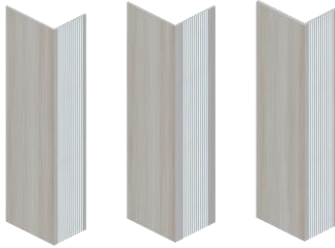
Note to use with Floor Spanning Vertical Profiles only.

EVT II - Thermal Pads EVT and EVT II Brackets

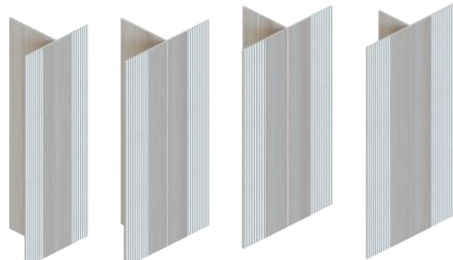
Code	Description
130530	EVT II Thermal pad 80 x 42mm
130531	EVT II Thermal pad 160 x 42mm

System Aluminium Profiles

L Profiles

Code	Description	
553167	L-Profile - 60 x 40 x 2mm (3.0m Length)	
553198	L-Profile - 60 x 50 x 2mm (3.0m Length)	
553358	L-Profile - 60 x 40 x 3mm (3.0m Length)	

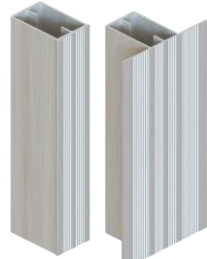
T Profiles

Code	Description	
553169	T-Profile - 80 x 60 x 2mm (3.0m Length)	
553171	T-Profile - 110 x 60 x 2mm (3.0m Length)	
553195	T-Profile - 120 x 60 x 2mm (3.0m Length)	
519055	T-Profile - 110 x 40 x 2mm (3.0m Length)	
519058	T-Profile - 80 x 60 x 3mm (3.0m Length)	

Structural Tophat / C-Channel Profiles

Code	Description	
558327	Hat Profile FPH - 234 x 20 x 2/3mm (3.0m Length)	
558328	Hat Profile SPH - 126 x 20 x 2/3mm (3.0m Length)	
553902	C-Profile FPH - 176 x 27 x 2/3mm (3.0m Length)	
553703	C-Profile SPH - 100 x 27 x 2/3mm (3.0m Length)	
573702	C-Profile FPH - 180 x 30 x 2/3mm (3.0m Length) – A2 Stainless	
573703	C-Profile SPH - 104 x 30 x 2/3mm (3.0m Length) – A2 Stainless	
593702	C-Profile FPH - 180 x 30 x 2/3mm (3.0m Length) – A4 Stainless	
593703	C-Profile SPH - 104 x 30 x 2/3mm (3.0m Length) – A4 Stainless	

Floor Spanning Vertical Profiles

Code	Description	
554310	Floorspan Profile – 40/38 x 60 x 2/3mm (3.0m Length)	
554312	Floorspan T Profile – 110/38 x 60 x 2/3mm (3.0m Length)	
554314	Floorspan Profile – 40/38 x 80 x 3mm (3.0m Length)	
554319	Floorspan T Profile – 110/38 x 80 x 2/3mm (3.0m Length)	
554316	Floorspan Profile – 40/38 x 100 x 3mm (3.0m Length)	
554321	Floorspan T Profile – 110/38 x 100 x 2/3mm (3.0m Length)	

Note to use with EVT II U brackets only.

Tophats / Z Profiles for facade panels

Code	Description	
558621	Hat Profile - 94 x 25 x 2mm (3.0m Length)	
553202	Z-Profile - 45 x 25 x 30 x 2mm (3.0m Length)	

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SF1 & SF2 Secret fix system for undercut anchor systems

Horizontal SF rail for all SF1 and SF2 Panel Clasps (Hanger Brackets)

Code	Description
182369	SF-Profile - 25 x 70 x 2/3mm (3.0m Length)



Note all profiles listed in 3M, but available in other lengths. Profiles powder coated and anodised where required

SF1 Panel Clasps for light weight façade panels, using undercut anchors

Panel Clasps for HEX undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182370	SF1 25x2 40/HEX/FP
182371	SF1 25x2 50/HEX/FP
182372	SF1 25x2 80/HEX/FP
182373	SF1 25x2 40/HEX/SP
182374	SF1 25x2 50/HEX/SP
182375	SF1 25x2 80/HEX/SP



Panel Clasps for SQUARE undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182382	SF1 25x2 40/SQUARE/FP
182383	SF1 25x2 50/SQUARE/FP
182384	SF1 25x2 80/SQUARE/FP
182385	SF1 25x2 40/SQUARE/SP
182386	SF1 25x2 50/SQUARE/SP
182387	SF1 25x2 80/SQUARE/SP



Panel Clasps for M6 STUD undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182394	SF1 25x2 40/M6/FP
182395	SF1 25x2 50/M6/FP
182396	SF1 25x2 80/M6/FP
182397	SF1 25x2 40/M6/SP
182398	SF1 25x2 50/M6/SP
182399	SF1 25x2 80/M6/SP



Panel Clasps for M8 STUD undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182406	SF1 25x2 40/M8/FP
182407	SF1 25x2 50/M8/FP
182408	SF1 25x2 80/M8/FP
182409	SF1 25x2 40/M8/SP
182410	SF1 25x2 50/M8/SP
182411	SF1 25x2 80/M8/SP



Panel Clasps for 2xM6 stud undercut anchors, width of clasp 40mm, 50mm, & 80mm

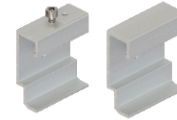
Code	Description
182421	SF1 25x2 40/2xM6/FP
182422	SF1 25x2 50/2xM6/FP
182423	SF1 25x2 80/2xM6/FP
182425	SF1 25x2 40/2xM6/SP
182426	SF1 25x2 50/2xM6/SP
182427	SF1 25x2 80/2xM6/SP



SF2 Panel Clasps for heavy weight façade panels, using undercut anchors

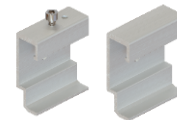
Panel Clasps for HEX undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182376	SF2 25x3 40/HEX/FP
182377	SF2 25x3 50/HEX/FP
182378	SF2 25x3 80/HEX/FP
182379	SF2 25x3 40/HEX/SP
182380	SF2 25x3 50/HEX/SP
182381	SF2 25x3 80/HEX/SP



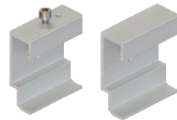
Panel Clasps for SQUARE undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182388	SF2 25x3 40/SQUARE/FP
182389	SF2 25x3 50/SQUARE/FP
182390	SF2 25x3 80/SQUARE/FP
182391	SF2 25x3 40/SQUARE/SP
182392	SF2 25x3 50/SQUARE/SP
182393	SF2 25x3 80/SQUARE/SP



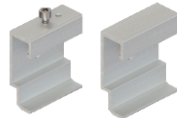
Panel Clasps for M6 STUD undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182400	SF2 25x3 40/M6/FP
182401	SF2 25x3 50/M6/FP
182402	SF2 25x3 80/M6/FP
182403	SF2 25x3 40/M6/SP
182404	SF2 25x3 50/M6/SP
182405	SF2 25x3 80/M6/SP



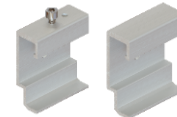
Panel Clasps for M8 STUD undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182412	SF2 25x3 40/M8/FP
182413	SF2 25x3 50/M8/FP
182414	SF2 25x3 80/M8/FP
182416	SF2 25x3 40/M8/SP
182417	SF2 25x3 50/M8/SP
182418	SF2 25x3 80/M8/SP



Panel Clasps for 2xM6 STUD undercut anchors, width of clasp 40mm, 50mm, & 80mm

Code	Description
182429	SF2 25x3 40/2xM6/FP
182430	SF2 25x3 50/2xM6/FP
182431	SF2 25x3 80/2xM6/FP
182433	SF2 25x3 40/2xM6/SP
182434	SF2 25x3 50/2xM6/SP
182435	SF2 25x3 80/2xM6/SP



Horizontal rail system Kerf, for stone panels 30-80mm

Code	Description
553713	Kerf Upper / Lower Profile (3.0m Lengths)
553711	Kerf Intermediate Profile (3.0m Lengths)



All profiles listed in 3M, but available in other lengths. Profiles powder coated and anodised where required
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Profiles for aluminium Cassette panels

Code	Description	
606381	FC+ Cassette Profile (3.0m Length)	
556243	SFS Cassette Profile (3.0m Length)	
556233	SFS2 Cassette Profile (3.0m Length)	

All profiles listed in 3M, but available in other lengths. Profiles powder coated and anodised where required

Profiles for brick slips

For bricks 62-65mm in height			
Code	Description		
167393	Briklok MJ Profile Anodised (3.0m Length)		
167379	Briklok Upper Profile Anodised (3.0m Length)		
167380	Briklok Mid Profile Anodised (3.0m Length)		
167391	Briklok Soldier Spacer (3.0m Length)		
167380	Briklok Mid Profile Anodised (3.0m Length)		
for bricks 64-67mm in height use below profiles in upper and mid position			
Code	Description		
167421	Briklok XL Upper Profile Anodised (3.0m Length)		
167420	Briklok XL Mid Profile Anodised (3.0m Length)		

Technical Information RJ Profiles

Description	Face W (mm)	Leg D (mm)	Face T (mm)	Leg T (mm)	CSA [mm ²]	I _{min}	Y _{min}	α
L-Profile - 60 x 40 x 2mm	60	40	2.00	2.00	196	26802.8	31.5	0.58
L-Profile - 40 x 60 x 2mm	40	60	2.00	2.00	196	73480.5	40.8	0.58
L-Profile - 60 x 40 x 3mm	60	40	3.00	3.00	291	40764.4	30.8	0.71
L-Profile - 40 x 60 x 3mm	40	60	3.00	3.00	291	108213.5	41.0	0.71
L-Profile - 60 x 50 x 2mm	60	50	2.00	2.00	216	50271.0	38.2	0.65
L-Profile - 50 x 60 x 2mm	50	60	2.00	2.00	216	79215.9	42.5	0.65
T-Profile - 80 x 60 x 2mm	80	60	2.00	2.00	276	91967.0	46.0	0.41
T-Profile - 80 x 60 x 3mm	80	60	3.00	3.00	411	134726.8	46.2	0.54
T-Profile - 110 x 40 x 2mm	110	40	2.00	2.00	296	31500.3	33.7	0.52
T-Profile - 110 x 60 x 2mm	110	60	2.00	2.00	336	99897.8	48.3	0.39
T-Profile - 120 x 60 x 2mm	120	60	2.00	2.00	356	101941.4	48.9	0.38
Floorspan Profile – 40/38x60x2/3mm	40	60	3.00	2.00	493	260152.0	30.0	1.00
Floorspan T-Profile – 110/38x60x2/3mm	110	60	3.00	2.00	608	340400.0	35.7	0.95
Hat Profile FPH - 234 x 20 x 2/3mm	160	20	3.0	2.0	697.6	39049.3	13.7	0.58
Hat Profile SPH - 126 x 20 x 2/3mm	90	20	3.0	2.0	413.3	21819.3	13.7	0.96
Hat Profile - 94 x 25 x 2mm	30	25	2.0	2.0	273.5	25787.3	15.4	1.00
Z-Profile - 45 x 25 x 30 x 2mm	45	25	2.0	2.0	180.4	19199.9	14.3	0.41
C-Profile FPH - 176 x 30 x 2/3mm	176	3	2.0	2.0	553.4	20523.0	22.6	0.91
C-Profile SPH - 100 x 30 x 2/3mm	100	3	2.0	2.0	375.1	18885.0	21.4	0.96

Suitable fixings - Fixing to steel and aluminium

For fixing vertical profiles to wall brackets. A4 for all corrosive environments

Code	Description
7380387703	JT9-4-4.8 x 19 A4 (Orange)



For fixing wall brackets to SFS 1.2 - 3.0mm. A2 for standard UK environmental conditions

Code	Description
7380317301	JT3-3-6.3x50 F13 A2



For fixing wall brackets to SFS 1.2 - 3.0mm. A4 version for high corrosive environmental conditions

Code	Description
7380777301	JT6-3-6.3x50 F13 A4



For fixing wall brackets to structural aluminium C Profiles and Tophats.

For fixing structural aluminium C Profiles / Tophats to SFS 1.2 - 3.0mm. A2 for standard UK environmental conditions

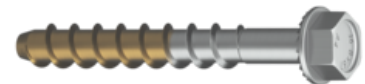
Code	Description
7380216301	JT3-3-6.3 x 38 F13 A2



Suitable fixings - Fixing to concrete and masonry (block and brick)

For fixing brackets to concrete & block - cracked and non-cracked concrete. ETA Option 1

Code	Description
500719	JC6 KB 8 x 80/15 SW13



For fixing brackets to concrete - cracked and non-cracked concrete. ETA Option 1

Code	Description
9650005323	BA-E Plus-10/10/- Through Bolt A4



For fixing brackets to concrete & solid block. ETA approved

Code	Description
8581070650	SDF-KB 10V x 70-E



For fixing brackets to blockwork, brick, concrete & perforated brickwork. ETA

Code	Description
8513080620	SDF-KB 10H x 80-E



Note the above are frequently specified methods to fix to standard building substrates, please always refer to the RJ Facades calculation for confirmation.

Section 5 – Factory Production Control

The RJ Facade Support Systems are manufactured in UK at UL audited sites. All associated fixings and other materials are externally sourced from RJ Façade Systems approved supplier chain.

An initial factory production control audit has been carried out at the certified products manufacturing sites to assess the effectiveness of the following:

- Contract review – enquiries, quotations and orders
- Production planning and organisation
- Control of purchasing, including supplier approvals
- Control and storage of incoming materials and components
- Control of documentation related to the production, quality control/inspection, packaging and despatch
- Identification and traceability of certified products
- Ongoing production inspection, testing and records thereof
- Maintenance of production equipment
- Training Records of personnel
- Internal audit reports including non-conformances and corrective actions
- Customer complaint procedures
- Installation guide and processes
- Non-conforming products
- Labelling of products

UL witnessed the production and quality processes at each manufacturing site and storage location in the UK. It can be confirmed that the procedures and controls were carried out as specified and documented, and were in line with the UL Mark certification scheme requirements. The completed products are dispatched to RJ Facade Systems in Bathgate where they are stored prior to final delivery to the clients. All sites related to this certificate will be subjected to further onsite annual audits to ensure ongoing compliance and effectiveness of their quality control systems.

Section 6 – Design documentation review of the certified products

A review of the certified products documentation was conducted in order to help demonstrate compliance with the appropriate sections of the UL Mark Scheme and applicable NHBC 2019 Standard requirements. At least the following requirements were evaluated in the review and were found to show evidence of compliance.

6.1 Loads and movements

The range of cladding support systems, allow movement without causing damage or deformation, Loads are all calculated in accordance with BS EN 1991-1-1 and BS EN 1991-1-4 using the wind load calculator to Eurocodes. Recommended fastening spaces are based on calculations in accordance to Eurocode EN 1991-1-4.

6.2 Support and Fixings

The RJ Facade Support Systems have demonstrated that they can be securely fixed with suitably durable fixings to ensure adequate in-service performance. A series of load testing on brackets was witnessed by UL this demonstrated that the fixings could accommodate the specified design wind loads. Pull out testing is also carried out onsite by RJ Facades on request of their clients. European Technical Approvals are available for the range of Ejoyt fixings used in the support systems.

6.3 Durability

The product provides satisfactory durability with a high durability rating from Eurocode EN1999.1.1.2007 (Design of aluminium structures). The system has been designed to avoid the need for disproportionate work when repairing or replacing individual cladding components. Corrosion resistant fixings are used, and bimetallic corrosion has been considered.

6.5 Installation

Installation is to be supplied by others, detailed site-specific risk assessments and method statements are produced by site contractors. RJ Facade Systems supply a summary calculation report for all projects. Onsite product training is made available on request.

- 6.7 Electrical continuity and earth bonding
Method statements for the installation of the RJ Facade Support Systems cladding system specify that the electrical continuity and earth bonding is to be managed by separate contactors onsite during installation.
- 6.8 Behaviour in relation to fire
- The components of the RJ Facade system are non combustible and, therefore, are classified as Class A1 in accordance with national Building Regulations and not subject to any restriction on building height or any other restrictions relating to systems with a lower fire rating.
- 6.8.1 RJ Facades EVT II aluminium and stainless steel brackets and support structure, stainless steel fixings are Class A1 'No contribution to fire' provided for in decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC on construction products.
- 6.8.2 RJ Facades EVT II brackets feature polypropylene copolymer insulation pads with a flame-retardant additive. The pads are small, in isolated locations and are a necessary thermal break, and are therefore can be considered to be an exempt item as per the ADP Regulation 7(3)
- The RJ Facades System has been tested to TDG-019 in conjunction with cavity barrier system FSi Silverliner OSCB1 Horizontal Ventilated Cavity Barriers rated EI120, achieved a combined rating of EI120 unaffected the performance of the barrier.
- Fire approval is outside the scope of this Certificate.
- 6.9 Drainage and Ventilation
The Cladding Support System has been designed so that drainage and ventilation is considered and managed effectively. RJ Facades can make details available on request.
- 6.10 Handling and storage
An onsite assessment of the manufacturer confirmed that materials, products and systems are protected and stored in a satisfactory manner to prevent damage, distortion and uneven weathering. The UK warehouse also demonstrated that all products are kept in easily identifiable locations and are stored in a way to prevent any damage or possible degradation.

Section 7 – Comments on the certified products contribution to The Building Regulations

A top level review of the key related requirements from The Building Regulations 2010 (England and Wales) was conducted based on the information declared by RJ Facade Systems and the data provided for the documentation review. The following comments have been made on whether the certified product can contribute to the Building Regulations requirements.

The Building Regulations 2010 (England and Wales)

Requirement	Comment/s
A.1 Loading	The calculations and test data provided give confidence that this regulation is contributed towards by the products tested and certified.
B4 (1) External fire spread	The key components of the cladding system comprise of non-combustible aluminium and / or non-combustible stainless. This gives confidence that then certified product adheres to this regulation. Fire approval is outside the scope of this Certificate.
7. Materials and workmanship	The evidence of method statements, internal documentation and staff training provided gives confidence that this regulation is contributed towards by the product certified.

Section 8 – Product installation

General

This product must be installed in accordance with RJ Façade Systems recommendations and the any details specified in this certificate. RJ Facade Systems have specified that product Installers can be trained and approved by them directly on request. Any trained and approved installers will be issued with an appropriate in-house certificates/training evidence.

Product delivery

The products are delivered to the UK RJ warehouse on banded on wooden pallets with suitable packaging. Each delivery is labelled with details including; order number, location, product name, type, size, quantity and weight.

Site survey

RJ Facade Systems have specified that prior to installation of the Cladding Support System; a pre-installation survey of the property has to be carried out by the client or a suitable engineer to determine whether the site is suitable for product installation, and if any repairs are required to the building wall.

Section 9 – Supporting test documentation

General

All brackets and fixing configurations have FEA modelling carried out to establish max wind or pull-out loads. Actual Load testing of the cladding support systems brackets and fixings was carried out by RJ Fixings at their UK location and was witnessed by UL. The products were tested as detailed below.

Testing witness date

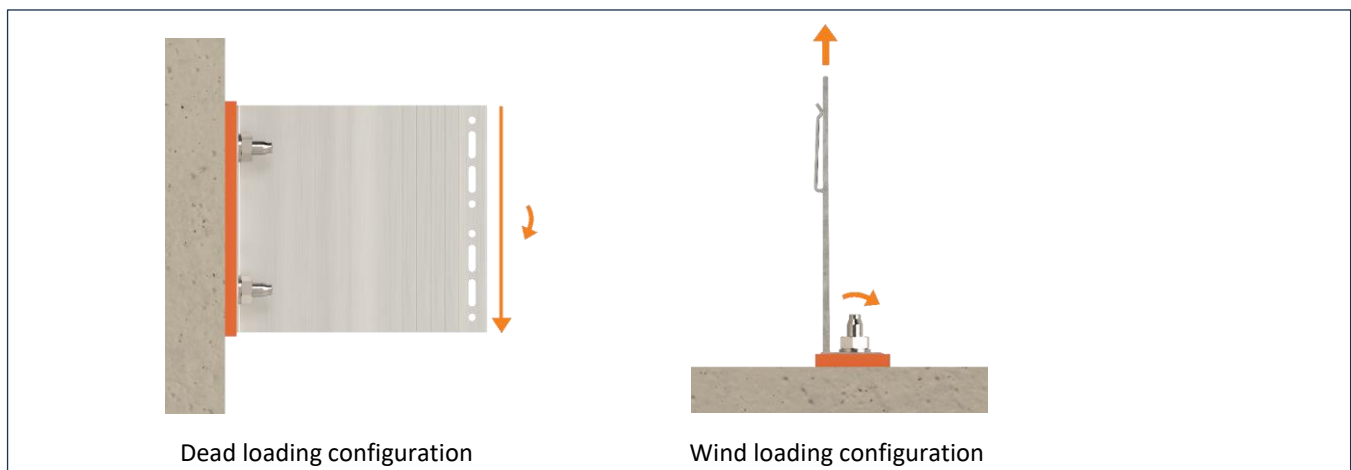
The testing was witnessed on the 5th April 2023 and was completed by the 30th April 2023.

Test witness laboratory

UL (UK) International Ltd, Telford, Shropshire TF7 4QH

Test rig and equipment

In order to validate the FEA models, the brackets and hangers were subjected to physical load testing.



These tests were used to simulate both the wind and dead loads. For each bracket range and variety, the shortest, longest and middle length brackets were tested both in wind load and dead load configuration. For each individual bracket, 3 wind load and 3 dead load tests were carried out. Over the entire range, this led to over 100 tests being carried out.

The method for each individual test was kept the same, the bracket/hanger was loaded to at least the value calculated from the FEA software. Calibrated dial test indicators were used in order to measure the deflection as a screw jack applied a gradually increasing load. The dial indicator was set to zero when the bracket was in its original, unloaded state. The maximum load was held for one minute, and then released back to zero by releasing the screw jack. The dial test indicator was then observed in order to determine whether the bracket had returned to its original unloaded position.

The FEA model created is an accurate representation of what the brackets experience in service, and the behaviour of the bracket as modelled in the software closely resembled the reality during tests.

The physical testing supports the FEA model was well calibrated, and the results are acceptable. Therefore, the results calculated from the FEA software can be taken as the design loads for each range.

Section 10 – Certification conditions

This UL Mark Certificate:

1. Covers the product/system that is named and described on the front page only.
2. Should be read in conjunction with the UL Mark – Performance of Curtain Walling and Rainscreen Cladding certification scheme document.
3. Is granted to the company listed front page only.
4. Is valid within the UK only.
5. Will remain valid for the period listed on the front page provided that the product and the manufacturer comply with the UL Mark requirements.

Please check the validity and issue level of this certificate with UL (UK) International, or check the list of certified products online via www.UL.com. UL is not responsible for any mistakes, complaints, legal issues or liability regarding the incorrect manufacture or installation of any UL Mark certified products. This is not fire certification, evidence of fire performance should be obtained directly from the company certified. For more details the UL Mark certification terms and conditions and the UL Mark Scheme document should be read in conjunction with this certificate.