

Technical Data Sheet

UNIVERSAL FIXING POINT WITH EXTENDED POST

For RBM and PVC

The Axter Universal Fixing Point with Extended Post for RBM and PVC (UFP-EP-RBM/PVC) is a member of the Universal Fixing Point family, providing a weatherproof fixing point for green, warm and inverted roofing applications.

The post upstand is fabricated to suit the depth of the roof build up, providing an upstand above the roof build up to raise the supported structure above the finished roof deck. To waterproof the post, the UFP-EP-RBM/PVC is factory fitted with an appropriate flange material to enable it to be weathered or sealed to the main roof area waterproofing which extends up the post.

Uses

The UFP-EP-RBM/PVC is designed for use in green, warm and inverted roof build ups that are weathered with a membrane system and can be used in applications where a connection to the structure is required.

This would include uses such as solar pv, solar thermal, roof plant supports and roof mounted signage.

Not for use with

Balustrade or any use which applies a non-axial load.

Compatibility

The UFP-EP-RBM/PVC is designed for roof constructions where the waterproofing system is under the green roof build up or insulation. It can be used where the waterproofing membrane is laid directly over the roof deck or in green roofs where the insulation is under the membrane.

MATERIALS FOR FIXING THROUGH WATERPROOFING SYSTEM

304 stainless steel anchor point	Machined finish
Mild steel fixing plate and post upstand	PPC or galvanised finish
Internal insulation	PIR
Thermal break	5mm HDPE

DIMENSIONS

Baseplate	250mm x 250mm x 6mm
Post	8no for direct fixing to timber substrate
OA height	76mm ϕ x variable height to suit insulation thickness
Max height	1No. M10 x 20mm female blind thread
Single connection point	M10 x 20mm
Weathering flange dimension	400mm x 400mm for all membranes

UFP-EP-RBM / UFP-EP-PVC loading values

The following values assume that the supporting structure is adequate to support the design values that will be imposed on the UFP-EP-RBM/PVC.

Compressive Load as 'A'

Maximum compressive load 5kN

Shear loading as 'B'

Maximum shear load

Up to 600mm high - 2.5kN

600 - 900mm high - 1.5kN

Tensile Load as 'C'

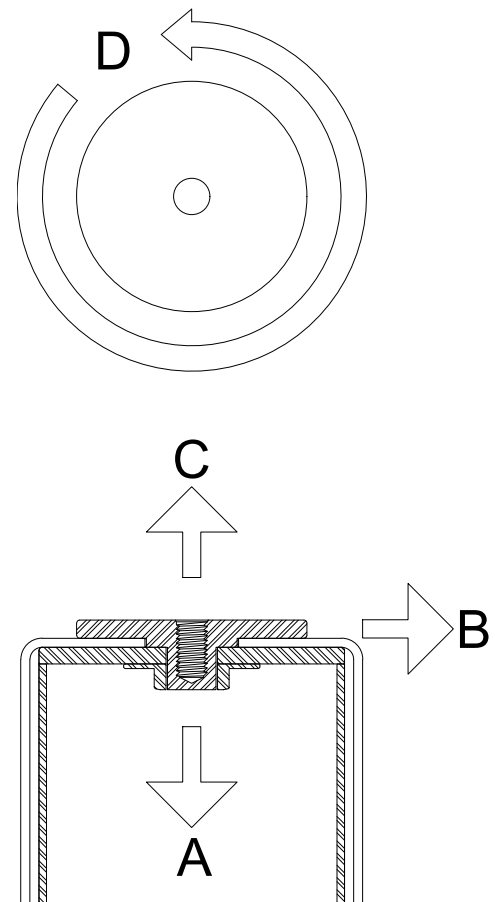
Tensile Load as 'C' for direct fixings to metal wood and concrete.

Values given below are based on the Axter MTP fixings and C fixings as per European Technical Approval 15/0406 and allow a safety factor of three on the combined mean axial pullout value of the fixings. Values are also given for steel decks where normally only 6 no fixings into the profile crown can be achieved.

	8 FIXINGS
BS5.8 fixed to 18mm plywood to EN 636	5.0kN
BS5.8 fixed to 18mm OSB/3 to EN300	4.2kN
BS5.8 fixed to 38mm softwood timber	5.0kN
BS5.8 fixed to 0.7mm galvanised profiled steel	3.8kN
BS5.8 fixed to 0.9mm galvanised profiled steel	5.0kN
BS5.8 fixed to 1.2mm galvanised profiled steel	5.0kN
HD6.1 fixed to C25 concrete	5.0kN

Rotational as 'D'

Configuration of the UFP-EP-RBM/PVCs should be such that turning motion is not exerted on individual fixing points.



Loading diagram

IMPORTANT NOTES:

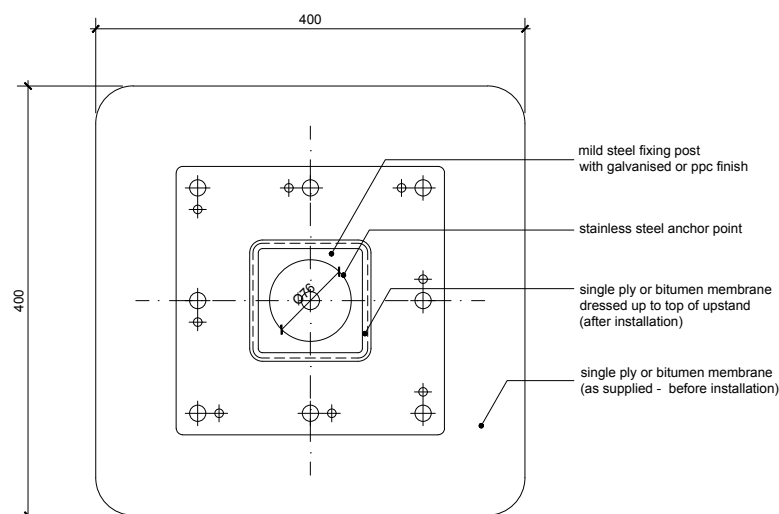
- It is the responsibility of the designer/specifier/purchaser to ensure that the intended use of the UFP-EP-RBM/PVC in any given application is approved by a competent structural engineer.
- On site pull-out testing may be required to determine pull out values where the substrate is an existing roof structure.

Installation

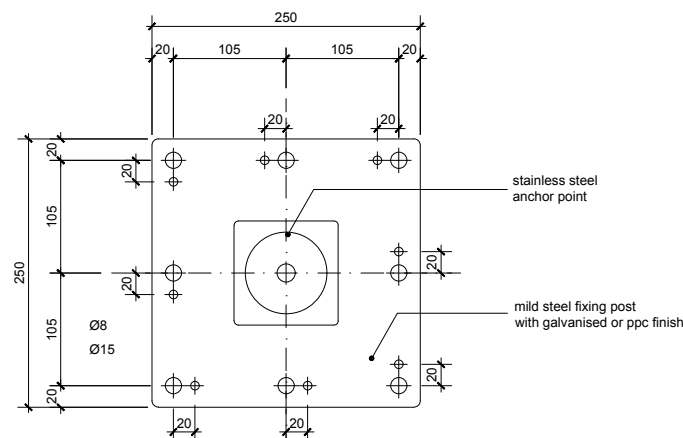
The Axter UFP-EP-RBM/PVC can be installed directly to the structural roof substrate, prior to the insulation being fitted. 8no. fixings should be used to secure the UFP-EP-RBM/PVC to the structure. Fixing types should be selected depending on the substrate type. It is important that the UFP-EP-RBM/PVC units are sealed into the vapour control layer. Insulation should be tightly fitted around the UFP-EP-RBM/PVC upstand.

The UFP-EP-RBM/PVC flange membrane should be dressed down the upstand post and onto the field membrane and a lap seal made in accordance it normal good practice and in line with any specific guidelines as set out by the membrane manufacturer. For higher post dimensions extra membrane may be required to complete the weathering. Detailing of the membrane at this point must be carried out in a manner that provides a completely waterproof upstand weathering.

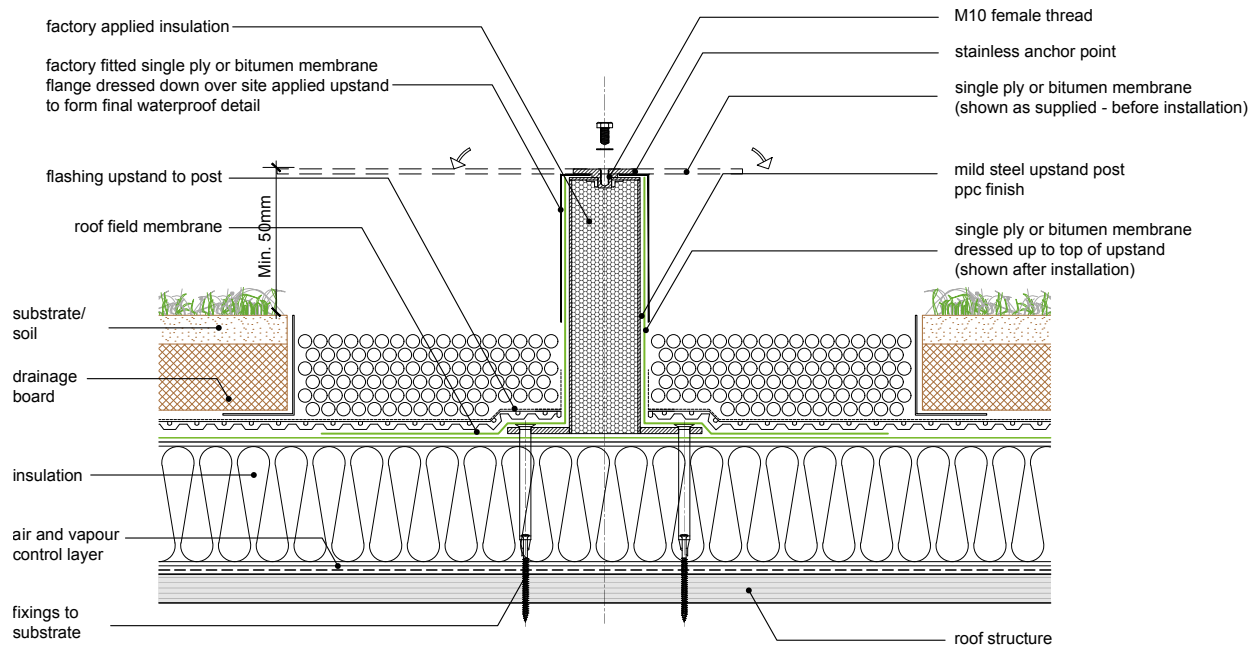
The UFP-EP-RBM/PVC upstand post must extend a minimum of 50mm past any green roof medium. Green roofing should be fitted around the UFP-EP-RBM/PVC allowing surface water to drain away from the fixing point. The UFP-EP-RBM/PVC fixing point should not become submerged at any time.



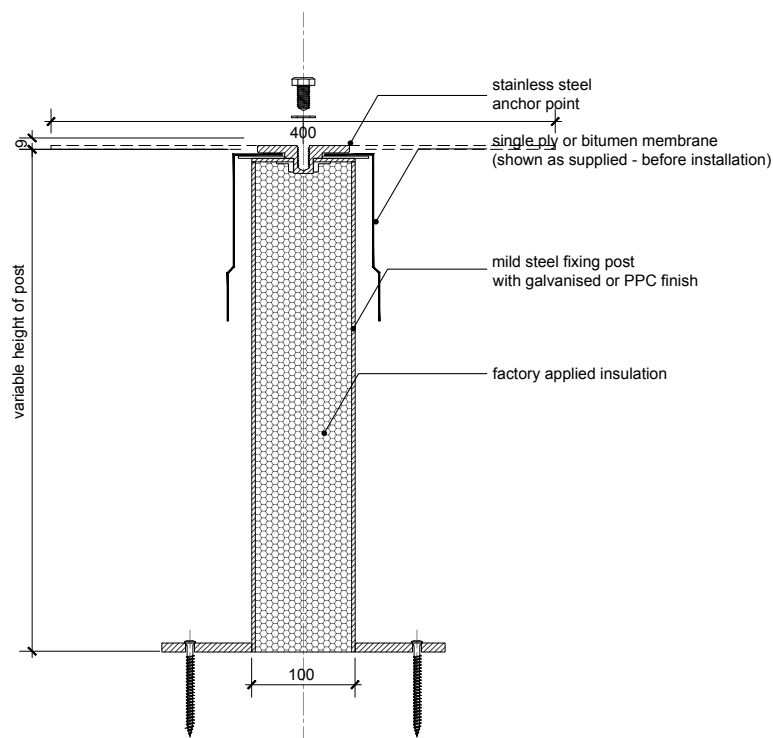
PLAN VIEW INCLUDING WEATHERING FLANGE

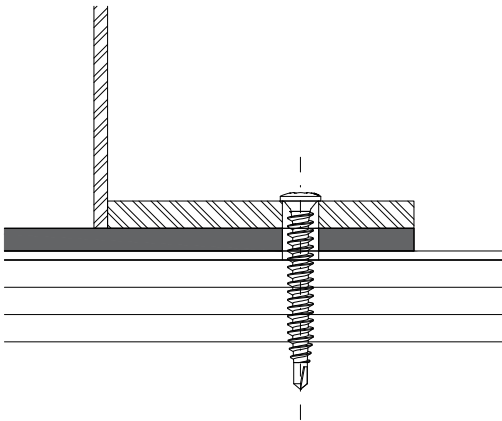


FIXING PLATE DIMENSIONS - PLAN VIEW
WEATHERING FLANGE NOT SHOWN

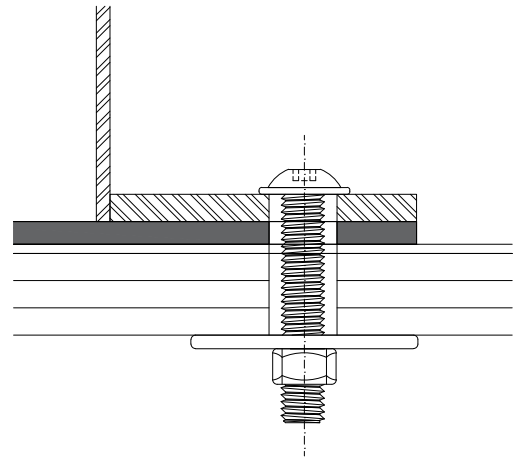


ON LIVING ROOF - SECTION VIEW FIXING THROUGH THE DECK

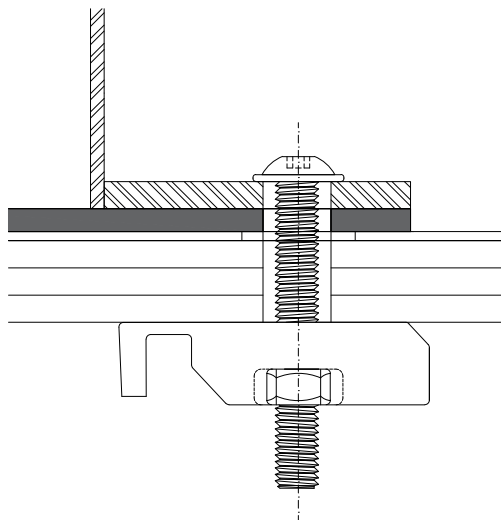
FIXING UPSTAND DIMENSIONS - SECTION VIEW
WATERPROOF MEMBRANE NOT SHOWN



FIXING DETAIL 1
MTP Fixing x 40 FIXING
INTO MIN.18MM PLY
DECK
SCALE 1:2



FIXING DETAIL 2
M10 x 50 SOCKET BUTTON
FLANGE + SQ WASHER & NUT
THROUGH MIN. 18MM PLY DECK
SCALE 1:2



FIXING DETAIL 3
M10SB BOLT & TOGGLE FOR
BOLTING THROUGH MIN. 18MM
PLY DECK
SCALE 1:2

Universal Fixing Point with Extended Post for RBM-PVC - Warm living roof with fixing through the waterproofing

MATERIALS FOR FIXING THROUGH WATERPROOFING SYSTEM	
304 stainless steel anchor point	Machined finish
Mild steel fixing plate and post upstand	PPC or galvanised finish
Internal insulation	PIR
Thermal break	5mm HDPE
DIMENSIONS	
Baseplate	250mm x 250mm x 6mm
Post	8no for direct fixing to timber substrate
OA height	76mm ϕ x variable height to suit insulation thickness
Max height	1No. M10 x 20mm female blind thread
Single connection point	M10 x 20mm
Weathering flange dimension	400mm x 400mm for all membranes

UFP-EP-RBM/PVC loading values

The following values assume that the supporting structure is adequate to support the design values that will be imposed on the UFP-EP-RBM/PVC.

UFP-EP-RBM/PVC for green roof warm roof constructions

Compressive Load as 'A'

The maximum compressive load will be determined by the insulation manufacturers static load rating. These figures can be obtained from the relevant insulation manufacturer.

A minimum static load rating of 30kPa and a maximum loading of 1.8kN.

It is the purchaser or specifiers responsibility to check that the insulation will bear any compressive load without compression. The insulation manufacturer should be consulted if there is any doubt.

If there is a compressive insulation in use such as mineral wool, the Axter UFP-EP-RBM/PVC fixing point should be considered in lieu of the Axter UFP-EP-RBM/PVC.

Shear loading as 'B'

Maximum height of post is 250mm above roof membrane

Maximum shear load 1kN

Tensile Load as 'C'

Values given below are based on the Axter MTP fixing and C fixing as per European Technical Approval 15/0406 and allow a safety factor of three on the combined mean axial pullout value of the fixings. Values are also given for steel decks where normally only 6no fixings into the profile crown can be achieved.

	6 FIXINGS	8 FIXINGS
BS5.8 fixed to 18mm plywood to EN 636	4.2kN	5.0kN
BS5.8 fixed to 18mm OSB/3 to EN300	3.1kN	4.2kN
BS5.8 fixed to 38mm softwood timber	5.0kN	5.0kN
BS5.8 fixed to 0.7mm galvanised profiled steel	2.8kN	3.8kN
BS5.8 fixed to 0.9mm galvanised profiled steel	3.8N	5.0kN
BS5.8 fixed to 1.2mm galvanised profiled steel	5.0kN	5.0kN
HD6.1 fixed to C25 concrete	3.9kN	5.0kN
M10 x 90 concrete screw	5.0kN	5.0kN

Tensile Load as 'C' for thermally broken fixings to metal, wood and concrete

Values given below are based on the Fixfast SF-RS-5.8 fasteners and SF-T-50 tube washers as per European Technical Approval 15/0406 and allow a safety factor of three on the combined mean axial pullover value of the thermal washers. Values are also given for steel decks where normally only 6 no fixings into the profile crown can be achieved.

	6 FIXINGS	8 FIXINGS
Fixing into all substrate materials*	3.1kN	4.1kN

Rotational as 'D'

Configuration of the UFP-EP-RBM/PVCs should be such that turning motion is not exerted on individual fixing points.

IMPORTANT NOTES:

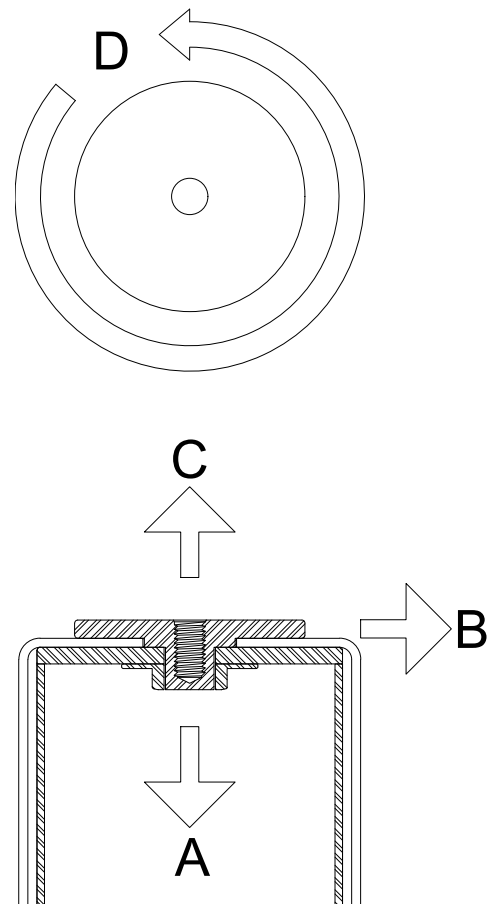
- It is the responsibility of the designer/specifier/purchaser to ensure that the intended use of the UFP-EP-RBM/PVC in any given application is approved by a competent structural engineer.
- On site pull-out testing may be required to determine pull out values where the substrate is an existing roof structure.

Installation

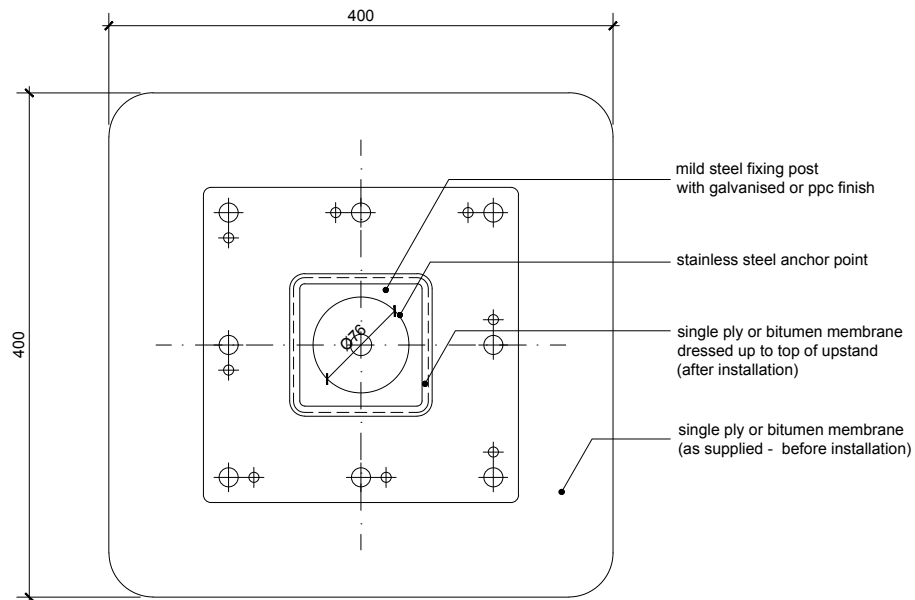
The UFP-EP-RBM/PVC can be fitted once the insulation and field membrane is completed. 8no thermally broken fixings should be used to secure the UFP-EP-RBM/PVC to the structural substrate. Fixing types should be selected depending on the substrate type.

The UFP-EP-RBM/PVC flange membrane should be dressed down the upstand post and onto the field membrane and a lap seal made in accordance it normal good practice and in line with any specific guidelines as set out by the membrane manufacturer. For higher post dimensions extra membrane may be required to complete the weathering. Detailing of the membrane at this point must be carried out in a manner that provides a completely waterproof upstand weathering.

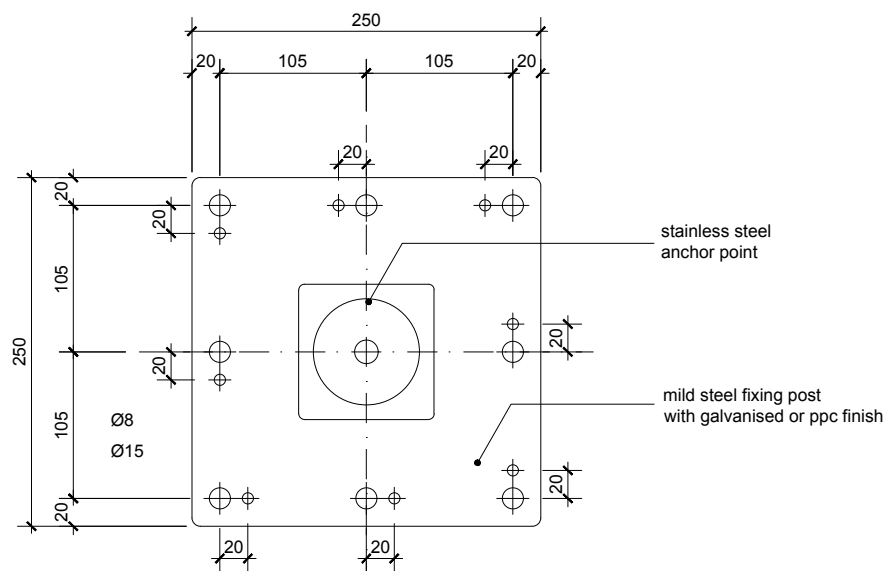
The UFP-EP-RBM/PVC upstand post must extend a minimum of 50mm past any green roof medium. Green roofing should be fitted around the UFP-EP-RBM/PVC allowing surface water to drain away from the fixing point. The UFP-EP-RBM/PVC fixing point should not become submerged at any time.



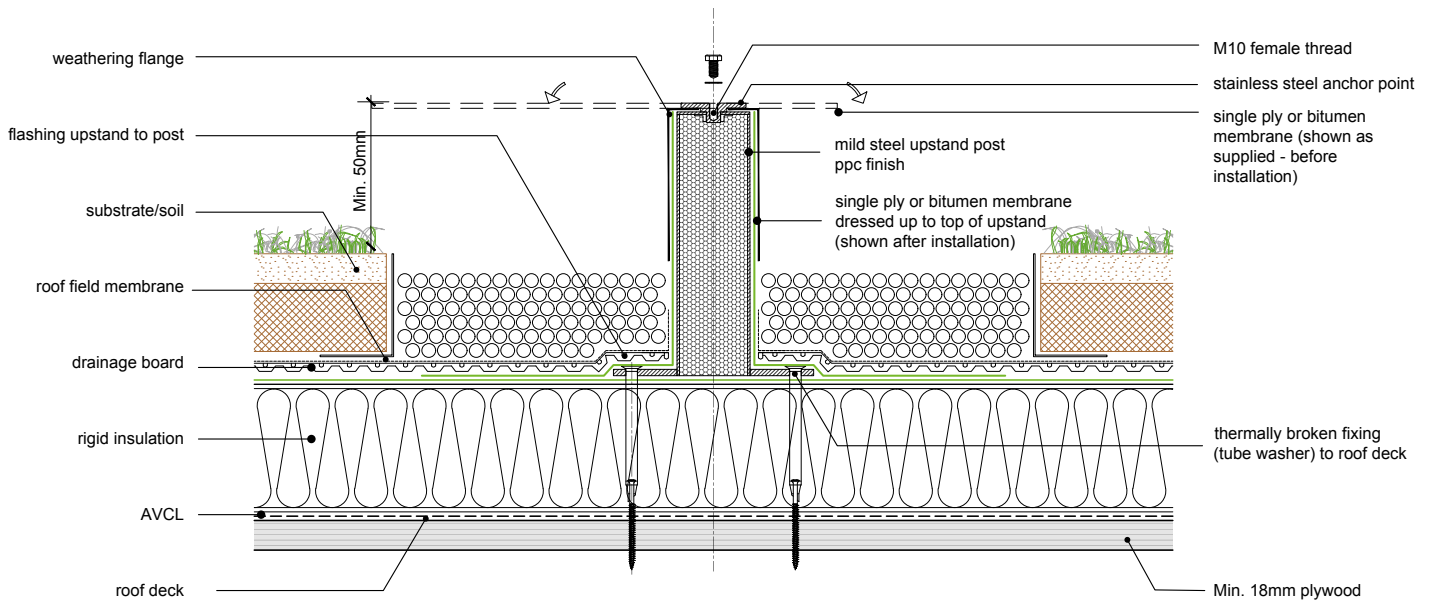
Loading diagram



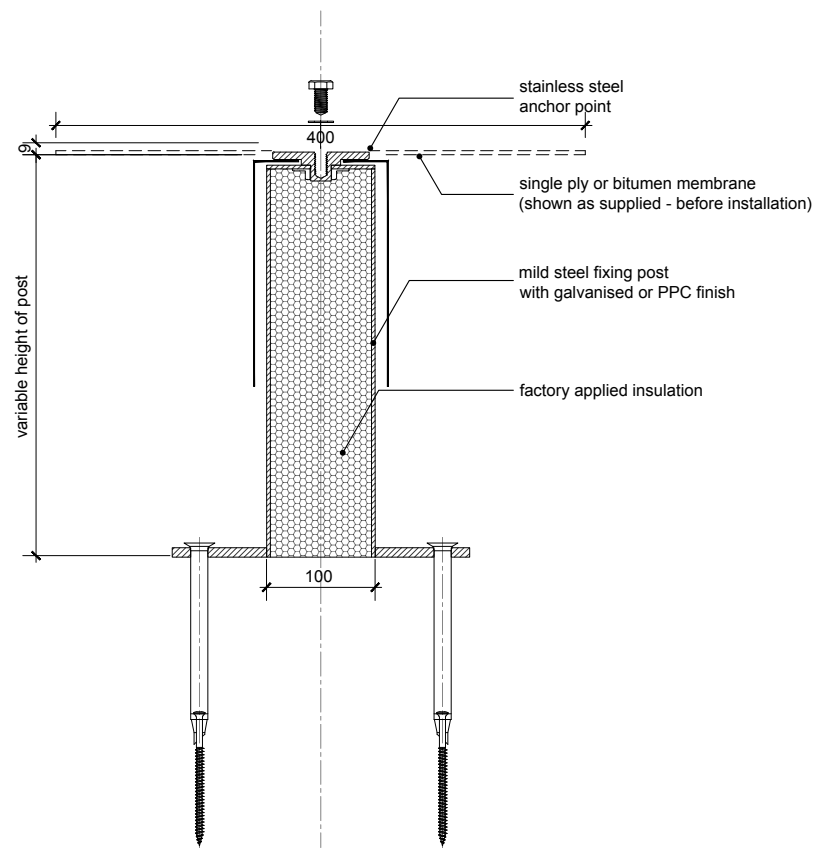
PLAN VIEW INCLUDING WEATHERING FLANGE



FIXING PLATE DIMENSIONS - PLAN VIEW



LIVING ROOF - SECTION VIEW FIXING
THROUGH THE WATERPROOF SYSTEM



UPSTAND DIMENSIONS - SECTION VIEW
WATERPROOF MEMBRANE NOT SHOWN

Universal Fixing Point with Extended Post for RBM-PVC - Inverted living roof

The UFP-EP-RBM/PVC is designed for flat and pitched roof constructions up to 10deg. and with a maximum height of 150mm, where the roofing membrane or weathering layer is on top of the insulation layer in a warm roof scenario. It can also be used where the weathering layer is below the insulation, with a max. post height of 1000mm - see 'direct fixed' scenario detail.

MATERIALS FOR FIXING THROUGH WATERPROOFING SYSTEM	
304 grade stainless steel connection point	Single M10 x 20mm female threaded connection (316 grade SS components available for locations within 2km of the coast)
Mild steel fixing plate and post upstand	PPC or galvanised finish
Weathering flange	Material to match main roof weathering system
DIMENSIONS	
Baseplate	250mm x 250mm x 6mm
Post	100mm x 100mm
OA height	Variable to suit roof build up
Max height	900mm
Single connection point	M10 x 20mm
Weathering flange dimension	400mm x 400mm for all membranes

Loading values

The following values assume that the supporting structure is adequate to support the design values that will be imposed on the UFP-EP-RBM/PVC.

Compressive Load as 'A'

Maximum compressive load 5kN

Shear loading as 'B'

Maximum shear load

Up to 600mm high - 2.5kN

600 - 900mm high - 1.5kN

Tensile Load as 'C'

Tensile load as 'C' for direct fixings to metal wood and concrete. Values given below are based on the Axter MTP fixings and C fixings as per European Technical Approval 15/0406 and allow a safety factor of three on the combined mean axial pullout value of the fixings. Values are also given for steel decks where normally only 6no fixings into the profile crown can be achieved.

	8 FIXINGS
BS5.8 fixed to 18mm plywood to EN 636	5.0kN
BS5.8 fixed to 18mm OSB/3 to EN300	4.2kN
BS5.8 fixed to 38mm softwood timber	5.0kN
BS5.8 fixed to 0.7mm galvanised profiled steel	3.8kN
BS5.8 fixed to 0.9mm galvanised profiled steel	5.0kN
BS5.8 fixed to 1.2mm galvanised profiled steel	5.0kN
HD6.1 fixed to C25 concrete	5.0kN

Rotational as 'D'

Configuration of the UFP-EP-RBM/PVCs should be such that turning motion is not exerted on individual fixing points.

IMPORTANT NOTES:

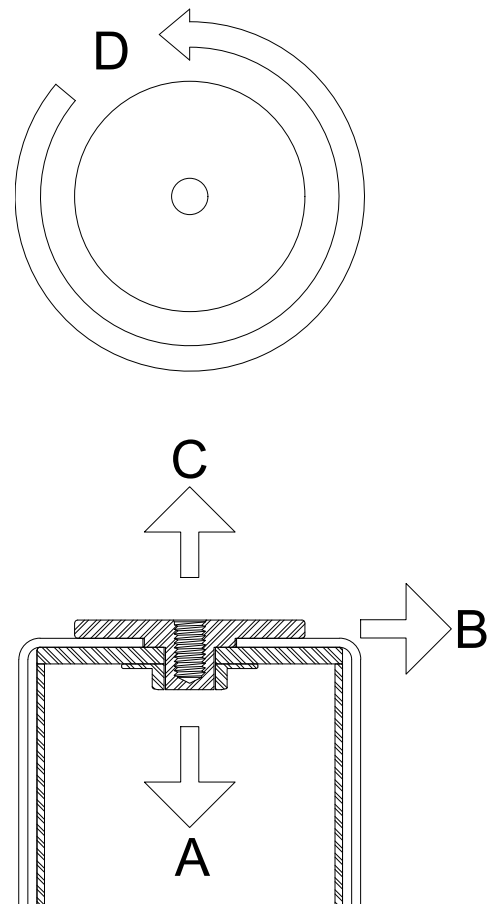
- It is the responsibility of the designer/specifier/purchaser to ensure that the intended use of the UFP-EP-RBM/PVC in any given application is approved by a competent structural engineer.
- On site pull-out testing may be required to determine pull out values where the substrate is an existing roof structure.

Installation

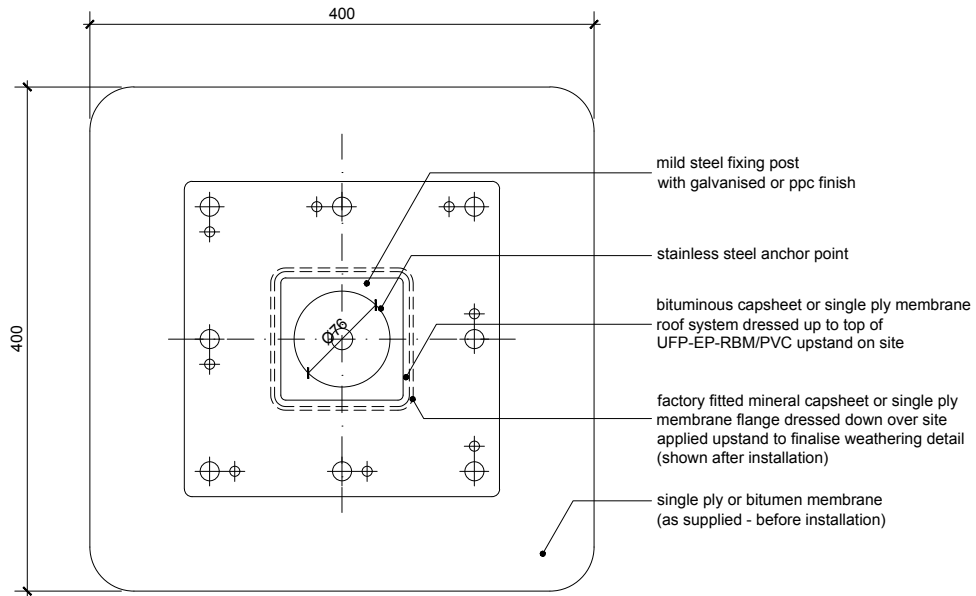
The Axter UFP-EP-RBM/PVC can be installed directly to the structural roof substrate. 8no. fixings should be used to secure it to the structure. Fixing types should be selected depending on the substrate type. The inverted roof membrane should be taken up the top of the UFP-EP-RBM/PVC upstand post.

The UFP-EP-RBM/PVC flange membrane should be dressed down onto the field membrane upstand and a lap seal made in accordance it normal good practice and in line with any specific guidelines as set out by the membrane manufacturer. Detailing of the membrane at this point must be carried out in a manner that provides a completely waterproof upstand weathering.

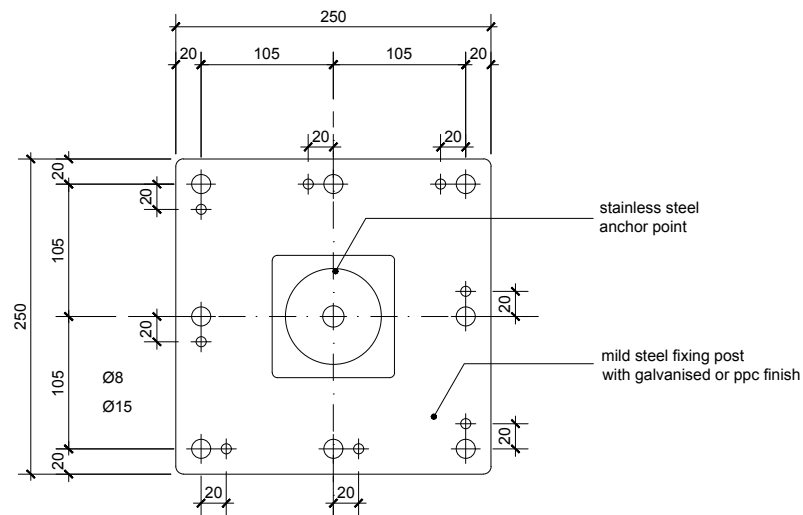
Insulation & living roof should be fitted around the UFP-EP-RBM/PVC allowing surface water to drain away from the fixing point. The UFP-EP-RBM/PVC upstand post must extend a minimum of 50mm past any green roof medium. The UFP-EP-RBM/PVC fixing point should not become submerged at any time.



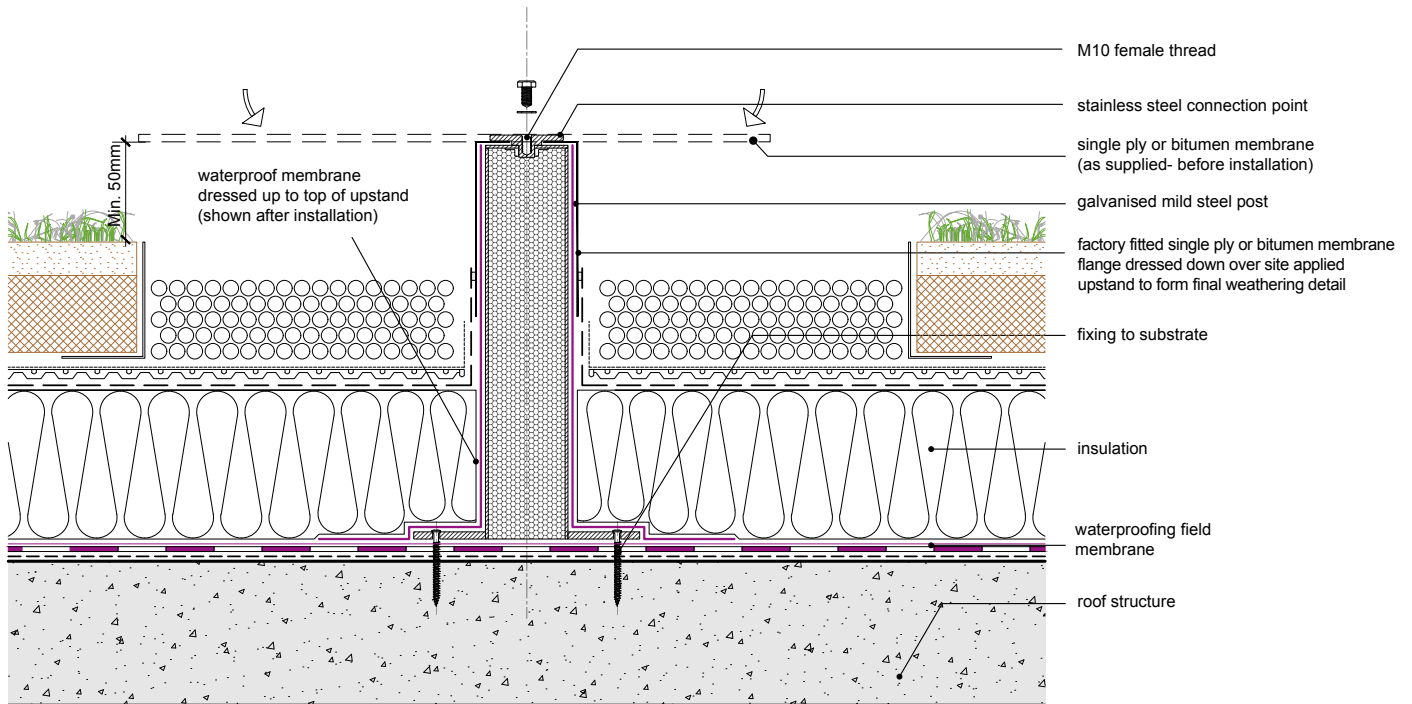
Loading diagram



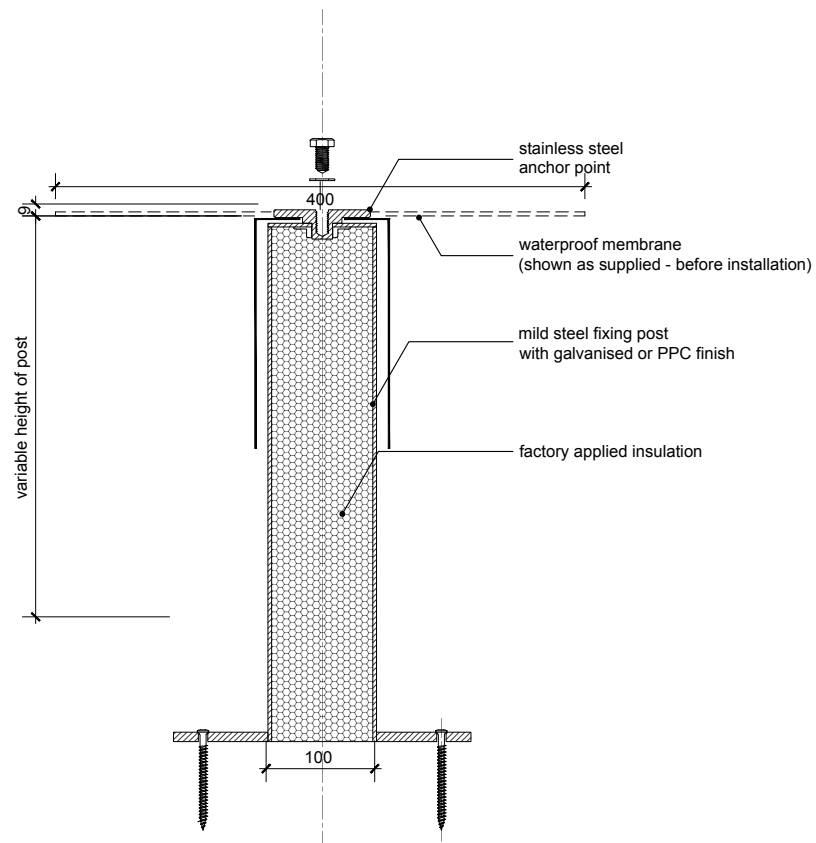
PLAN VIEW INCLUDING WEATHERING FLANGE

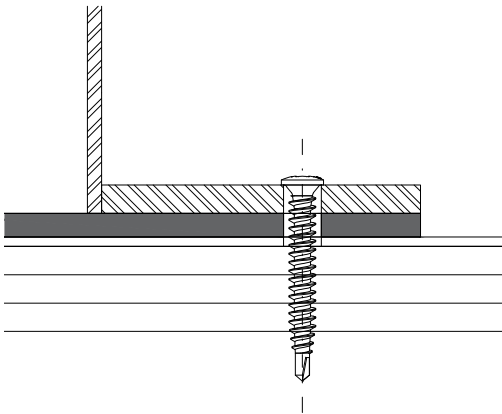


FIXING PLATE DIMENSIONS - PLAN VIEW
WEATHERING FLANGE NOT SHOWN

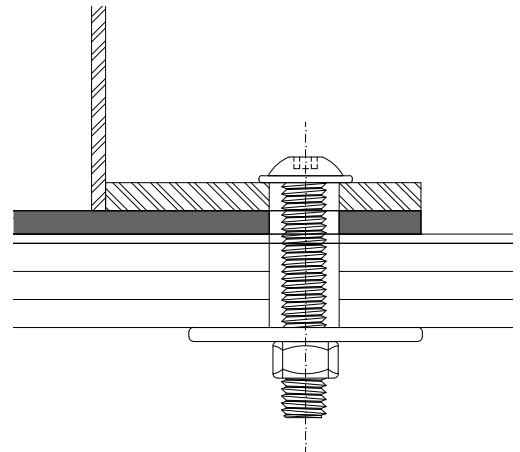


INVERTED ROOF - SECTION VIEW

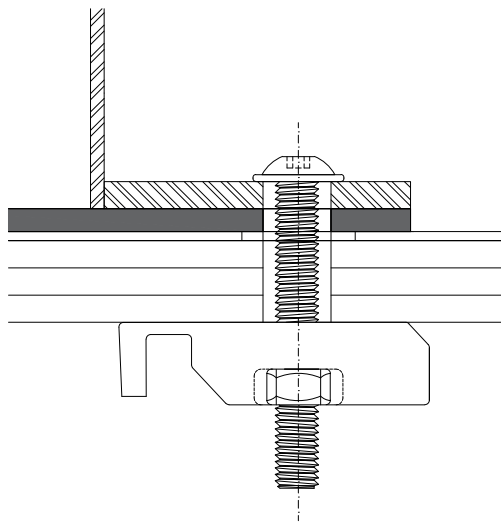
FIXING UPSTAND DIMENSIONS - SECTION VIEW
WATERPROOF MEMBRANE NOT SHOWN



FIXING DETAIL 1
MTP Fixing x 40 FIXING
INTO MIN. 18MM PLY
DECK
SCALE 1:2



FIXING DETAIL 2
M10 x 50 SOCKET BUTTON
FLANGE + SQ WASHER & NUT
THROUGH MIN. 18MM PLY DECK
SCALE 1:2



FIXING DETAIL 3
M10 SB BOLT & TOGGLE FOR
BOLTING THROUGH MIN. 18MM
PLY DECK
SCALE 1:2

Axter Ltd reserves the right to modify and update this data at any time without prior notice. Only the latest version of this document is valid, available for download at www.axter.co.uk/downloads. Once downloaded, documents are uncontrolled. Users should always confirm they are referring to the latest version prior to use. Further assistance is available from Axter Ltd's Technical Support Team, email: technical@axterltd.co.uk, telephone: 01473 935008.

The intended use of this product should be verified with Axter Ltd prior to adoption to ensure its suitability and compliance with specifications, project requirements, industry regulations, legislation, good practice, installation techniques and all other relevant guidance. Axter Ltd accepts no liability for non-compliant use of this product.