

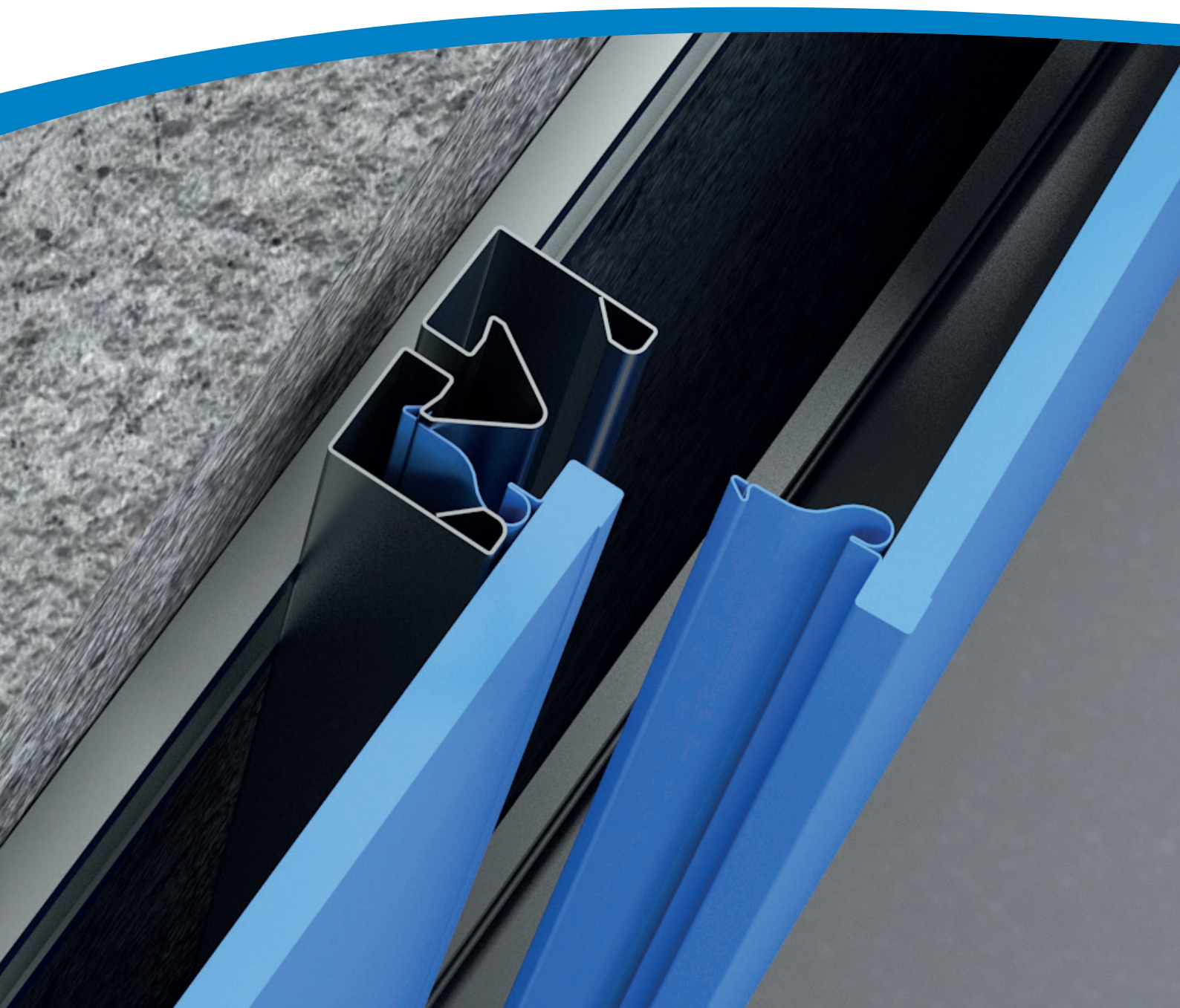
Building Systems UK

A Tata Steel enterprise



Trisofix[®]

Universal mounting system

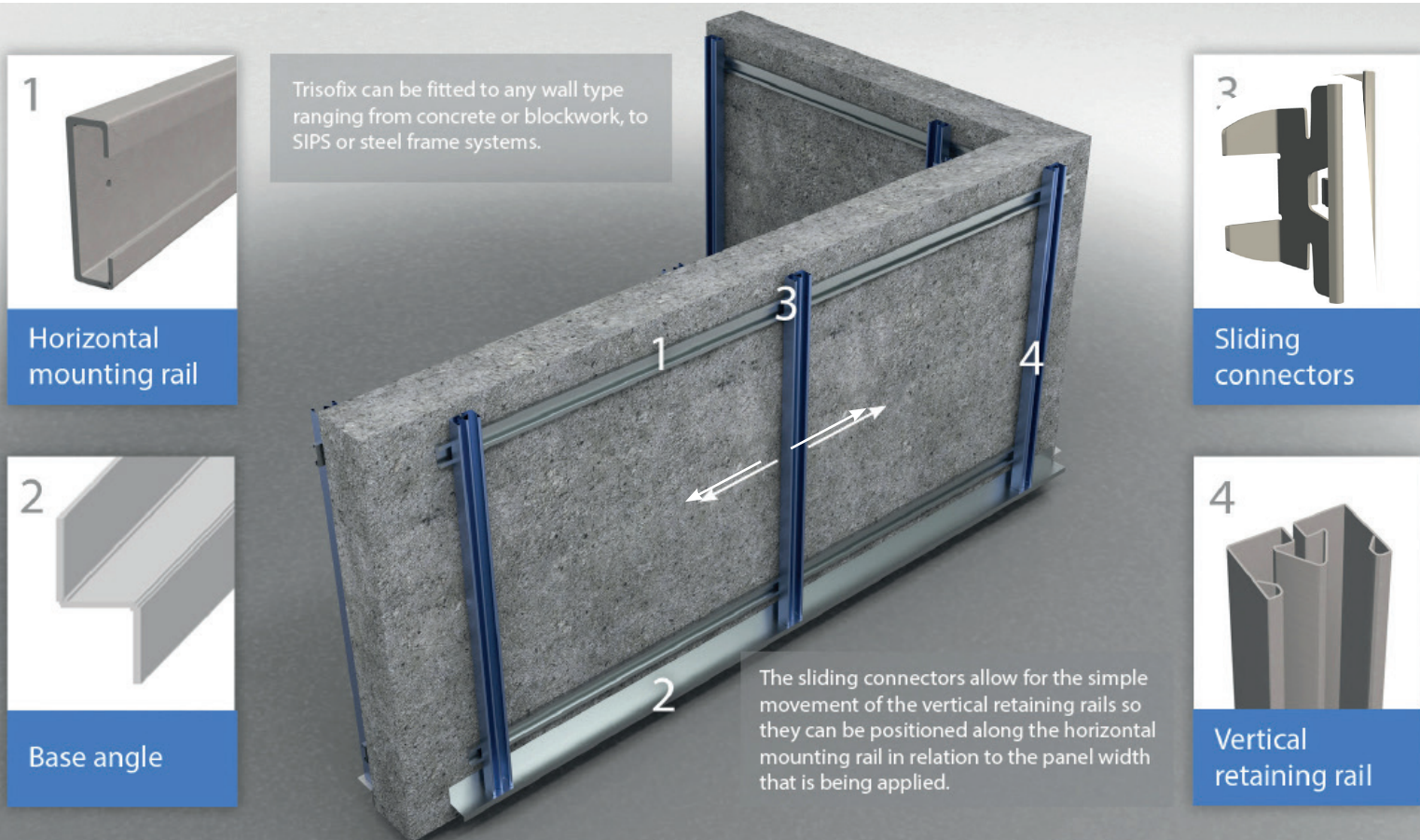


Universal mounting system

Developed for construction in partnership with Reform Systems Ltd, Trisofix® uses their patented universal mounting system to create a high performance, demountable & reusable secret fix solution.

- Combined with pre-finished panels and products it creates a true DfMA solution that unlocks both off-site and on-site productivity. Trisofix® enables lower carbon, cost and time certain project delivery.
- Made using high quality coated steel components the Trisofix® mounting system fixes back to any structural wall type and can be used throughout a building, both for façades and internal fit out.
- Typically Trisofix's Fast Fit clip is factory fitted to prefinished panels but can also be fitted on site offering hybrid functionality and flexibility for installers.
- Trisofix creates a 55mm cavity behind prefinished panels, which when combined with the individual panel demounting, provides easy access to any services behind, simplifying and speeding up M&E installation.
- The robust steel clip can be continually reinstalled without compromising strength or integrity, and allows panels and products to be removed, replaced, relocated and reused.
- While Trisofix® is fast to fit, the universal mounting system combines its usability with exceptional strength and durability credentials.

Component Guide



Reduced trades



Improved safety



Faster
installation



Reduced waste



Circular
economy

*When compared to a traditional pattressed, plasterboard and painted wall

Base Angle

Fixed back to the structural wall, the base angle creates a level support for the retainers and wall panels combined with being an interface for skirting or vinyl flooring.

Specification	2.0mm S280 G275
Dimensions	52 x 62 x 85mm Z angle
Weight	3.12 kg / lm
Standard Lengths	1500 & 3000mm
Downward bending load resistance	2.89 kN/m load



Horizontal Mounting Rail

Fixed back to the structural wall, the mounting rails facilitates flexibility of panel location and speed of installation along with creating a 55mm depth for the service cavity / ventilated rainscreen.

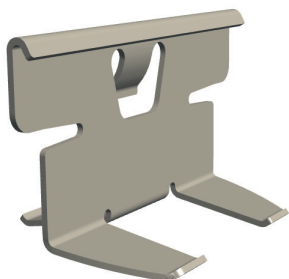
Specification	1.6 mm S280 G275
Dimensions	55 x 21 x 10mm Lipped C
Weight	1.21 kg / lm
Standard Lengths	1500 & 3000mm
Fixing spacing	Fixed up to 600mm span



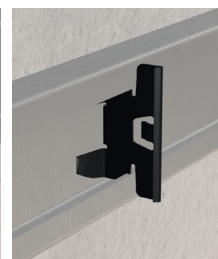
Sliding Connector

Installed via a twist fix into the mounting rail, the connector enables tool free installation of the vertical retainers and slides side to side offering flexibility of positioning.

Specification	0.7mm Heat Treated steel with protective e-coating
Dimensions	62 x 35mm
Weight	37g
Factored serviceability pull-out resistance*	1.82kN per connector



Below illustrates twist fit and sliding mechanism

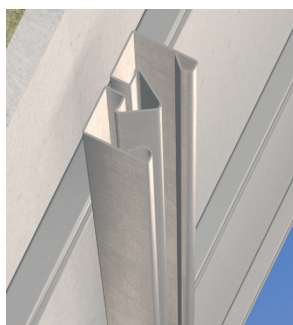


* Factored partial material safety factor = 2.0

Vertical Retainer

A quick, tool free push fit into the sliding connector and mounting rail to provide full length support and clamping for pre-finished panels, louvres and window shrouds.

Specification	1.0mm S250 GA275
Dimensions	53 x 43mm roll formed rail
Weight	1.735 kg / lm



Factored serviceability pull-out resistance
1.82kN per connector

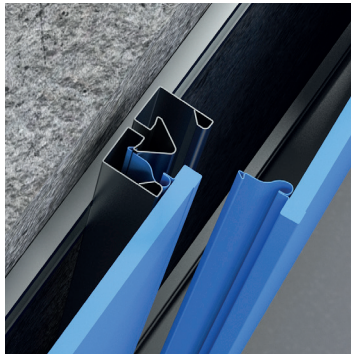
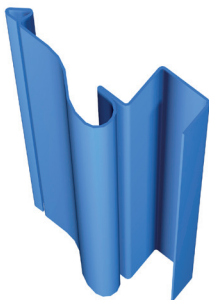
Above illustrates sliding connector situated within vertical rail

Trisofix® panel clip

Designed to be factory or site fitted to panels, the Trisofix® roll formed steel clip allows panels to push fitted into the vertical retainer, automatically settling to the desired panel centres without the need to precisely measure and locate each fix.

Specification	0.50mm S250 Colorcoat®
Dimensions	17 x 43mm roll formed steel
Weight	0.385 kg / 1m
Pull out resistance	1.37kN per 1m

* Factored partial material safety factor = 2.0



Note*: Once the clip hooks over the retainer’s arrowhead its roll formed steel profile provides exceptional strength and safety of fix for panels and products such as louvres or window shrouds. All structural pull-out testing of the Trisofix® universal mounting system has been carried out in accordance with BS 5427:2016 + A1:2017.

1.37kN/m factored pull out resistance

The clip design allows for elastic deformation under extreme loads, with initial failure occurring when the arms become permanently deformed rather than the hook disengaging from the retaining rail.

Worked example

Panel clip capacity 1.37kN/m based on working load with material factor of 2.0

Calculations		Panel 1	Panel 2	
Width	m	1.2	0.6	
Height	m	3.0	3.0	
Area	m²	3.6	1.8	
Clip length	m	6.0	6.0	
Unfactored	Max load	kN	8.22	8.22
	Max load/m²	kN/m²	2.28	4.57
Factored*	Max load	kN	5.48	5.48
	Max load/m²	kN/m²	1.52	3.05

Note* with 1.5 wind load factor applied

Trisofix® detailing:

The side on views in Fig 1 and 2 show how the base angle supports the vertical retaining rails and panels, along with providing an interface for skirting and vinyl floors. Fig 3 shows a top down view detailing the cavity depth available for mechanical and electrical services to be threaded in between the main wall and interior finish.

Fig 1. Base angle with wood skirting board

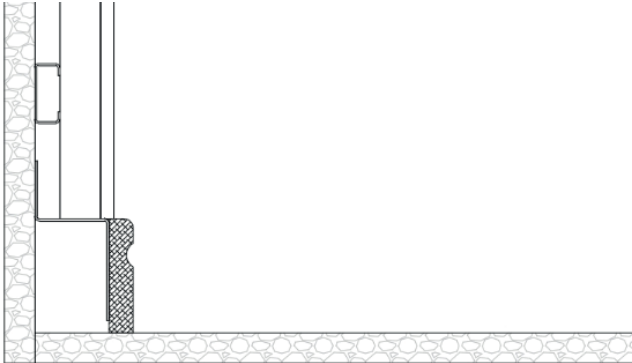


Fig 2. Base angle with coving PVC flooring

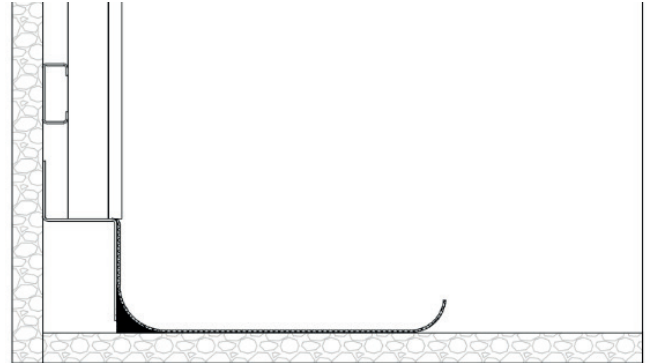
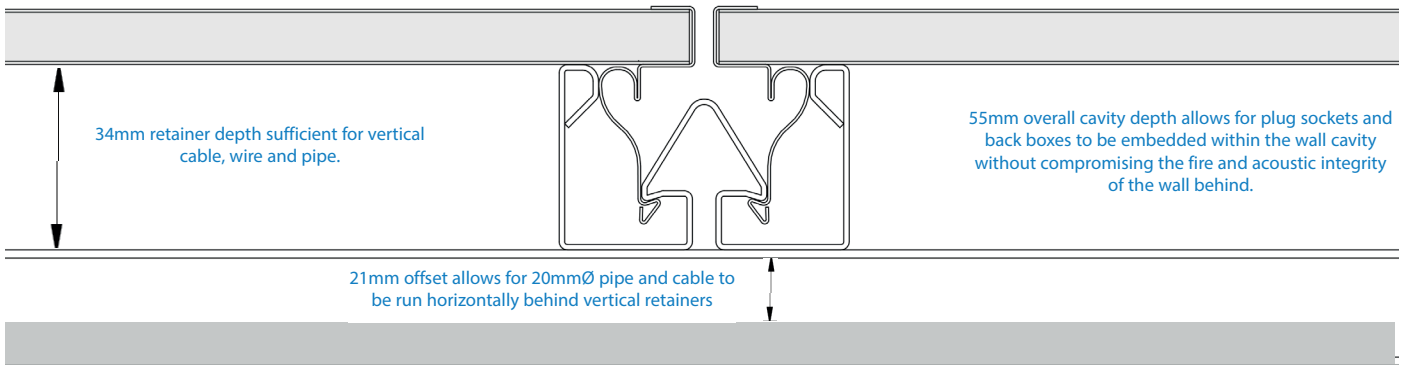


Fig 3. Top down view showing 55mm accessible services cavity



Note: Horizontal rail does not need to run along the whole elevation, so gaps can be left to create clear 55mm vertical drops. A steel top hat can also be added to increase the cavity depth to over 120mm to run extraction ducting within the accessible wall space

Adaptable for any application

The Trisofix® panel clip can be supplied in two formats to create a range joint details to meet the specific requirements of schools, offices, healthcare or even secure environments.



The standard format has an 8mm front face fold to fully enclose panel edges. Its robust design enables quick individual demounting of panels. Available in either a galvanised or Colorcoat® finish, the clip can also be powder coated to create bespoke accent colours on panel joints.



The hidden clip format is ideally suited to hygienic or secure environments where a more seamless wall its required. It has a 6mm upstand to help positioning against the panel's edge and is typically supplied in a Colorcoat® finish to facilitate hybrid adhesive and mechanical fixing onto panels.

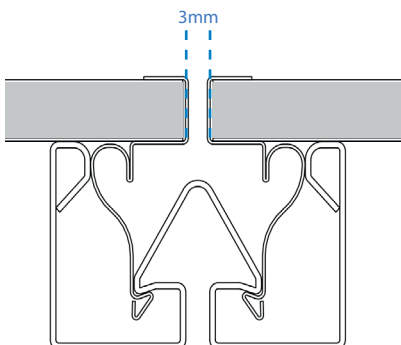


Fig 4. Standard clip

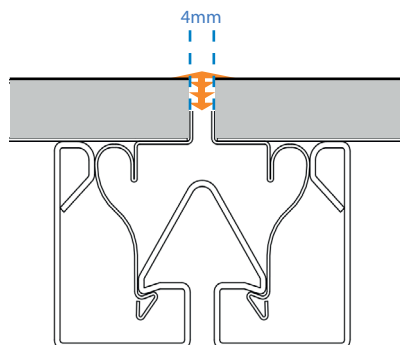


Fig 5. Hidden clip with push in gasket

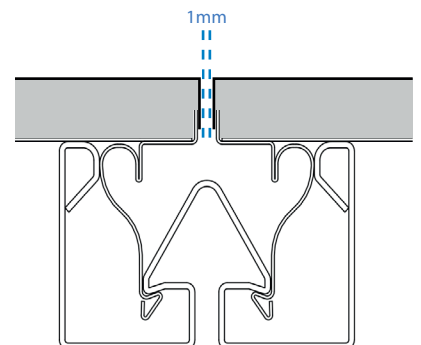


Fig 6. Hidden clip with wrapped panel

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