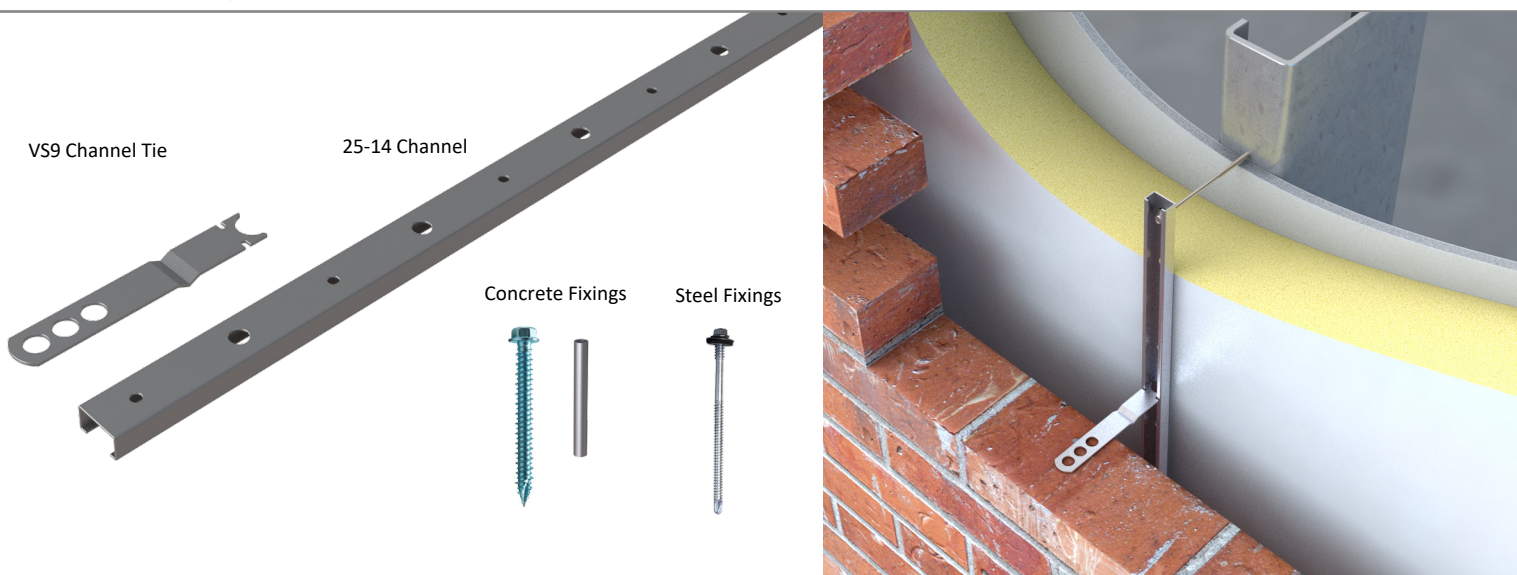


Channel Systems

The Vista RCS System effectively ties an outer masonry leaf to a light steel, concrete or timber frame through the insulation. It allows vertical movement at the same time as offering lateral restraint. The system comprises stainless steel channels, wall ties, fixings and compression sleeves (for use when fixing to concrete, timber and large insulation thicknesses). The system has been independently tested by Lucideon and ZUS (European testing house).



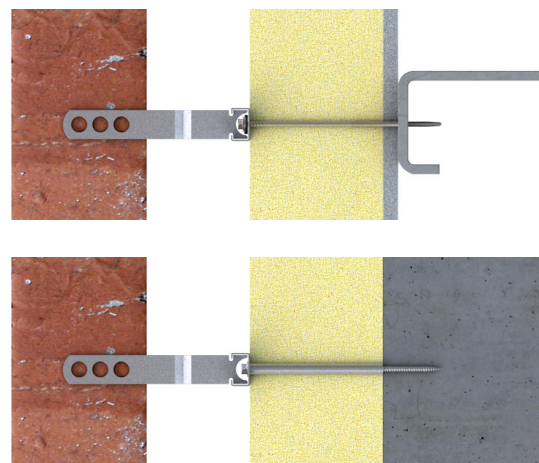
System

RCS 25-14 Restraint Channel System

When attaching to steel, self-drill/self-tapping screws fix through the channel, insulation and CP board into the steel frame. The screws have an under-head high thread which offers maximum support to the channel, but prevents compression of the insulation material. For large insulation thicknesses and flexible insulation, compression sleeves may be required, please contact Vista Technical team for details.

In the case of fixing to concrete, screws run through the channel and insulation inside a compression sleeve, and into pre-drilled pilot holes in the concrete. Compression sleeves ensure the insulation is not deformed.

The channel sits in the cavity abutting the insulation layer. VS9 ties twist into the channel to tie across the cavity into the masonry bed joint. The ties can be positioned at any point along the length of the channel.



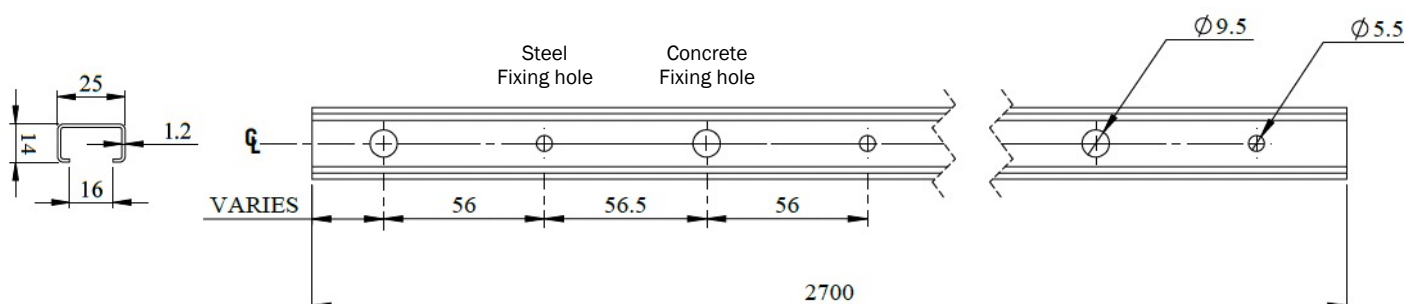
Performance (Based on horizontal spacings of 600mm between channels. Basic wind speed not exceeding 27m/s)

Required Wall Tie type to PD6697:2010	Fixing Centres (mm)	Tie Centres (mm)
Type 1	225	300
Type 2	337.5	450
Type 3	337.5	450
Type 4	450	450

Components

SFC 25-14 Restraint Channel

The Vista 25/14 restraint channel is available in lengths of 2700mm. It features alternate 5.5mm and 9.5mm diameter pre-punched holes, at 112.5mm centres to ensure a fixing position is always located near the end of each channel length. The smaller 5.5mm holes are used when fixing to steel with Vista self-tapping screws; the larger diameter holes are for fixing to concrete with self-tapping, fully-threaded concrete fasteners. A 16mm opening in the channel allows the use of 16mm washers with the fixing screws. The smaller holes can also be used when attaching to a timber frame - please contact Vista technical support when using this application. NB: if the wrong combination of screws and holes are used during installation, the system's performance will be compromised.



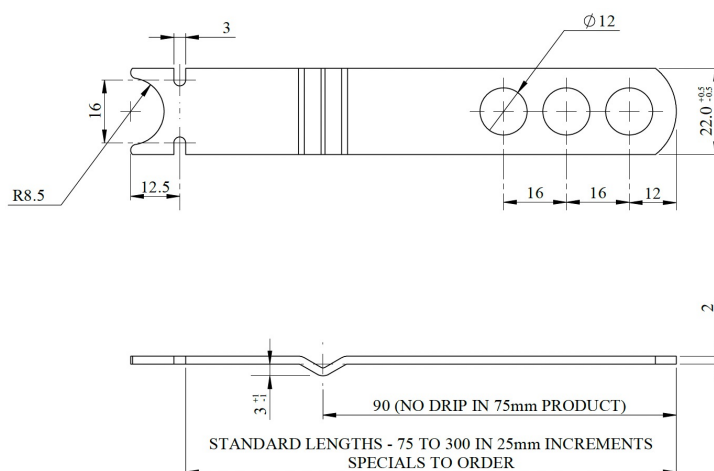
VS9 - Steel Channel Tie

The VS9 head has been specifically designed for use with 25-14 channel systems. The tie incorporates a radiused notched head profile which ensures the tie won't clash with the screw head, allowing the tie to be positioned anywhere along the length of the channel. Cavities up to 250mm can be accommodated using ties with a projection from 75-300mm. The ties are manufactured from grade 304 stainless steel and are non-combustible (as defined in the national Building Regulations). They also offer excellent corrosion resistance and a service life of not less than 60 years.

Code	Projection (mm)	Cavity (mm)	Embedment (mm)
VS9-075-STST	75	25	65
VS9-100-STST	100	50	65
VS9-125-STST	125	75	65
VS9-150-STST	150	100	65
VS9-175-STST	175	125	65
VS9-200-STST	200	150	65
VS9-225-STST	225	175	65
VS9-250-STST	250	200	65
VS9-275-STST	275	225	65
VS9-300-STST	300	250	65

(Whilst the British Standards suggest a minimum embedment of 50mm, in order to allow for site variations and reasonable working tolerance, Vista Engineering would suggest a minimum design embedment of 65mm.)

Longer ties available as specials.



Components

Self-Tapping Fixings for steel frame

Vista's range of self-drill, double-threaded screws are specifically designed for fixing the restraint channel to steel work, accurately and easily. Screw lengths range from 80mm to 185mm and to suit a combined insulation and CP board thickness of up to 165mm as standard. The double thread allows the channel to be tightly secured without a compression sleeve, thus making the process quick and efficient. A 16mm washer allows the fixing to easily fit through the 16mm channel opening. The fasteners are bi-metal to be non-combustible (as defined in the national Building Regulations) and deliver excellent corrosion resistance. The below table shows fixings for light gauge steel substrates (1.2mm to 3.5mm), for thicker gauge substrates (4mm to 12.5mm) contact the office. NOTE: For large insulation thicknesses and flexible insulation, compression sleeves are required.

Code	Length (mm)	Insulation (mm)	Washer (mm)
BMTSBWHT5.5-80-3	80	25-60	16
BMTSBWHT5.5-105-3	105	50-85	16
BMTSBWHT5.5-135-3	135	60-115	16
BMTSBWHT5.5-150-3	150	75-130	16
BMTSBWHT16-5.5-185-3	185	110-165	16



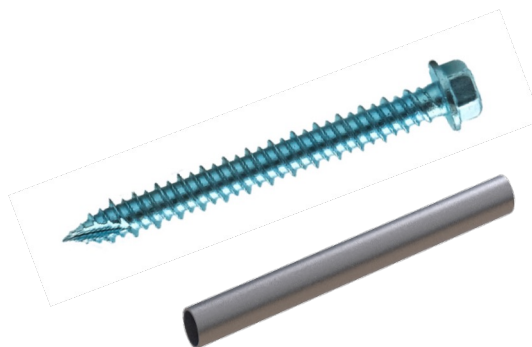
(Further sizes available on request. For larger insulation of up to 210mm we offer carbon coated steel screws only.)

Fixings and compression sleeve for concrete

These self-tapping, fully-threaded screws are for use when fixing to concrete. Lengths range from 70mm to 200mm to suit insulation thickness of up to 165mm. The fasteners must be used in conjunction with a compression sleeve. With an 11mm diameter hex head, the screws easily fit through the 16mm channel opening. These bi-metal fasteners feature a hardened carbon steel drill point paired with a Euro A4 stainless steel shank and head for strength and corrosion resistance. The aggressive threadform ensures secure fixing, while the non-expansion design allows installation close to substrate edges.

We offer compression sleeves in a variety of lengths, to suit various insulation thicknesses. They prevent the insulation from being compressed whilst the fasteners are being tightened. Our 304 grade SS compression sleeves mean that the strength, stability and uniformity of the channel tie system are assured, and no damage or distortion is caused to insulation during fitting or in normal service loadings.

Code	Length (mm)	Min Embed	Max Embed	Insulation (mm)
A4HH6.3-70-GP	70	25	45	25-40
A4HH6.3-100-GP	100	25	45	50-70
A4HH6.3-125-GP	125	25	45	75-100
A4HH6.3-140-GP	140	25	45	80-105
A4HH6.3-160-GP	160	25	45	95-125
A4HH6.3-180-GP	180	25	45	120-145
A4HH6.3-200-GP	200	25	45	140-165



(Further sizes available on request)

Installation

Fixing to Steel

1. Channel placed against insulation, in line with the steel.
2. Fixings screwed directly through the small holes in the channel, insulation and cp board into the steel.
3. Tie placed into the channel and rotated through 90 degrees to lock into place then lowered to embed into the mortar.

NB Installing through large holes in the channel is not good practice and will invalidate any system performance.

Fixing to concrete

1. Channel offered up to the insulation, hole locations marked.
2. Holes drilled through insulation.
3. Steel compression sleeves inserted.
4. Pilot holes drilled in concrete.
5. Channel abutted to the insulation, fixed through the large holes in the channel, insulation/sleeve and into the pre-drilled pilot holes ensuring a minimum embedment of 35mm.
6. Fastener tightened up to the compression sleeve without deforming the insulation.
7. Tie placed into the channel and rotated through 90 degrees to lock into place then lowered to embed into the mortar.

