

Technical Data Sheet

BALUSTRADE FIXING POINT WITH THERMAL WRAP

For RBM and PVC

The Axter Balustrade Fixing Point with Thermal Wrap for RBM/PVC (BFP-TW-RBM/PVC) is designed for use on warm flat roof constructions where the upstand post protrudes through the depth of the roof insulation increasing the impact of thermal bridging. The BFP-TW-RBM/PVC has an extra external layer of insulation and an additional thermal break at the top of the unit to help reduce thermal transition, making it the ideal choice for thermally sensitive or passivhaus projects.

The BFP-TW-RBM/PVC is fixed directly to the supporting roof deck below the insulation providing a connection point for balustrade supports. It comprises a 225mm x 375mm fixing plate with a steel upstand column that is manufactured to suit the insulation or roof build up. The fixing plate provides 8no holes through which the BFP-TW-RBM/PVC is bolted to the structure. To weather the fixing plate the BFP-TW-RBM/PVC is factory fitted with an appropriate flange material to enable it to be weathered or sealed to the main roof area. Above the membrane there are two stainless steel anchor points each with 2no M10 x 20 blind threaded connection points A connection or weld plate can be supplied in mild steel or stainless steel for connecting the balustrade to the fitting.

Design considerations

Max. loading values that the BFP-TW-RBM/PVC can be subject to are shown within the 'loading ratings' section. Their inclusion in any situation should be approved by the structural engineer. The BFP-TW-RBM/PVC should not be used in any situation where the product might become submerged to any extent.

Typical uses

Connecting balustrade supports to a flat roof or parapet wall or any application where resistance to a turning moment is required.

Compatibility - roof construction

The BFP-TW-RBM/PVC is designed for warm or inverted roof constructions on concrete or timber substrates.

Compatibility - roof covering types

The BFP-TW-RBM/PVC can be supplied with different flange materials to integrate with the following roofing systems

- PVC roofing membrane.
- EPDM roofing membrane.
- TPO roofing membrane.
- TPE roofing membrane.
- PIB roofing membrane.
- SBS and APP modified bitumen membranes.
- Built up roofing systems.
- Liquid applied roof coatings.

MATERIALS	
304 stainless steel anchor point	Machined finish
Mild steel fixing plate	Polyester powder coat or galvanised finish
Weathering flange	Material to match main roof weathering system
Optional balustrade connection plate	Mild steel or stainless steel
Thermal break	5mm HDPE
Internal insulation	PIR
External insulation	25mm thick PIR
DIMENSIONS OA height from roof deck manufactured to suit insulation thickness	
2 no fixing points	M10 x 20
Distance between fixing points	52mm
Distance between anchors	150mm
Fixing plate	225mm x 375mm x 6mm
Fixing holes	8no 15mm Ø holes
Max. height	800mm

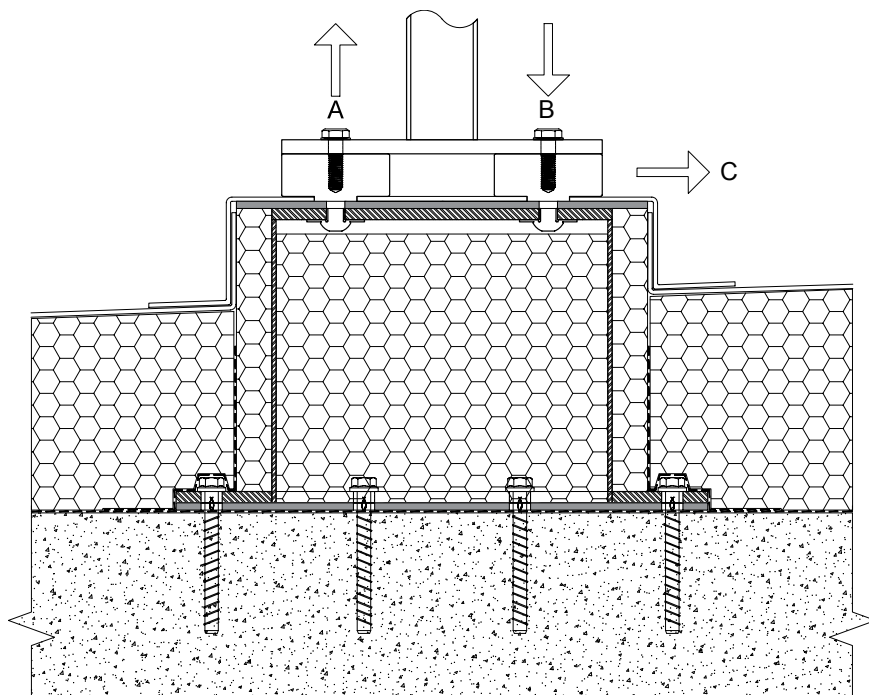
Installation

The Axter BFP-TW-RBM/PVC is ideally installed to a flat, level structural surface, prior to the installation of the main waterproofing system. It is the designers/ installers responsibility to ensure that the substrate has the structural capacity to sustain the loads imposed by the balustrade system.

The BFP-TW-RBM/PVC units should be fixed to the substrate with suitable fixings, which may need to be agreed by a structural engineer. All 8no. fixings should be utilised.

Once installed, the waterproofing system should be fitted around the Axter BFP-TW-RBM/PVC units taking care to seal the air and vapour control layer (AVCL) to around the post & insulation layer. Insulation should be tightly fitted to the upstand post and should not in any circumstances be less than 10mm below the top of the upstand post - please see detail attached. The waterproofing system should be dressed around the post and where necessary will need to extend up the upstand post where it rises above the insulation. The factory fitted membrane flange should be dressed down and sealed to the field roof membrane in accordance with standard procedures associated to that specific membrane or as directed by the membrane manufacturer. It is the installer's responsibility to ensure that a waterproof seal is achieved at the lap joint.

M10 bolts of a suitable length can be used to secure the balustrade system to the BFP-TW-RBM/PVC. A suitable connection bracket or plate may be required. The bolts should be installed with a suitable thread locking adhesive or locking washer to stop potential loosening over time. M10 bolts to the top of the BFP-TW-RBM/PVC should be tightened to 57.3Nm.



Loading diagram

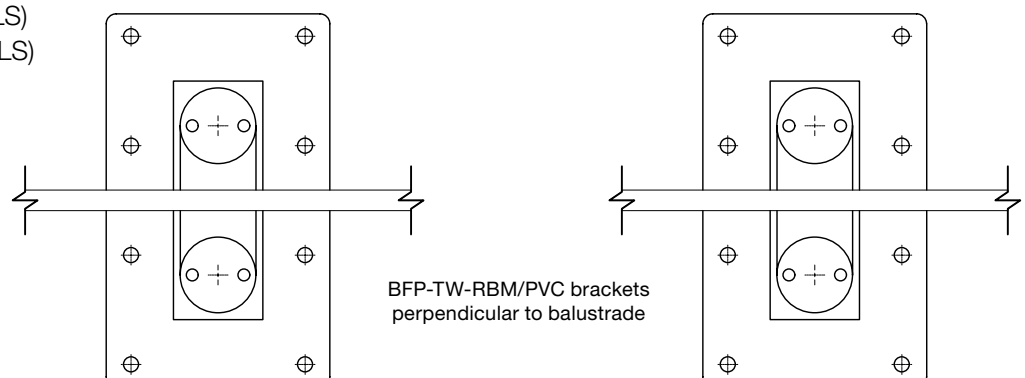
Maximum load ratings

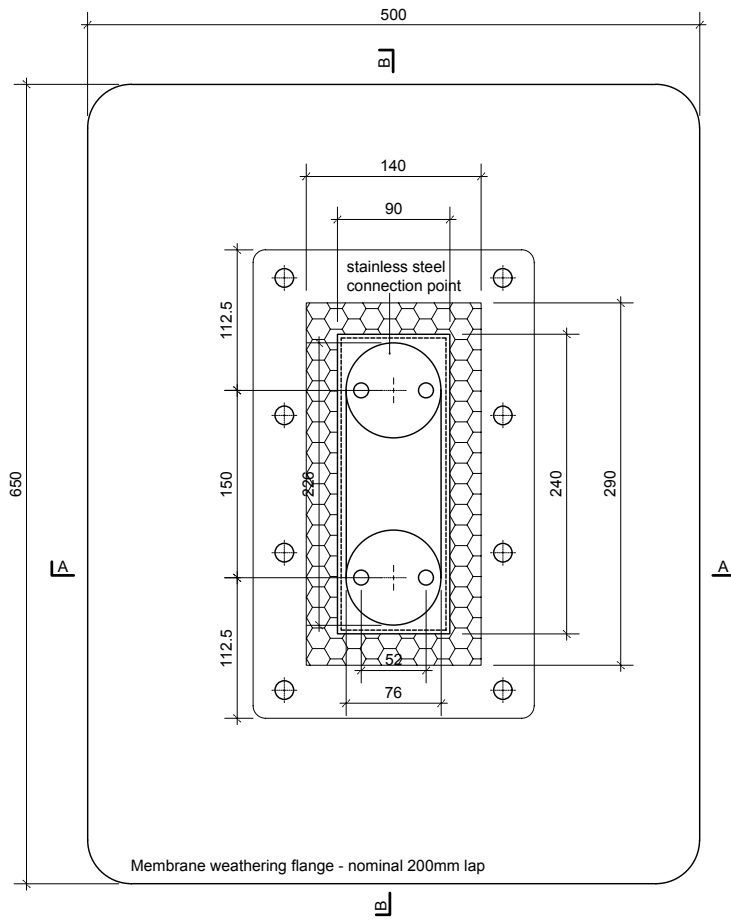
The following values assume that the supporting structure is of adequate stability to support the design values that will be imposed on the BFP-TW-RBM/PVC. All designs and calculations should take into account the supporting structure and balustrade construction to be compliant with current regulation requirements.

Max. height of BFP-TW-RBM/PVC upstand - 800mm

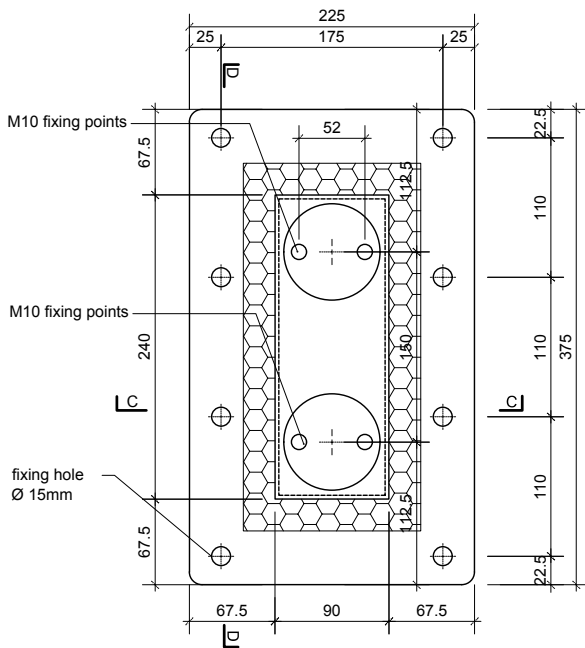
Maximum serviceable limit state (SLS) axial loads to the BFP-TW-RBM/PVC

At 'A'	25kN (SLS)
At 'B'	25kN (SLS)
At 'C'	2.5kN (SLS)

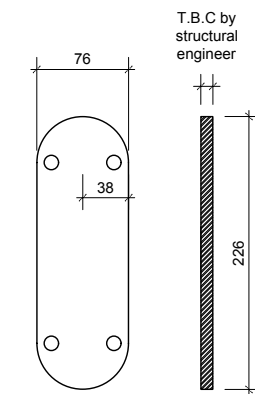




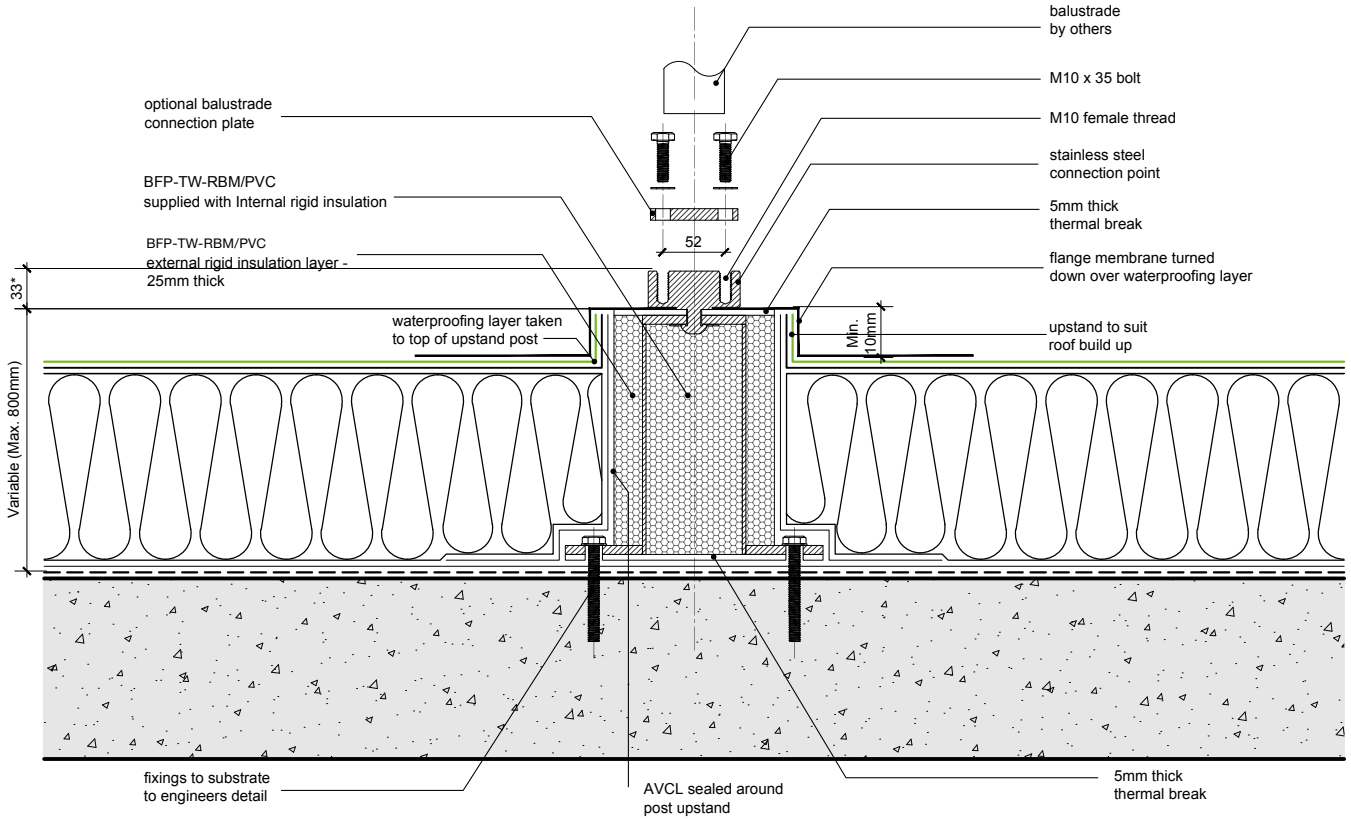
ROOF - PLAN VIEW



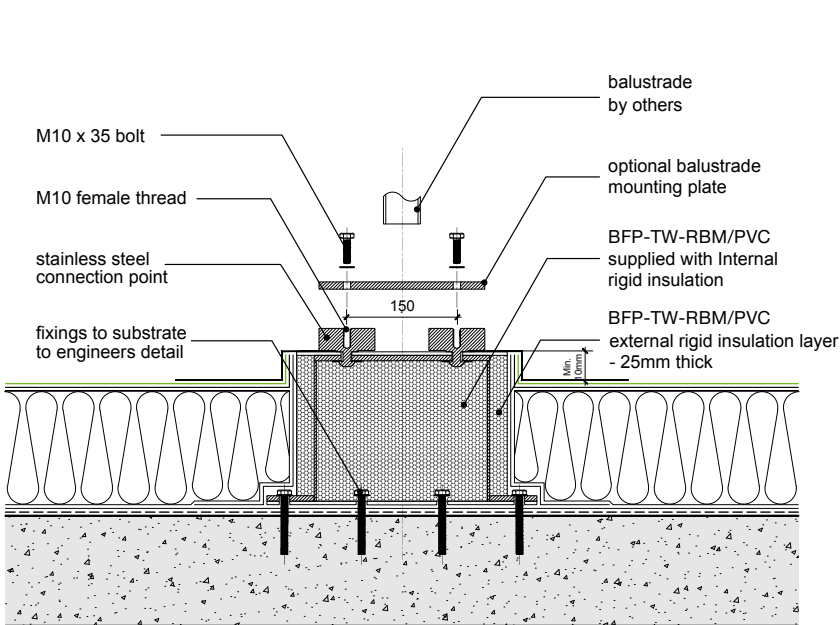
FIXING PLATE - MEMBRANE NOT SHOWN
PLAN VIEW OF FIXING PLATE



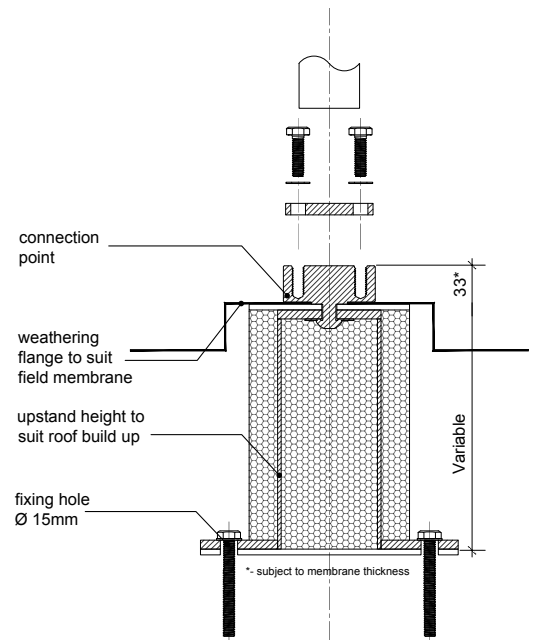
OPTIONAL
CONNECTION PLATE
DETAILS



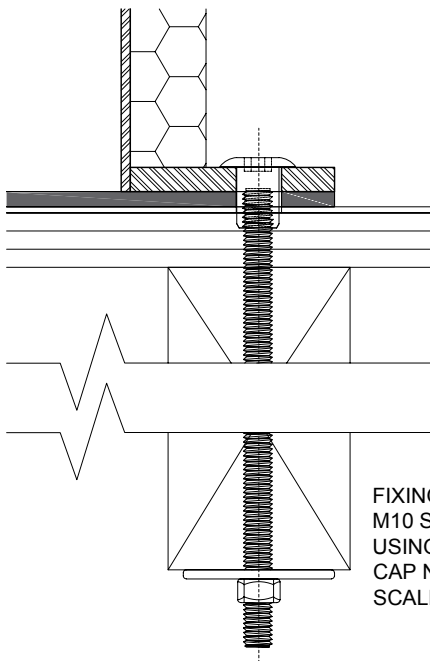
WARM ROOF - SECTION A-A



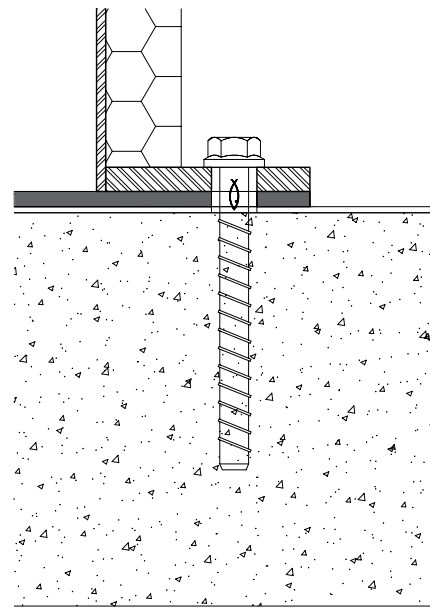
WARM ROOF - SECTION B-B



SECTION C-C

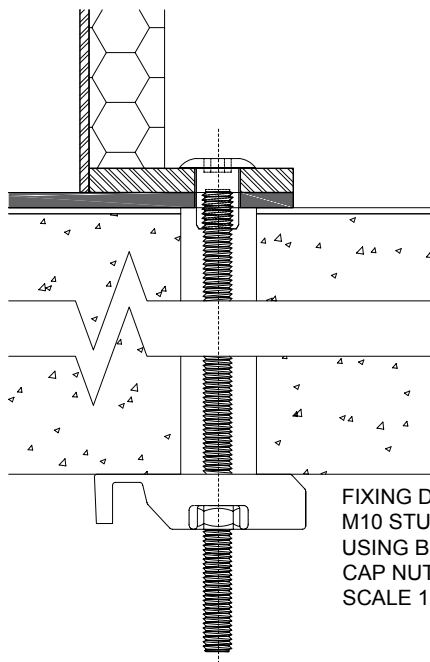


FIXING DETAIL 1
M10 STUD FOR BOLTING
USING BFP-TW-RBM/PVC
CAP NUT & TOGGLE
SCALE 1:2.5

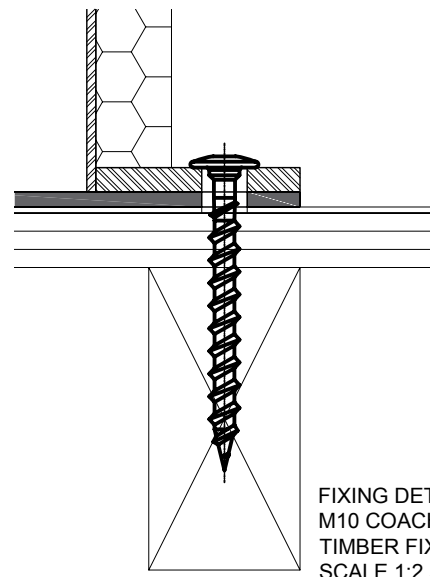


FIXING DETAIL 2
CONCRETE FIXING
SCREW
SCALE 1:2.5

BFP-TW-RBM/PVC



FIXING DETAIL 3
M10 STUD FOR BOLTING
USING BFP-TW-RBM/PVC
CAP NUT
SCALE 1:2.5



FIXING DETAIL 4
M10 COACH SCREW
TIMBER FIXING
SCALE 1:2.5

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