Technical Data Sheet

BALUSTRADE FIXING POINT WITH EXTENDED POST

For Inverted Hot Melt Waterproofing

The Axter Balustrade Fixing Point with Extended Post for Inverted Hot Melt Waterproofing (BFP-EP-IHM) is designed for use on inverted flat roof constructions where it is fixed directly to the supporting roof deck below the insulation providing a connection point for balustrade supports.

The BFP-EP-IHM 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-EP-IHM is bolted to the structure. To weather the fixing plate the BFP-EP-IHM is installed with a pitch pocket detail to enable it to be weathered or sealed to the main roof area. There are two 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-EP-IHM can be subjected to are shown within the 'loading ratings' section. Their inclusion in any situation should be approved by a structural engineer. The BFP-EP-IHM 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 where resistance to a turning moment is required.

Compatibility - roof construction

The BFP-EP-IHM is designed for warm or inverted roof constructions on a concrete or timber substrates.

Compatability - roof covering types

The BFP-EP-IHM can be supplied with different flange materials to integrate with the following roofing systems:

- Monolithic hot melt 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	Galvanised finish
Optional balustrade connection plate	Mild steel or stainless steel
Thermal break	5mm HDPE
Internal insulation	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

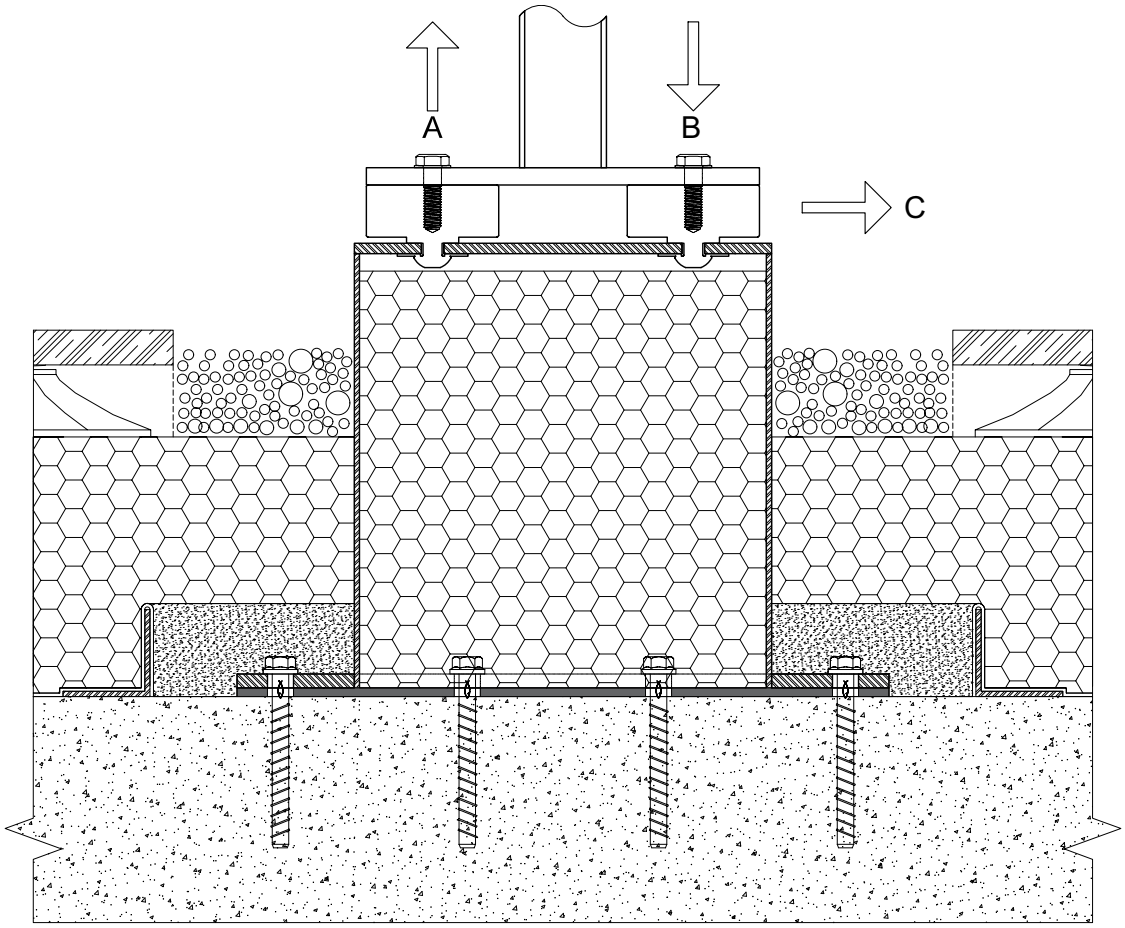
Installation

The Axter BFP-EP-IHM is ideally installed to a flat, horizontal structural surface, prior to the installation of the Wilotekt hot melt 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-EP-IHM 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-EP-IHM units taking care to seal the air and vapour control layer (AVCL) to around the post. The Wilotekt hot melt waterproofing system should be installed around the upstand post using a pitch pocket detail to create a waterproof seal. The surrounding roof finish should not in any circumstances be less than 50mm below the top of the steel upstand section - see detail.

M10 bolts of a suitable length can be used to secure the balustrade system to the BFP-EP-IHM. 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-EP-IHM should be tightened to 57.3Nm.



Loading diagram.

Maximum load ratings

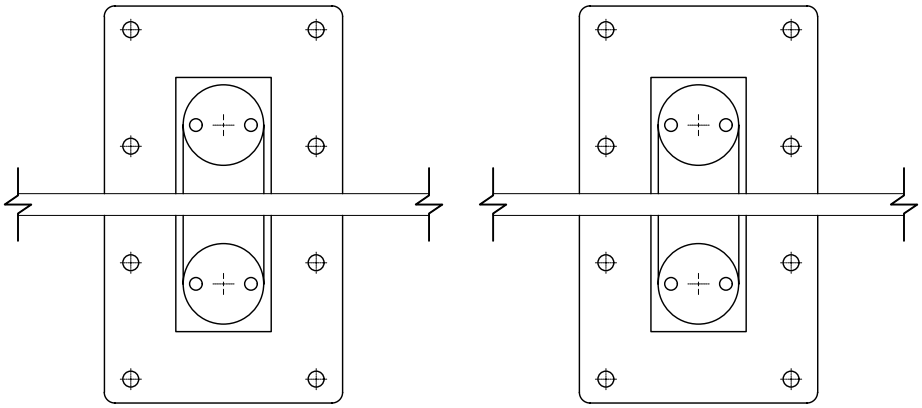
The following values assume that the supporting structure is of adequate stability to support the design values that will be imposed on the BFP-EP-IHM.

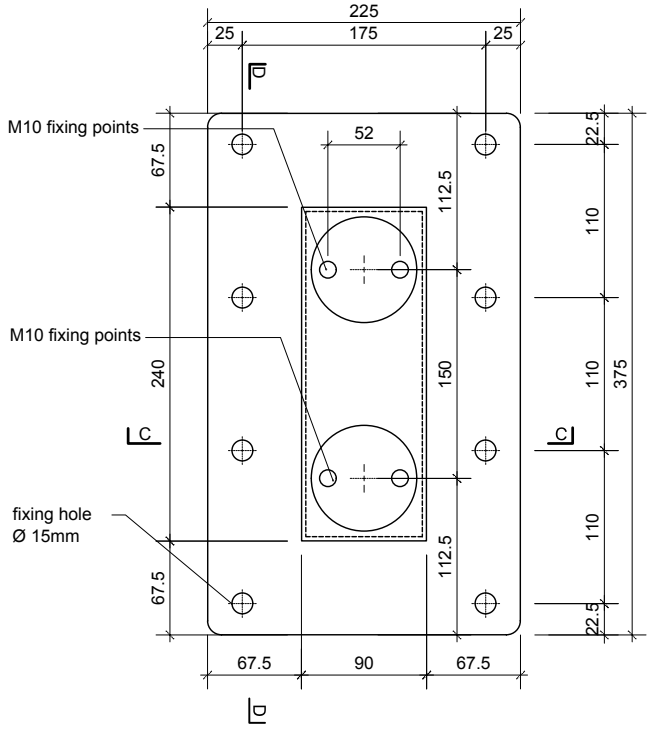
All designs and calculations should take into account the supporting structure and balustrade construction to be compliant with current regulation requirements.

Max. height of BFP-EP-IHM upstand - 800mm

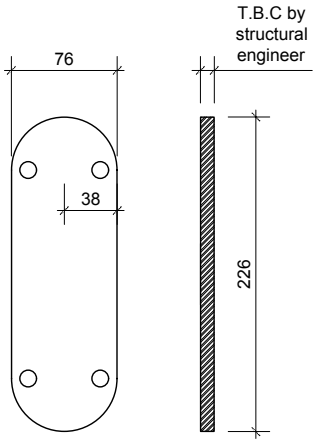
Maximum applied axial loads to the BFP-EP-IHM

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

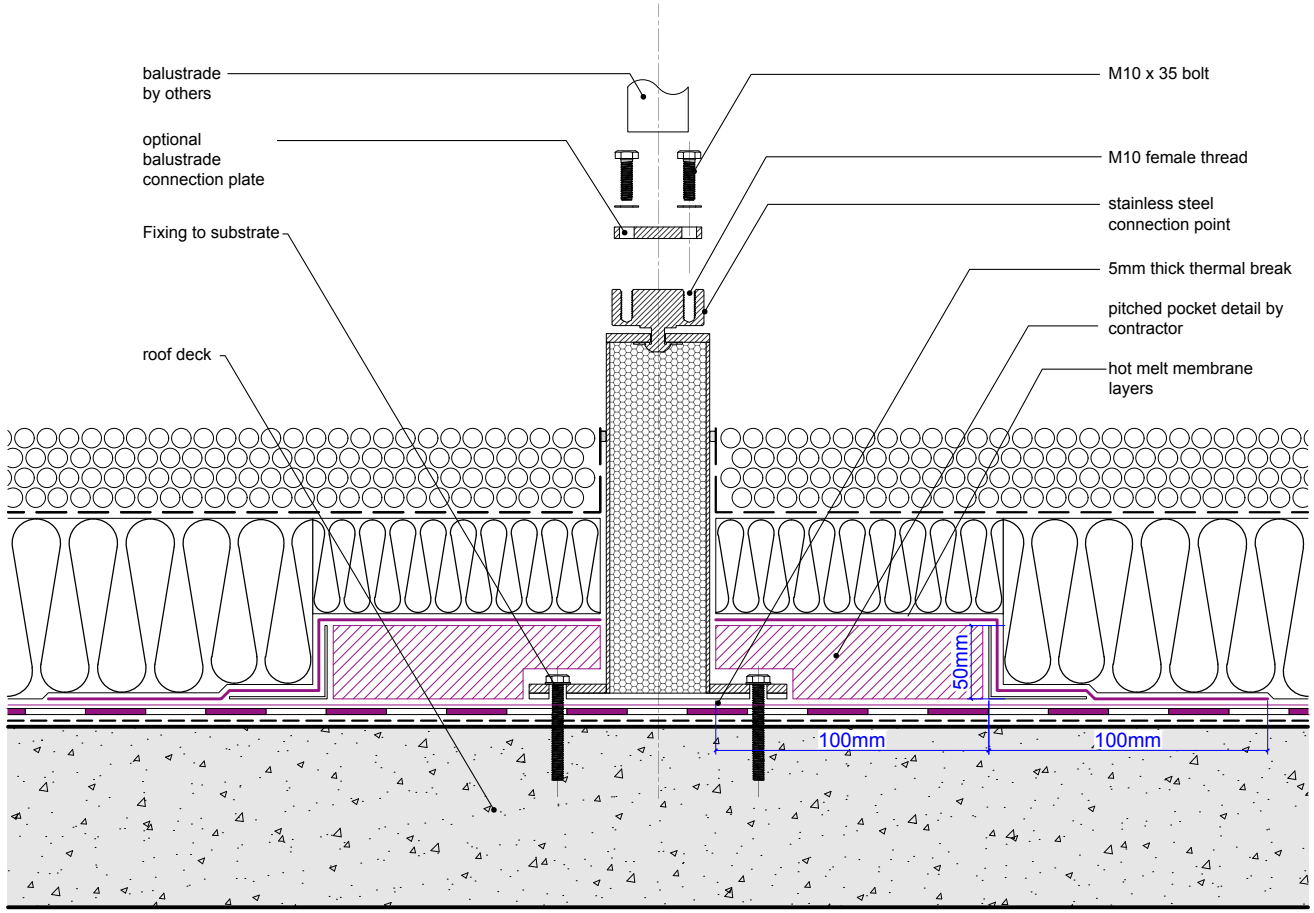




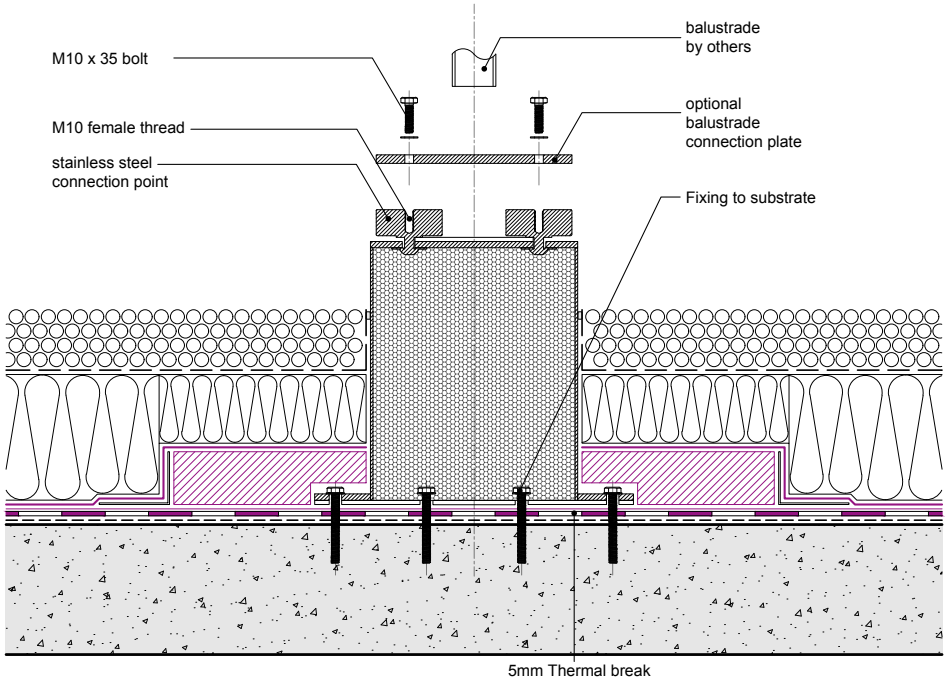
PLAN VIEW OF FIXING PLATE



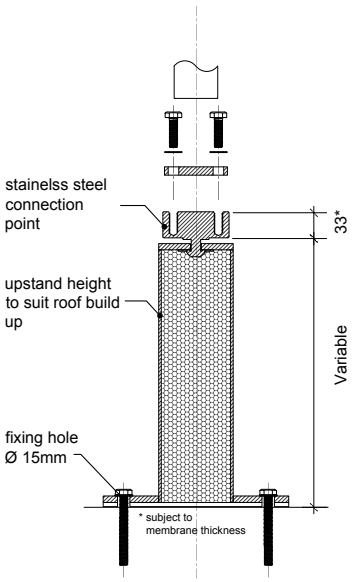
OPTIONAL BFP-EP-IHM
CONNECTION PLATE
DETAILS



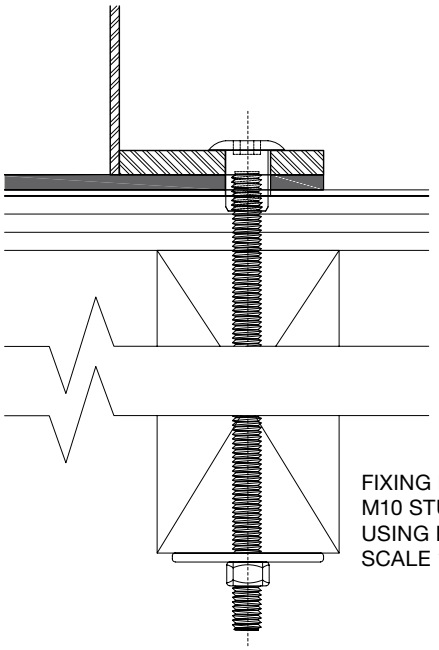
INVERTED ROOF - SECTION A-A



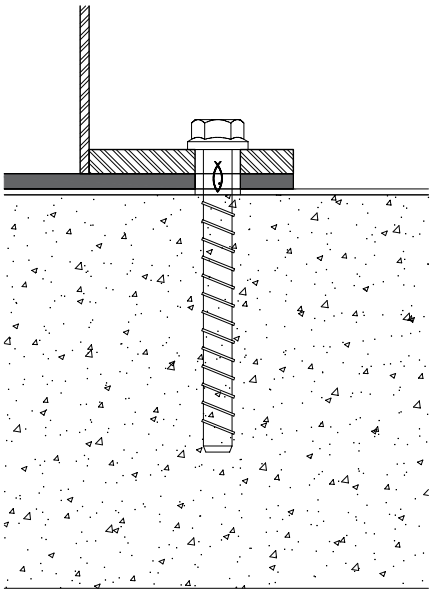
INVERTED ROOF - SECTION B-B



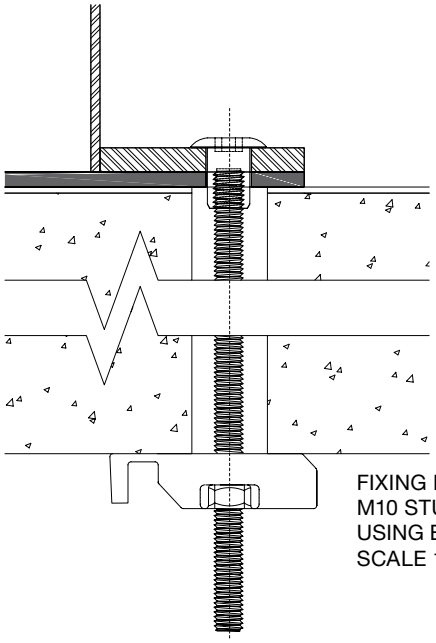
SECTION C-C



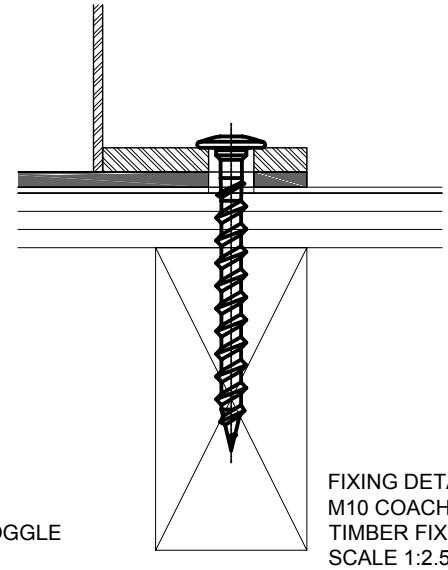
FIXING DETAIL 1
M10 STUD FOR BOLTING
USING BTP-EP-IHM CAP NUT
SCALE 1:2.5



FIXING DETAIL 2
CONCRETE FIXING
SCREW
SCALE 1:2.5



FIXING DETAIL 3
M10 STUD FOR BOLTING
USING BTP-EP-IHM CAP NUT & TOGGLE
SCALE 1:2.5



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