



TECHNICAL FILE

ALTIFIX BM

- ALTIFIX**
- | | |
|-----------------------------------|-----------------------------------|
| <input type="checkbox"/> AFX-BM | <input type="checkbox"/> AFX-1 |
| <input type="checkbox"/> AFX-PVC | <input type="checkbox"/> AFX-2 |
| <input type="checkbox"/> AFX-ZN | <input type="checkbox"/> AFX-FC |
| <input type="checkbox"/> AFX-KAL1 | <input type="checkbox"/> AFX-ZN10 |



Distributed by

Support & anchoring point

ALTIFIX

PRODUCT BENEFITS

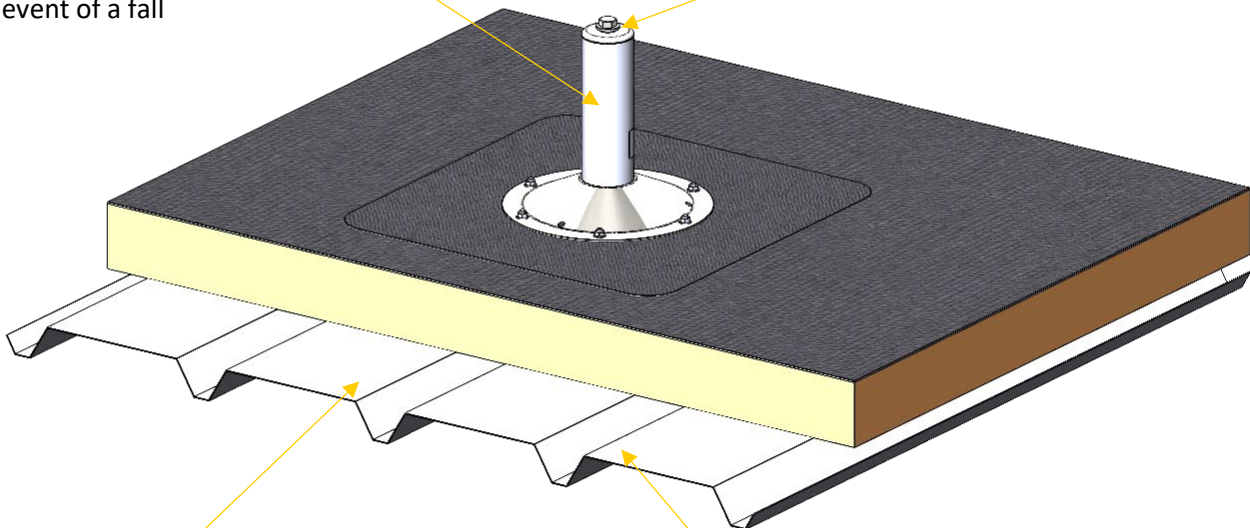
The ALTIFIX on bitumen range is designed for installation on a bitumen waterproofing complex. Versatile, it can be both an anchorage point and a support for a cable or rail lifeline. Its triggering bollard means that in the event of a fall, only the triggered part of the line is replaced, rather than the whole line.

Economical

Thanks to its patented release mechanism, only the released part of the line needs to be replaced in the event of a fall

Versatility

Anchoring point, cable lifeline support or rail line support



Preservation of waterproofing

Installed directly on the waterproofing, independently of the roof structure

Practical

Available for different waterproofing complex substrates: concrete slab, solid steel deck, perforated steel deck, etc.



Distributed by

Support & anchoring point

ALTIFIX

PRESENTATION

The Altifix BM range is a versatile range of anchor points, cable lifeline supports and rail lifeline supports.

It has been designed to be installed on all types of roofs sealed with BM membranes. The support for the waterproofing complex can be a steel sheet with a minimum thickness of 0.75 mm or concrete (thickness compatible with an anchor allowing a pull-out strength of 1000 daN).

TECHNICAL SPECIFICATIONS

- Post material: 304 stainless steel.
- Compatible with all types of steel sheets with a trapezoidal or sinusoidal profile, minimum thickness 75/100 and fixed in accordance with current standards. Wave spacing: 250, 280, 304 and 333mm.
- Compatible with OSB or CTBH roofs with a minimum thickness of 22 mm.
- Compatible with concrete substrates.

CONFORMITY & MARKING

Product marking in accordance with standard EN 365 WVAFXBM and WVAFXBMPA products comply with the:

- ▶ Standard EN 795 : 2012 Type A.
- ▶ CEN/TS 16415:2013



Type tests carried out by:

- APAVE

17 Bd Paul Langevin - 38600 Fontaine

- ALPES CONTROLES office

367 Av du Grand Arietaz - 73000 Chambéry

REMINDER OF STANDARDS

Only when it is technically impossible to provide collective protection can individual protection against falls from height be considered (French Labour Code R4323-61).

Personal protective equipment can also be used as a complement to collective protection. The use of this type of protection imposes organisational constraints, in particular:

- defining, installing and choosing the type of equipment (lifeline, anchorage point, etc.),
- work with at least two people,
- definition of an emergency response plan,
- installation and use instructions,
- staff information and training,
- periodic inspections,
- weather conditions.

As a reminder, extract from recommendation R430 - INRS/CNAMTS :

For buildings to be constructed of any kind, technical provisions to facilitate the prevention of falls from height during subsequent work on the building must be provided for at the design stage.

The ground of technical impossibility cannot therefore be accepted, as it is now up to the project owner to modify his project so that no situation remains that cannot be properly resolved, at least, by the implementation of collective protection.

Technical documentation

Support & anchor point

Altifix on Bitumen roofing Anchor point & lifeline support

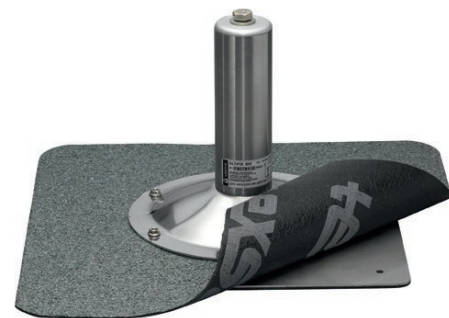
WVAFXBM



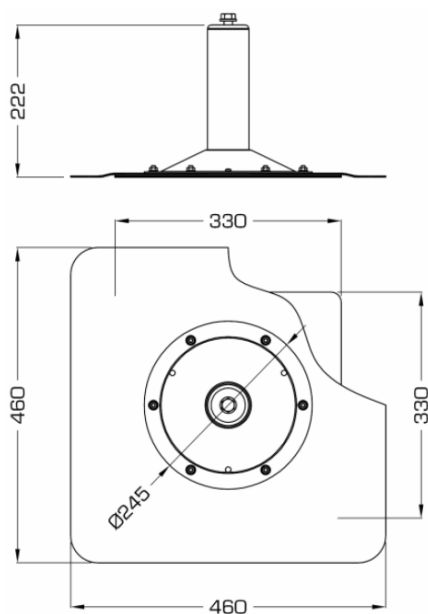
Ind. Nov. 2203

PRODUCT ADVANTAGES

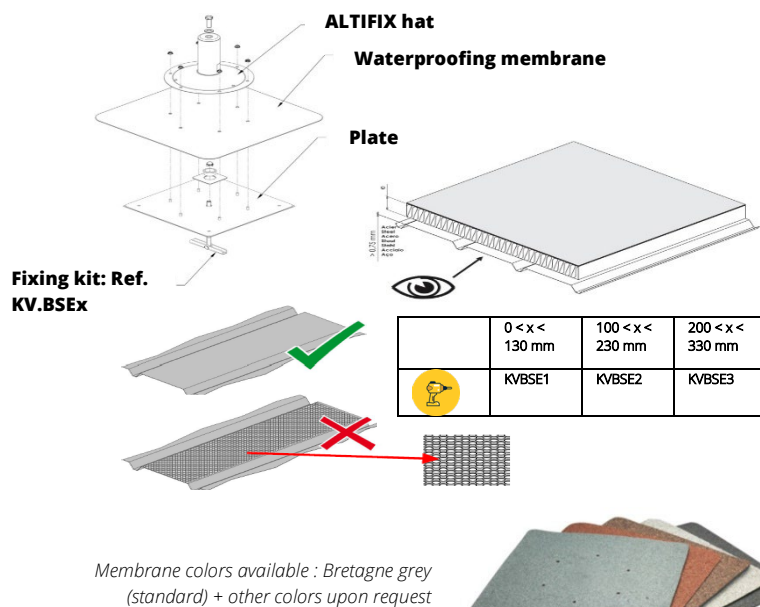
- Installation independent from the framework
- No damage to roof integrity nor compromise on guarantee
- Simplified waterproofing process
- If a fall occurs, the upper part of the post will lie down to limit stresses on the structure and fasteners
- Post can be replaced without hindering the waterproofing integrity



PRODUCT PLAN



INSTALLATION PRINCIPLE



TECHNICAL FEATURES

- Hat material properties: stainless steel
- Plate material properties: EIF coated galvanised steel
- Weight: 4.360 kg

INSTALLATION FEATURES

- Directly fixed on the waterproofing membrane.
- A central fixation insures the link with support of the complex (steel or concrete).
- Fixing kits (not included):
 - Ref.: KV.BSE1, KV.BSE2 or KV.BSE3 for fixation on full steel tray
 - Ref.: ANCR.AFX for fixation on concrete (thickness: 160mm min)
- Provide reinforcement screw kit for end-support or lifeline angle:
 - Waterproofing support tray ref.: KVR.BAC / KVR.BAC2 / KVR.BAC3
 - On concrete slab, ref: KVR.BET
 - On electropolished slab ref.: AFX_BM-EP (delivered without membrane)



Technical documentation

Support & anchor point

Altifix on Bitumen roofing Anchor point or lifeline support

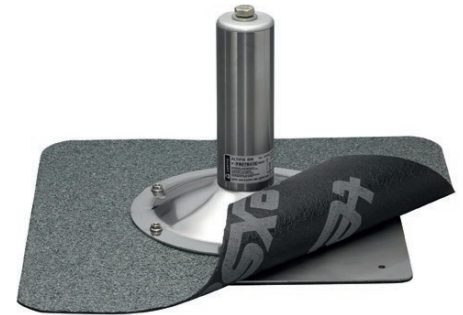
WVAFXBACPRFBM



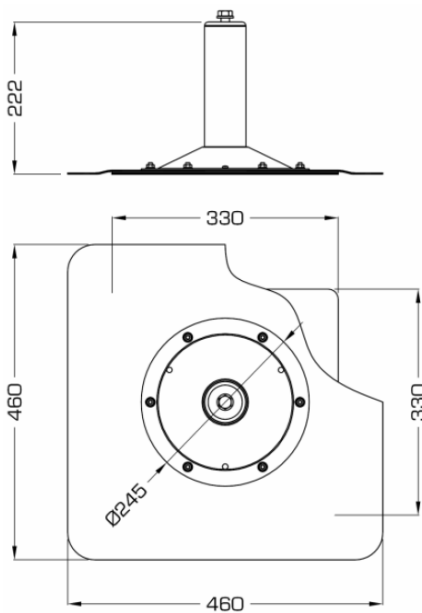
Ind. Nov. 2203

PRODUCT ADVANTAGES

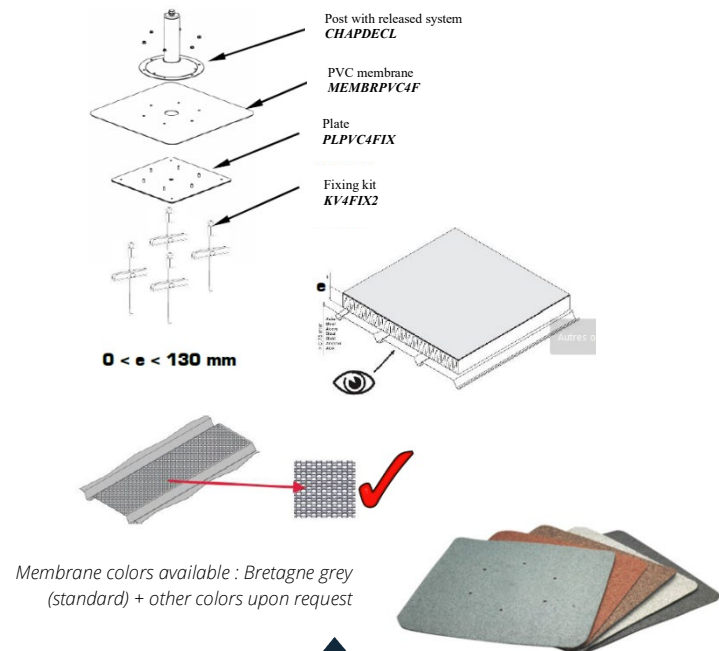
- Installation independent from framework.
- No damage to roof integrity nor compromise on guarantee.
- Simplified waterproofing process.
- The post can be replaced without any operation on the waterproofing.
- In the event of fall, the top part of the post will lay down to reduce the loads generated on the structure and fixings.



PRODUCT PLAN



INSTALLATION PRINCIPLE



TECHNICAL FEATURES

- Hat material properties: stainless steel
- Plate material properties: EIF coated galvanised steel
- Anchor ring material properties: cupro-aluminium
- Weight: 6.0 kg
- Complies with standard: EN 795 Class A

INSTALLATION FEATURES

- Installation directly on the waterproofed membrane.
 - Designed for perforated decks.
 - Associated fixing kit:
Ref. KV.4FIX(x) for fixing on perforated steel deck
- | | |
|------------------|------------------|
| <i>KV4FIX2</i> | 0 < e < 130 mm |
| <i>KV4FIX230</i> | 100 < e < 230 mm |
| <i>KV4FIX330</i> | 200 < e < 330 mm |



Technical documentation

Support & anchor point

Altifix on Bitumen roofing Anchor point

WVAFXBMPA



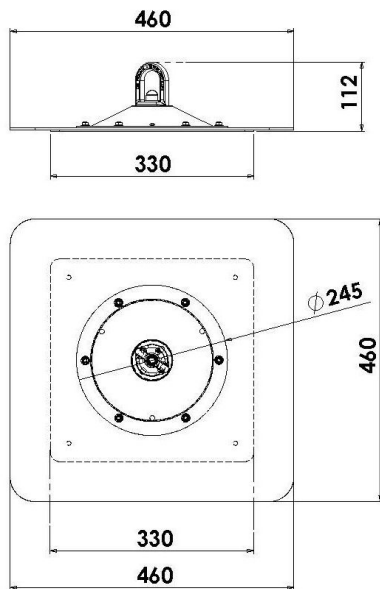
Ind. Nov. 2203

PRODUCT ADVANTAGES

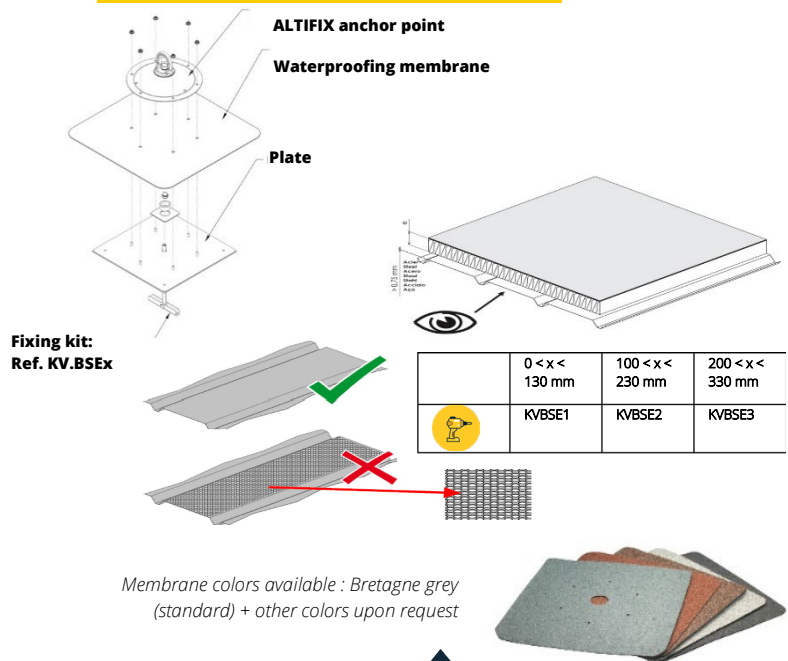
- Can be used in all directions thanks to the rotating anchor ring
- Installation independent from the framework
- No damage to roof integrity nor compromise on guarantee
- Simplified waterproofing process



PRODUCT PLAN



INSTALLATION PRINCIPLE



TECHNICAL FEATURES

- Material properties hat: stainless steel
- Material properties plate: EIF coated galvanised steel
- Material properties ring: copper-aluminium
- Weight: 4.320 kg
- Complies with standard: EN 795 Class A

INSTALLATION FEATURES

- Installation directly on the waterproofed membrane
- Link between post and structure (steel or concrete) guaranteed with a central fixing
- Fixing kits (not included):
 - ref.: KV.BSEx for steel deck (without standing seams)
 - ref.: ANCR.AFX for concrete (thickness 160mm min – insulation thickness 160mm max)
- Available in electro-polished finish ref: AFX_BM-EP (membrane not included)



Technical documentation

Support & anchor point

Altifix on Bitumen roofing Anchor point

WVAFXBMPA2



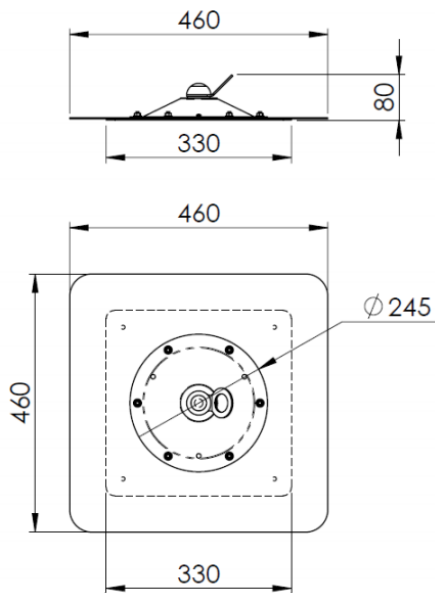
Ind. Nov. 2203

PRODUCT ADVANTAGES

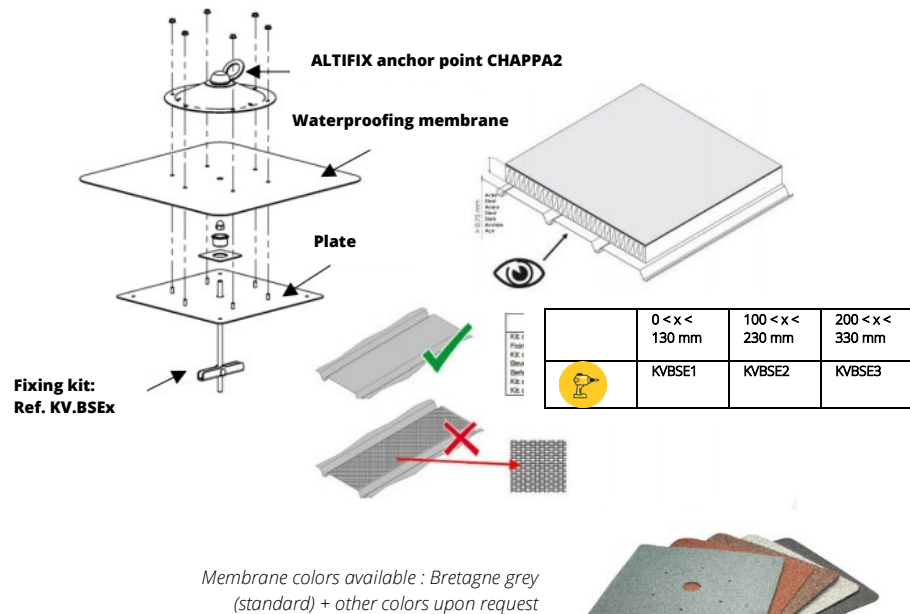
- Can be used in all directions thanks to the rotating anchor ring
- Installation independent from the framework
- No damage to roof integrity nor compromise on guarantee
- Simplified waterproofing process



PRODUCT PLAN



INSTALLATION PRINCIPLE



TECHNICAL FEATURES

- Material properties hat: stainless steel
- Material properties plate: EIF coated galvanised steel
- Material properties ring: stainless steel
- Weight: 4.320 kg
- Complies with standard: EN 795 Class A

INSTALLATION FEATURES

- Installation directly on the waterproofed membrane
- Link between post and structure (steel or concrete) guaranteed with a central fixing
- Fixing kits (not included):
 - ref.: KV.BSEx for steel deck (without standing seams)
 - ref.: ANCR.AFX for concrete (thickness 160mm min – insulation thickness 160mm max)



Technical documentation

Support & anchor point

Altifix on Bitumen roofing Rail support

WVRAFXB



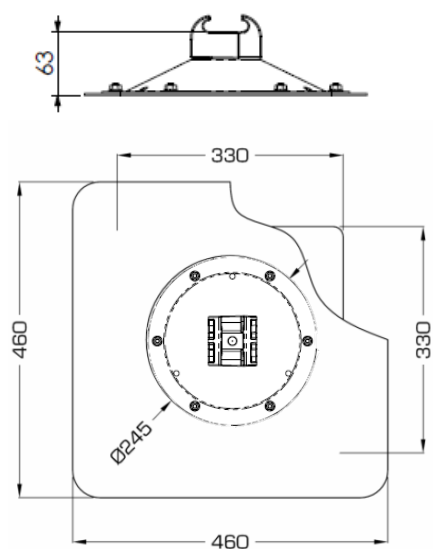
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PRODUCT ADVANTAGES

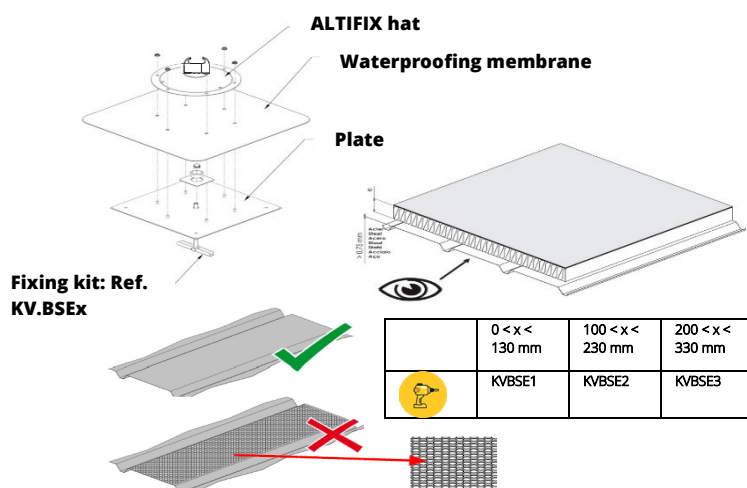
- Independant installation from the framework.
- Installation without intervention on the underside.
- Simplified anchor post waterproofing process.



PRODUCT PLAN



INSTALLATION PRINCIPLE



Membrane colors available : Bretagne grey (standard) + other colors upon request



TECHNICAL FEATURES

- Hat material properties: stainless steel
- Plate material properties: galvanized steel
- Weight: 4.360 kg

INSTALLATION FEATURES

- Directly fixed on the waterproofing membrane.
- A central fixation insures the link with support of the complex (steel or concrete).
- Fixing kits (not included):
 - Ref.: KV.BSE1, KV.BSE2 or KV.BSE3 for fixation on full steel tray
 - Ref.: ANCR.AFX for fixation on concrete (thickness : 160mm min)
- On end-support or lifeline angle, anticipate reinforcement screw kit:
 - Waterproofing support tray ref.: KVR.BAC / KVR.BAC2 / KVR.BAC3
 - On electropolished slab ref.: AFX_BM-EP (delivered without membrane)





Distributed by

apave
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 Fax +33.(0)4.76.53.32.40
 Lab38meca@apave.com

ATTESTATION DE CONFORMITE N° AT4749395-2

1. Demandeur

Demandeur : Monsieur Rodolphe ARGOUD
 Raison sociale : VERTIC SAS - Parc Technologique - 691 Chemin des fontaines – CIDEX 8F
 38190 Bernin - vertic@vertic.fr

2. Matériel considéré

Fabricant : VERTIC
 Référence : Ancre Tourant sur Toiture étanchée Bitumineuse **AFX_BM-PA + KV.4FIX2**
 Type d'équipement : Dispositifs d'ancrages Norme NF EN 795 Classe A1

3. Description / Nomenclature

Les éléments constitutifs d'un ancrage **AFX_BM-PA + KV.4FIX2** sont :

- Kit de fixation 4 ancrages pour bac perforé en plage Réf : **KV.4FIX2**
- Sous-Ensemble Chapeau + Anneau Tournant Réf : **CHAP.PA**
- Sous-Ensemble Plateau avec 4 trous Ø 10mm Réf : **PL_BM4FIX**
- Sous-Ensemble Membrane BM – Réf : **MEMBR.BM4FIX**



Les caractéristiques du bac support sont :

- Bac Acier de type 1010.4.42N perforé en plage
- Entraxe des ondes 252.5mm
- Epaisseur : 0.75 mm

Description détaillée dans le dossier technique de l'ancrage **AFX_BM-PA + KV.4FIX2** rédigé par Sylvain MANON (VERTIC SAS).

4. Référentiel

Le système d'ancrage **AFX_BM-PA + KV.4FIX2** est testé suivant la méthodologie d'essai décrite dans la Norme NF EN 795 Classe A1 de Septembre 1996, à savoir un test dynamique (Chute d'une masse de 100 kg sur 2.5 mètres) et un test statique (Maintien à 10 kN pendant 3 minutes).

5. Conclusion

Le système d'ancrage **AFX_BM-PA + KV.4FIX2** a subi avec succès les essais dynamiques et statiques de la Norme NF EN 795 Classe A1 de Septembre 1996. Chaque essai a été effectué dans le sens parallèle et perpendiculaire aux nervures des bacs. Le test statique a été poussé jusqu'à une valeur de 12 kN. Le système d'ancrage **AFX_BM-PA + KV.4FIX2** est conforme aux exigences de la Norme NF EN 795 Classe A1 de Septembre 1996

Le 17 juillet 2009
 Le Chargé d'Affaires

Guillaume QUINTIN

Cette attestation comporte une page. Elle est établie en deux exemplaires originaux transmis au demandeur. Aucun duplicata ne sera délivré

Cette attestation ne constitue pas le justificatif prévu par le code de la consommation (article L-115-27) par lequel un organisme distinct du fabricant atteste à des fins commerciales qu'un produit est conforme à des caractéristiques dans un référentiel déposé auprès de l'autorité administrative

CETE APAVE SUDEUROPE

Société par Actions Simplifiée au Capital de 3 050 000 € - N° SIREN : 775 581 812 – Site Internet : www.apave.com
 Locataire-gérant du fonds de commerce du CETE APAVE Lyonnaise

LYON 177 route de Sain Bel BP 3 69611 TASSIN CEDEX Tél. : 04 72 32 52 62 - Fax : 04 72 32 52 00	MARSEILLE 8 rue Jean-Jacques Vermaaza Z.A.C. Saumey-Silou – BP 133 13322 MARSEILLE CEDEX 18 Tél. : 04 96 15 22 60 - Fax : 04 96 15 22 61	BORDEAUX Z.I. avenue Gay Lussac BP 3 33370 ARTIGUES-près-BORDEAUX Tél. : 05 56 77 27 27 - Fax : 05 56 77 27 00
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38600 FONTAINE - France
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Fax +33.(0)4.76.53.32.40
Lab38meca@apave.com

ATTESTATION DE CONFORMITE N° AT4749395-3

1. Demandeur

Demandeur : Monsieur Rodolphe ARGOUD
Raison sociale : VERTIC SAS - Parc Technologique - 691 Chemin des fontaines - CIDEX 8F
38190 Bernin - vertic@vertic.fr

2. Matériel considéré

Fabricant : VERTIC
Référence : Potelet d'ancrage ALTIFIX sur Toiture étanchée Bitumineuse AFX_BM + KV.4FIX2
Type d'équipement : Dispositifs d'ancrages Norme NF EN 795 Classe A1

3. Description / Nomenclature

Les éléments constitutifs d'un potelet d'ancrage AFX_BM + KV.4FIX2 sont :

- Kit de fixation 4 ancrages pour bac perforé en plage Réf : KV.4FIX2
- Sous-Ensemble Chapeau + Déclencheur ALTIFIX Réf : CHAP.DECL
- Sous-Ensemble Plateau avec 4 trous Ø 10mm Réf : PL_BM4FIX
- Sous-Ensemble Membrane BM - Réf : MEMBR.BM4FIX



Les caractéristiques du bac support sont :

- Bac Acier de type 1010.4.42N perforé en plage
- Entraxe des ondes 252.5mm
- Epaisseur : 0.75 mm

Description détaillée dans le dossier technique de l'ancrage AFX_BM + KV.4FIX2 rédigé par Sylvain MANON (VERTIC SAS).

4. Référentiel

Le système d'ancrage AFX_BM + KV.4FIX2 est testé suivant la méthodologie d'essai décrite dans la Norme NF EN 795 Classe A1 de Septembre 1996, à savoir un test dynamique (Chute d'une masse de 100 kg sur 2.5 mètres) et un test statique (Maintien à 10 kN pendant 3 minutes).

5. Conclusion

Le système d'ancrage AFX_BM + KV.4FIX2 a subi avec succès les essais dynamiques et statiques de la Norme NF EN 795 Classe A1 de Septembre 1996. Chaque essai a été effectué dans le sens parallèle et perpendiculaire aux nervures des bacs. Le test statique a été poussé jusqu'à une valeur de 14 kN.

Le système d'ancrage AFX_BM + KV.4FIX2 est conforme aux exigences de la Norme NF EN 795 Classe A1 de Septembre 1996

Le 17 juillet 2009
Le Chargé d'Affaires

Guillaume QUINTIN

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CETE APAVE SUDEUROPE

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**Bureau Alpes Contrôles**

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bac.chambery@alpes-controles.fr

**CONFORMITY CERTIFICATE
to the static and dynamic tests according to**

- **FprEN 795:2012 F**
- **CEN/TS 16415:2013 E**

I. APPLICANT

Name: Mr ARGOUÉ
Company: VERTIC - 691, Chemin des fontaines - CIDEX 8F - 38190 BERNIN - France

II. CONSIDERED EQUIPMENT

Trade mark: **VERTIC ALTIPIX**
Type of Equipment: **Type A anchor device**
Reference : **AFX_BM**

III. REFERENTIAL

The device has been tested according to the method described in chapters §5.3.2, §5.3.3 and §5.3.4 of the document FprEN 795:2012 F as well as chapters §5.2.2 and §5.2.3 of the technical specification CEN/TS 16415:2013 E.

IV. CONDITION FOR USE

- This device is not considered as personal protective equipment (P.P.E.) against falls from a height.
- This device is designed to be used with personal protective equipment (P.P.E.) against falls from a height, in the longitudinal direction of the steel deck ribs.
- Designed to be fixed on vertical, horizontal or sloped surfaces.
- The AFX_BM device is only intended to be installed on minimum thickness of 0.75 mm trapezoidal wave form steel tray roof cover, with 300mm maximum insulation and covered by 2 crossed layers of bituminous membrane.

V. DESCRIPTION

A detailed description of the equipment AFX_BM is provided in the document « ALTIPIX® ancrage pour toitures BBC » written by Mr Cipriani and dated 03/01/2014.

VI. CONCLUSION

A sample of an AFX_BM anchor device, built by VERTIC Company, successfully passed the static and dynamic tests carried out on the 21/11/2013. These devices complies with the requirements of chapters §5.3.2, §5.3.3 and §5.3.4 of the document FprEN 795:2012 F as well as chapters §5.2.2 and §5.2.3 of the technical specification CEN/TS 16415:2013 E.

Chambery (FRANCE), 26/02/2014.

The inspector,

Mr Sylvain PERRIN



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Bureau Alpes Contrôles

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bac.chambery@alpes-controles.fr

CONFORMITY CERTIFICATE to the static and dynamic tests according to NF EN 795:1996 + A1:2000

I. APPLICANT

Name: Mr ARGOUD
Company: VERTIC - 691, Chemin des fontaines - CIDEX 8F - 38190 BERNIN - France

II. CONSIDERED EQUIPMENT

Trade mark: **VERTIC ALTIFIX**
Type of Equipment: **Type A anchor device**
Reference : **AFX_BM**

III. REFERENTIAL

The device has been tested according to the method described in chapters §5.2.1, §5.2.2, §5.3.2 and §5.3.3 of the standard NF EN 795:1996 + A1:2000.

IV. CONDITION FOR USE

- This device is not considered as personal protective equipment (P.P.E.) against falls from a height.
- This device is designed to be used with personal protective equipment (P.P.E.) against falls from a height, in the longitudinal direction of the steel deck ribs.
- Designed to be fixed on vertical, horizontal or sloped surfaces.
- The AFX_BM device is only intended to be installed on minimum thickness of 0.75 mm trapezoidal wave form steel tray roof cover, with 300mm maximum insulation and covered by 2 crossed layers of bituminous membrane.

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Chambéry (FRANCE), 26/02/2014.

The inspector,

Mr Sylvain PERRIN



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CONFORMITY CERTIFICATE to the static and dynamic tests according to

- **FprEN 795:2012 F**
- **CEN/TS 16415:2013 E**

I. APPLICANT

Name: Mr ARGOUD
Company: VERTIC - 691, Chemin des fontaines - CIDEX 8F - 38190 BERNIN - France

II. CONSIDERED EQUIPMENT

Trade mark: **VERTIC ALTIFIX**
Type of Equipment: **Type A anchor device**
Reference : **AFX_BM-PA**

III. REFERENTIAL

The device has been tested according to the method described in chapters §5.3.2, §5.3.3 and §5.3.4 of the document FprEN 795:2012 F as well as chapters §5.2.2 and §5.2.3 of the technical specification CEN/TS 16415:2013 E.

IV. CONDITION FOR USE

- This device is not considered as personal protective equipment (P.P.E.) against falls from a height.
- This device is designed to be used with personal protective equipment (P.P.E.) against falls from a height, in the longitudinal direction of the steel deck ribs.
- Designed to be fixed on vertical, horizontal or sloped surfaces.
- The AFX_BM-PA device is only intended to be installed on minimum thickness of 0.75 mm trapezoidal wave form steel tray roof cover, with 300mm maximum insulation and covered by 2 crossed layers of bituminous membrane.

V. DESCRIPTION

A detailed description of the equipment AFX_BM-PA is provided in the document « ALTIFIX® ancrage pour toitures BBC » written by Mr Cipriani and dated 03/01/2014.

VI. CONCLUSION

A sample of an AFX_BM-PA anchor device, built by VERTIC Company, successfully passed the static and dynamic tests carried out on the 21/11/2013. These devices complies with the requirements of chapters §5.3.2, §5.3.3 and §5.3.4 of the document FprEN 795:2012 F as well as chapters §5.2.2 and §5.2.3 of the technical specification CEN/TS 16415:2013 E.

Chambéry (FRANCE), 26/02/2014.

The inspector,

Mr Sylvain PERRIN

SPN/730XD00A-2a/SPN

Page 1/1

Bureau Alpes Contrôles - SAS au capital de 500 000 € - SIREN : 351 812 698 - APE : 7120B - Id. TVA : FR 21 351 812 698

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CONFORMITY CERTIFICATE to the static and dynamic tests according to NF EN 795:1996 + A1:2000

I. APPLICANT

Name: Mr ARGOUD
Company: VERTIC - 691, Chemin des fontaines - CIDEX 8F - 38190 BERNIN - France

II. CONSIDERED EQUIPMENT

Trade mark: **VERTIC ALTIFIX**
Type of Equipment: **Type A anchor device**
Reference : **AFX_BM-PA**

III. REFERENTIAL

The device has been tested according to the method described in chapters §5.2.1, §5.2.2, §5.3.2 and §5.3.3 of the standard NF EN 795:1996 + A1:2000.

IV. CONDITION FOR USE

- This device is not considered as personal protective equipment (P.P.E.) against falls from a height.
- This device is designed to be used with personal protective equipment (P.P.E.) against falls from a height, in the longitudinal direction of the steel deck ribs.
- Designed to be fixed on vertical, horizontal or sloped surfaces.
- The AFX_BM-PA device is only intended to be installed on minimum thickness of 0.75 mm trapezoidal wave form steel tray roof cover, with 300mm maximum insulation and covered by 2 crossed layers of bituminous membrane.

V. DESCRIPTION

A detailed description of the equipment AFX_BM-PA is provided in the document « ALTIFIX® ancrage pour toitures BBC » written by Mr Cipriani and dated 03/01/2014.

VI. CONCLUSION

A sample of an AFX_BM-PA anchor device, built by VERTIC Company, successfully passed the static and dynamic tests carried out on the 21/11/2013. These devices complies with the requirements of chapters §5.2.1, §5.2.2, §5.3.2 and §5.3.3 of the standard NF EN 795:1996 + A1:2000.

Chambery (FRANCE), 26/02/2014.

The inspector,
Mr Sylvain PERRIN

SPN/730X000A-2b/SPN

Page 1/1

Bureau Alpes Contrôles - SAS au capital de 500 000 € - SIREN : 351 812 698 - APE : 7120B - Id. TVA : FR 21 351 812 698
Head Office : 3, Impasse des Prairies - PAE Les Glaisins - 74940 ANNECY LE VIEUX - FRANCE
Tél. : +33 (0)4 50 64 06 75 - Fax : +33 (0)4 50 64 06 02 - contact@alpes-controles.fr - www.alpes-controles.fr



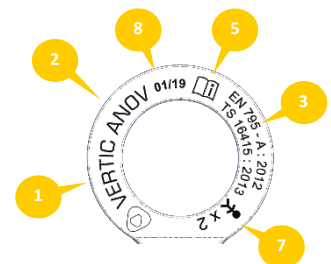
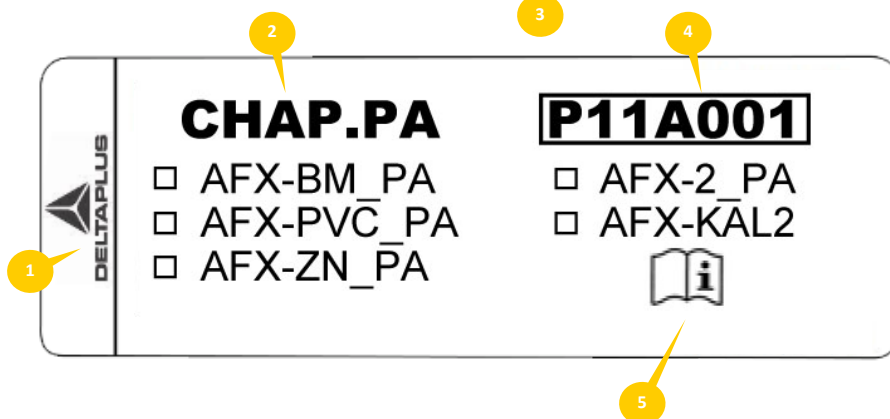
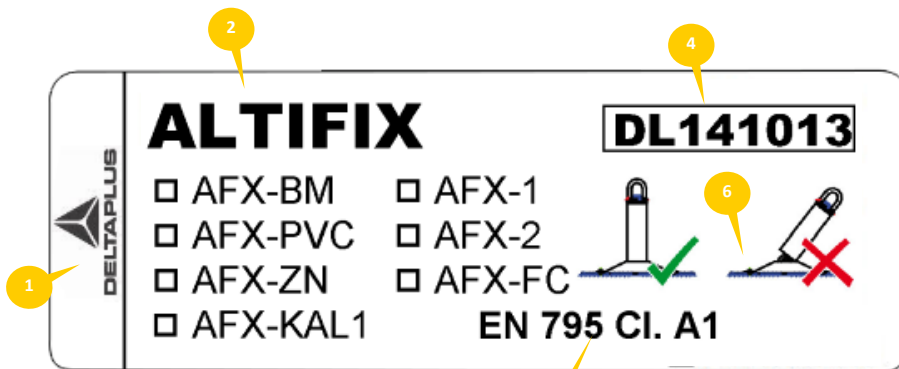
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Support & anchoring point

ALTIFIX

Product marking in compliance with EN 365

- 1 Manufacturer's name
- 2 Product name / Reference(s)
- 3 Standards to which the product conforms
- 4 Batch number
- 5 Pictogram inviting you to read the instructions
- 6 Pictogram warning not to use the product if it is triggered
- 7 Maximum number of people authorised to connect simultaneously
- 8 Date of manufacture of the ring





Support & anchoring point

ALTIFIX

Information

This manual is intended for users and installers of WVAFXBM, WVAFXBMPA and WVRAFXBM products. It must be read and understood by each person before using and/or installing the product. If you have any doubts, problems of understanding, or if a problem arises which is not dealt with in this document, contact your Delta Plus Systems representative or the Delta Plus Systems technical service directly.

These instructions must always be available and accessible to the user. Any activity at height is dangerous and may cause accidents, serious injury or death. You are responsible for practising and learning the techniques for using the appropriate equipment. Before using the product, you must therefore read and understand all the information contained in the instruction manual. Failure to heed any of these warnings could result in serious injury or death. For safety reasons, the user must be in good health and not be under the influence of medication, alcohol or drugs.

This equipment must only be used by people who are trained and competent to use it safely. The use of these products is strictly forbidden if they are incorrectly installed or damaged. No modification of or addition to the equipment may be made without the prior written consent of Delta Plus Systems, and any repairs must be carried out in accordance with Delta Plus Systems operating procedures.

These products must not be used beyond their limits, or in any other unforeseen situation.

Before any use of the anchor, a rescue plan must be put in place to deal with any emergencies that may arise during work.

Before and during use, consideration should of course be given to ensuring that any such rescue can be carried out safely and effectively.

Instructions for use

The Altifix on BM range is designed to be installed on all roofs sealed with BM membranes. The support for the waterproofing complex can be a steel sheet with a minimum thickness of 0.75 mm or concrete (thickness compatible with an anchor allowing a pull-out strength of 1000 daN).

WVAFXBMPA or WVAFXBM anchors are suitable for use by a single person with the following authorised connections:

- Guided type fall arresters EN353-2
- Automatic fall arresters EN360
- Energy absorber EN355

Authorised connections must be made to the person using a fall arrest harness complying with EN Standard 361.

The fall arrest harness is the only body-gripping device permitted to be used in a fall arrest system.

The WVAFXBM anchoring point is fitted with a system that is triggered in the event of a fall. The body of the post tilts along the axis of the fall and absorbs part of the energy to protect the roof.

The WVAFXBM post can be used as a Delta Plus Systems lifeline support fitted with an energy absorber (Ref. WVABS55) to limit the force at the end in the event of a fall.

The WVCHAPRSUP support can be used as a Delta Plus Systems rail lifeline support.



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Support & anchoring point

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Important - Prevention before use

Visually check that the anchor is in good condition:

- No permanent deformation of the anchoring ring
- No trace of corrosion
- Fasteners in good condition (nuts tightened, etc.).
- The AFX_BM is fitted with a release system. If the body is not fully and firmly in contact with the plate supporting it, this means that a significant stress has occurred. Do not use the anchorage point until it has been checked and repaired by a competent person authorised by Delta Plus Systems.

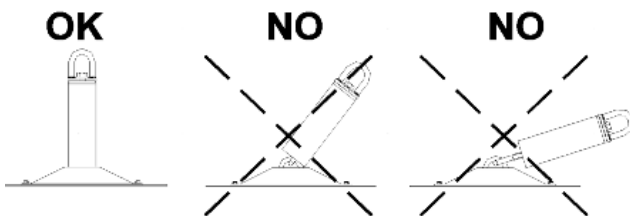
At height, your life depends on the equipment used. Any doubts as to the safety of the device should be reported to the manufacturer and to the person responsible for the installation. If the bollard is struck, do not use the product again until it has been checked and brought back into compliance by a competent person authorised by the manufacturer.

environment of use: aggressive environments, marine environment, sharp edges, extreme temperatures, chemicals, etc.).

A product must be scrapped when :

- ▶ It is over 10 years old and made of plastic or textile.
- ▶ The result of the product checks is not satisfactory.
- ▶ You have doubts about its reliability.
- ▶ You don't know its full history of use.
- ▶ Its use is obsolete (changes in legislation, standards, technology or incompatibility with other equipment, etc.).

Destroy these products to prevent future use.



Service life - Disposal

For Delta Plus Systems products, plastics and textiles, the maximum service life is 10 years from the date of manufacture, with the exception of the WVABS55 reference, as long as an annual inspection is carried out. There is no limit for metal products.

ATTENTION, an exceptional event may lead you to reject a product after a single use (type and intensity of use),



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Support & anchoring point

ALTIFIX

Maintenance and servicing

Any modification or addition to the equipment without the prior written consent of the manufacturer is prohibited.

Any repairs to system components must be carried out in accordance with Delta Plus Systems procedures. If in doubt about the condition of the product, replace it with an original Delta Plus Systems part.

A soiled product must be washed and rinsed with clean water, then dried. It must not be brought into contact with corrosive or aggressive materials, or stored at extreme temperatures. All chemical products and solvents can alter the resistance of the system components. If the product is likely to come into contact with these products, please let us know the exact name of the chemical components and we will reply after an appropriate study. It is known that equipment in use degrades progressively and it is therefore difficult to give a precise lifespan to the product without knowing the intensity and frequency of use. Similarly, an exceptional situation may limit the lifespan to a single use. Certain environments accelerate product ageing (salt, sand, snow, chemical environment, etc.) (non-exhaustive list).

The condition of the product must be checked at least every 12 months by an authorised and competent person in strict compliance with Delta Plus Systems operating procedures. These periodic and regular examinations are necessary because the safety of the user is linked to the maintenance of the efficiency and resistance of the equipment.

Checks should include: general good condition, condition of fasteners, tightening torque, legibility of markings, etc.

The inspection and the results must be recorded in writing in a maintenance log using the identification and inspection sheet supplied by Delta Plus Systems. Repairs to products in the Altifix BM range are prohibited. If in doubt about the condition of the product, replace it with an original Delta Plus Systems part.

Our Delta Plus Training centre can train you in all these maintenance, overhaul and repair operations for Delta Plus Systems products and also carries out all these maintenance operations.

Delta Plus Systems can also help you check, inspect and maintain your permanent fall arrest and PPE safety systems. You can also ensure that your teams are fully conversant with the use of these fall arrest solutions and the basic concepts they need to know to work safely at height, by offering them comprehensive, customised training courses run by our training centre.



Delta Plus Training - 691, Chemin des Fontaines -
Cidex 8F - 38190 BERNIN - France



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Support & anchoring point

ALTIFIX

Installation

For safety reasons, it is essential that the anchorage point is always correctly positioned and that the work is carried out in such a way as to minimise the risk of falls and the height of fall. It is also important to check that there is sufficient clearance below the user in the workplace, so that in the event of a fall there is no collision with the ground, and no other obstacle in the path of the fall. The anchorage must therefore be installed with all these safety parameters in mind. The product must be installed by installers approved or trained by Delta Plus Systems. Installers must ensure that the support materials in which the structural anchoring devices are fixed are suitable. A qualified engineer should verify by calculation that the design and installation data are compatible with the force applied in the type test. The suitability of structural materials should be verified by the installer by testing a sample of the material. It is recommended that each structural anchor, once fixed in the material under consideration, be subjected to an axial tensile force of 5KN. The load should be maintained for at least 15 seconds.

Delta Plus Systems cannot be held responsible for incorrect installation of the anchoring point.

A schematic plan should be affixed to the building so that it is visible to all.

Where several anchor points are to be photographed for identification purposes, it is recommended that the anchor devices are marked with numbers and that this numbering is incorporated into the anchor device inspection records and the ground plan of the installation area.



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Support & anchoring point

ALTIFIX



GENERAL NOMENCLATURE



1

Trigger post

WVAFXBM

For solid steel pan (BM membrane included)

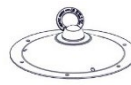


2

Trigger post

WVAFBACPRFBM

For perforated steel pan (BM membrane included)



3

Anchor point

WVAFXBMPA2

With stainless steel anchoring ring (BM membrane included)

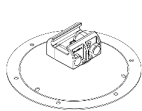


4

Anchor point

WVAFXBMPA

With aluminium-copper anchoring ring (BM membrane included)



5

Rail support

WVRAFxBM

(BM membrane included)



6

Rocker mounting kit

WVKVBSEx

For solid steel pan
Lengths: 130, 230, 330 mm



7

Chemical fixing kit

WVANCRAFX

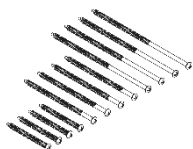


8

Reinforcement fixing kit for steel pan

WVKVRBAC

For installation in ends and corners



9

Reinforcement fixing kit for concrete slab

WVKVRBET

For installation in ends and corners



10

Bitumen sleeve - WVKV4FIXx

For perforated steel pan -
Available in 3 lengths: 130, 230,
330 mm

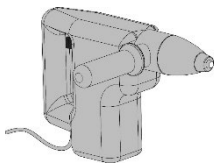


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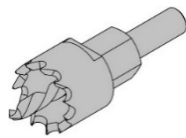
Support & anchoring point

ALTIFIX

TOOLS & PERSONNEL REQUIRED

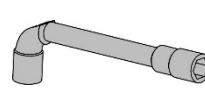


1



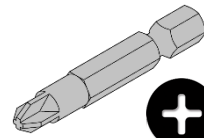
2

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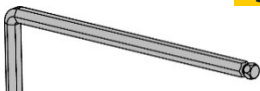


3

10 / 17



4



5

6



6

x 1



7



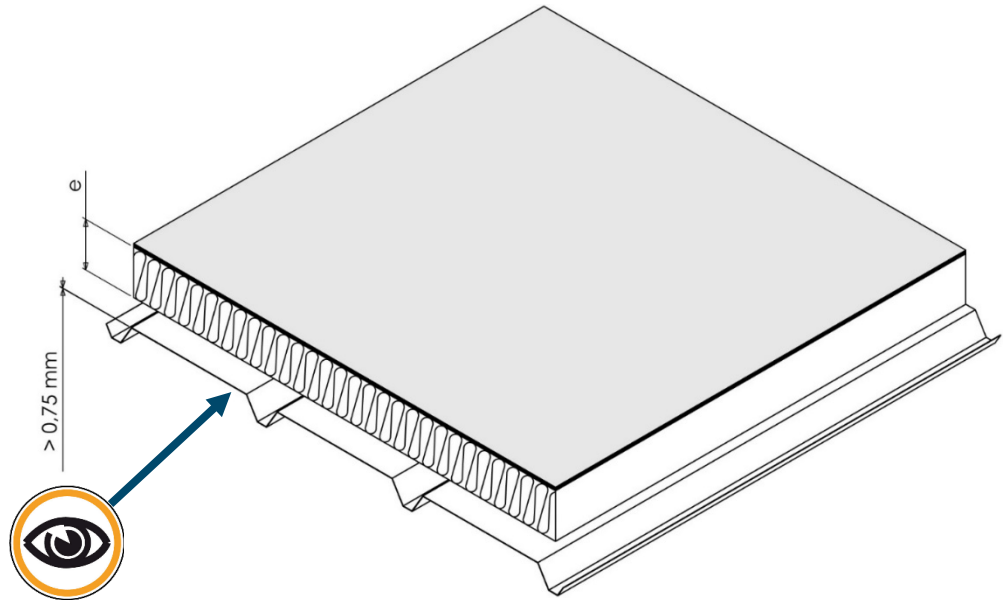
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Support & anchoring point

ALTIFIX

PRE-REQUISITES

Steel
Steel
Acero
Staal
Stahl
Acciaio
Aço



		$0 < e < 130$ mm	$100 < e < 230$ mm	$200 < e < 330$ mm
Fixing kit		KVBSE1	KVBSE2	KVBSE3
Fixing kit				
Kit de fijación				
Bevestigingskit				
Befestigungssatz				
Kit di fissaggio		KV4FIX2	KV4FIX230	KV4FIX330
Kit de fixação				

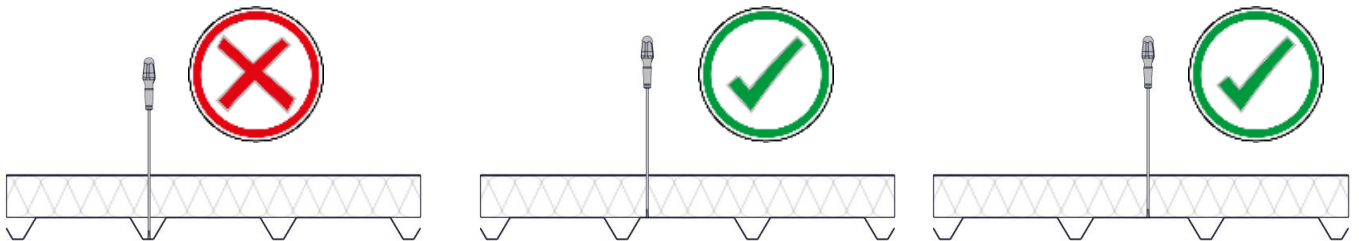


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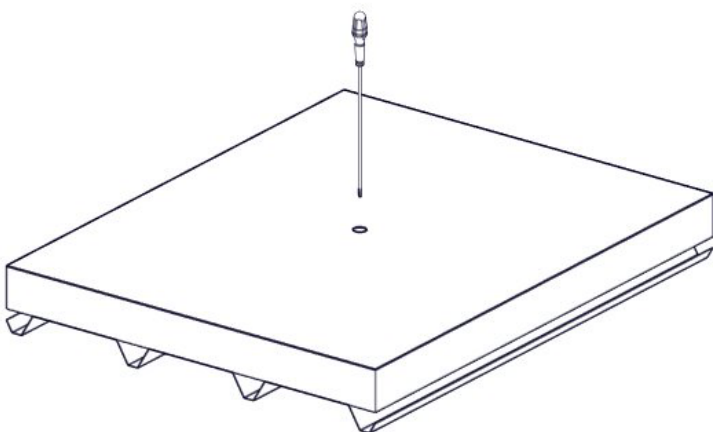
Support & anchoring point

ALTIFIX

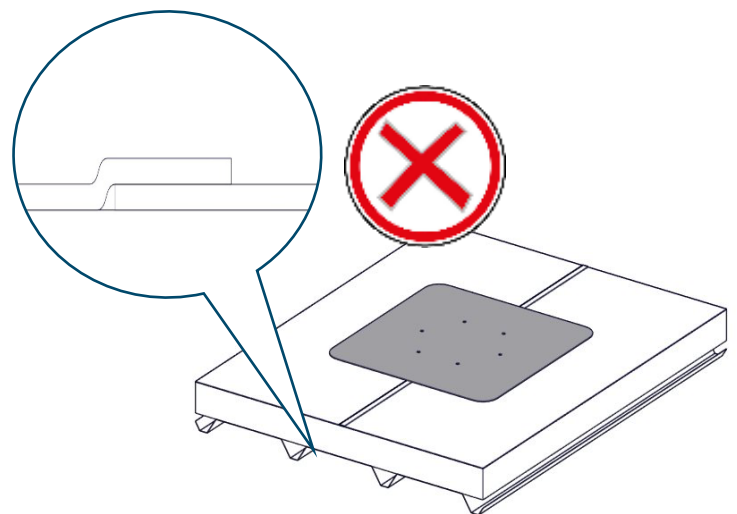
1



2



3



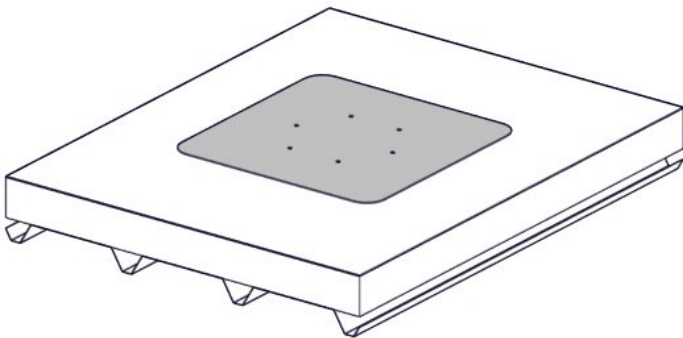


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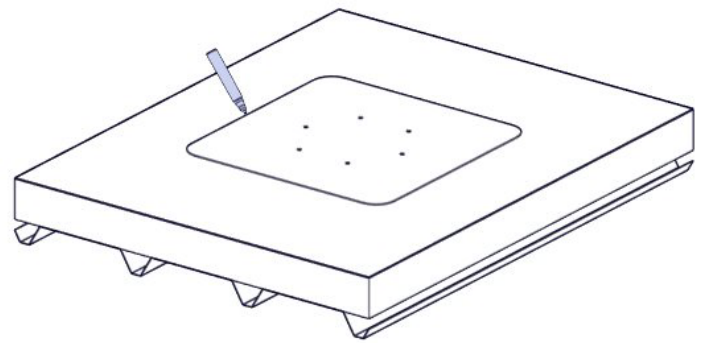
Support & anchoring point

ALTIFIX

4

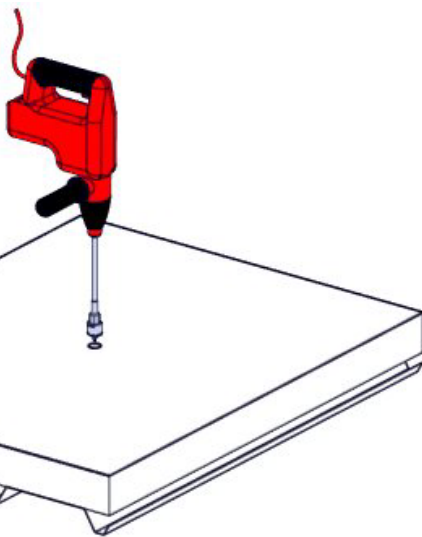


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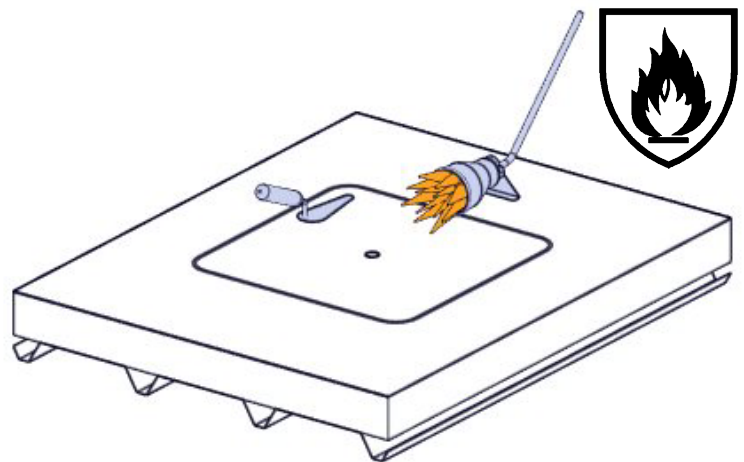


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Ø27



7



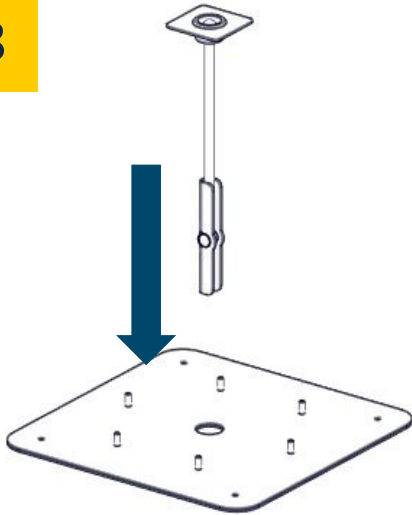


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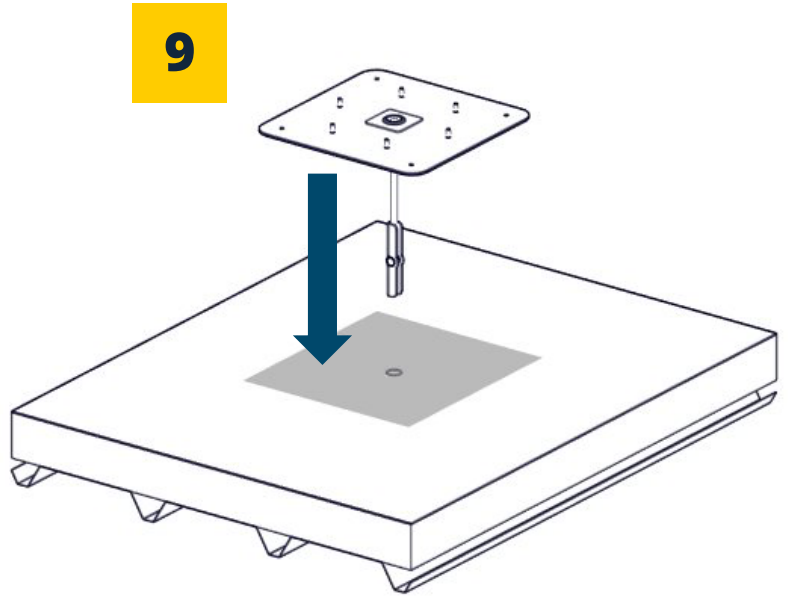
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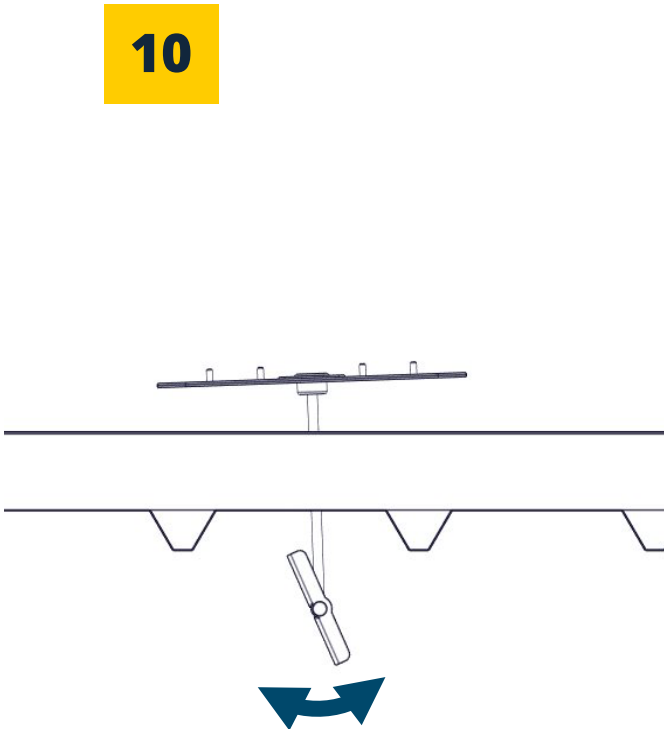
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9



10



11



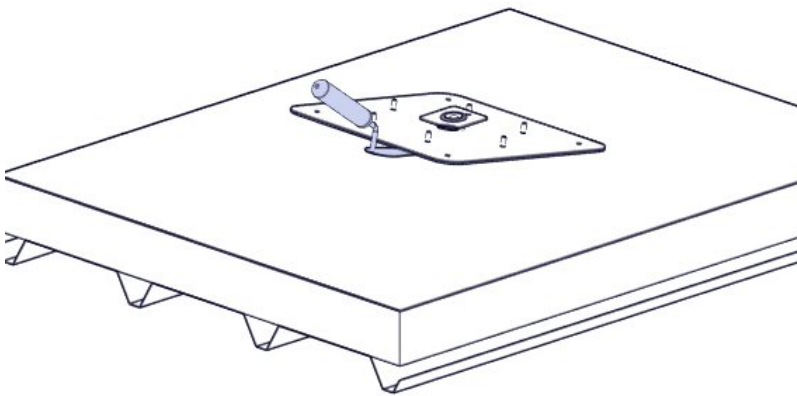


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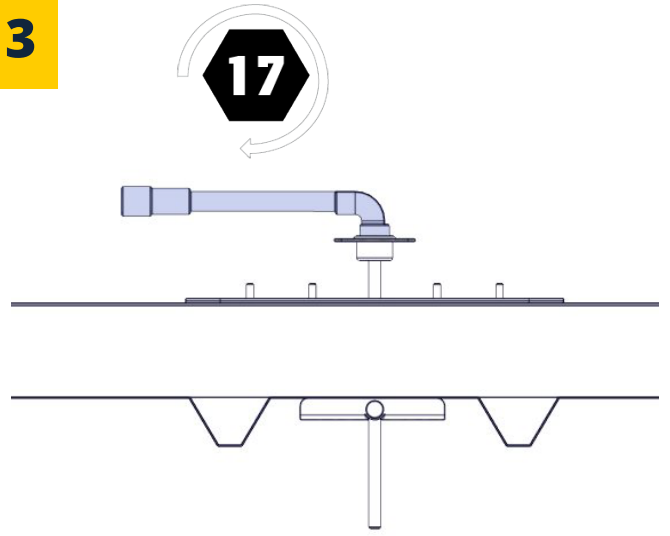
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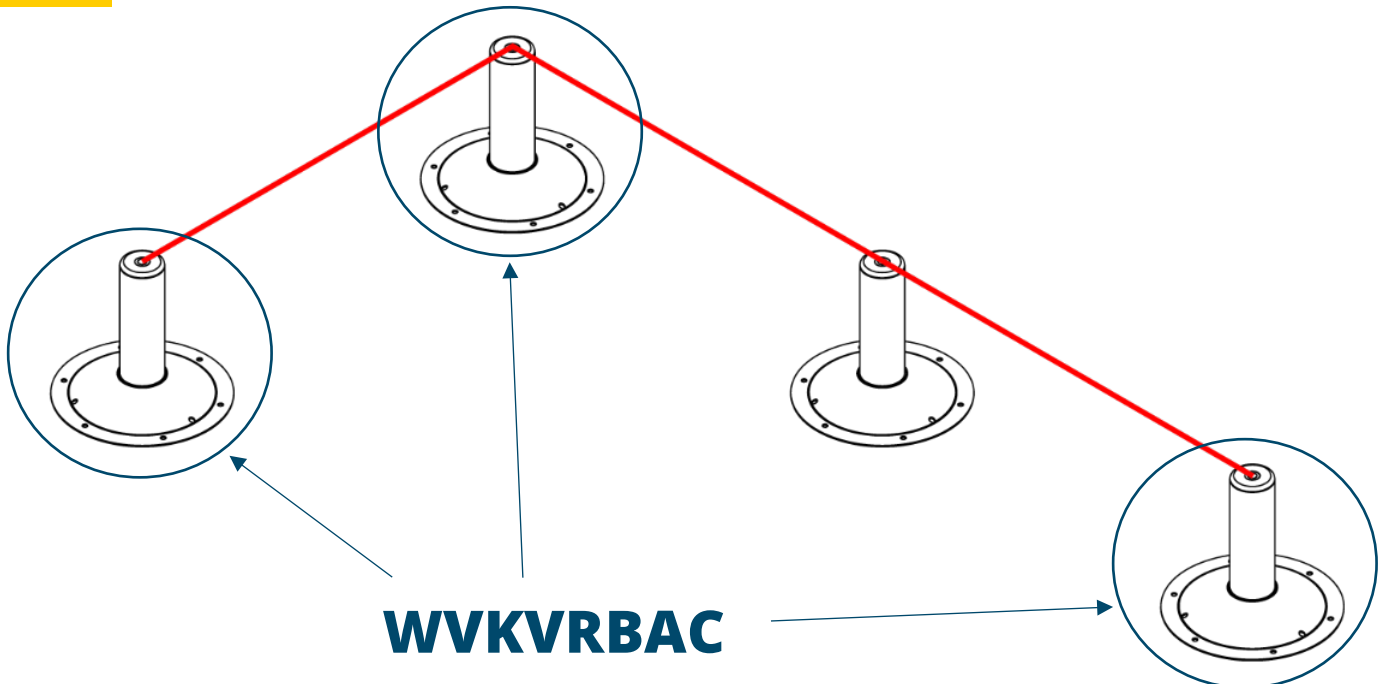
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13



14



WVKVRBAC

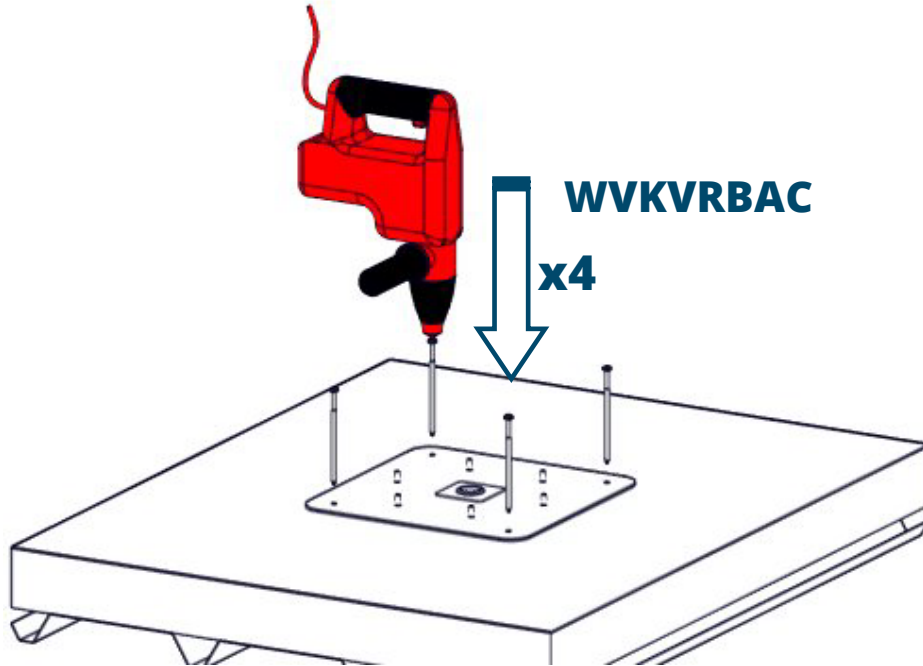


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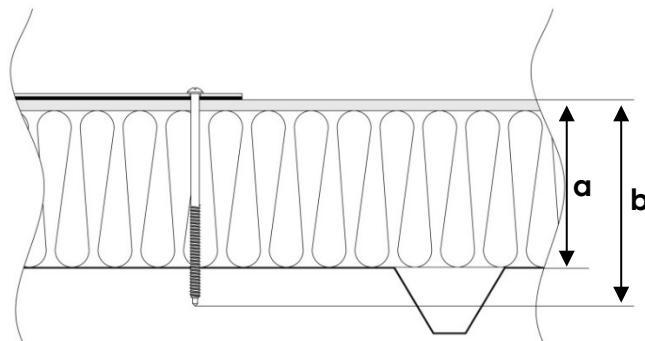
Support & anchoring point

ALTIFIX

15



a	0 < a < 100	100 < a < 160	160 < a < 245	215 < a < 280
b	127 mm	178 mm	250 mm	305 mm
	WVKVRBAC		WVKVRBAC2	



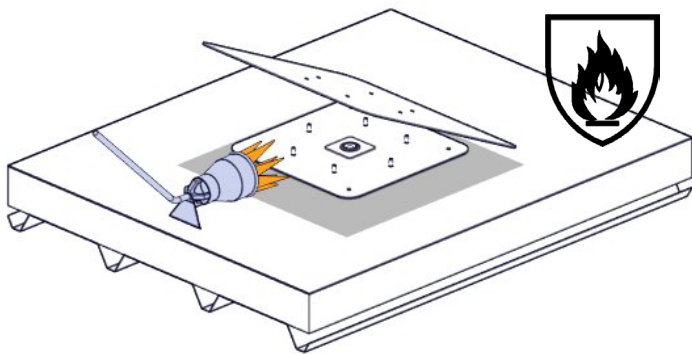


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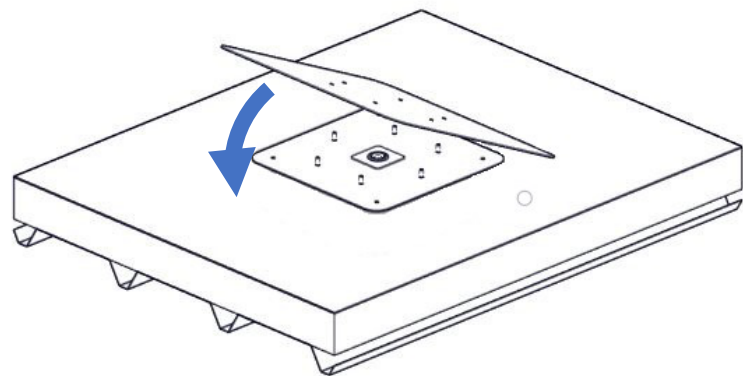
Support & anchoring point

ALTIFIX

16



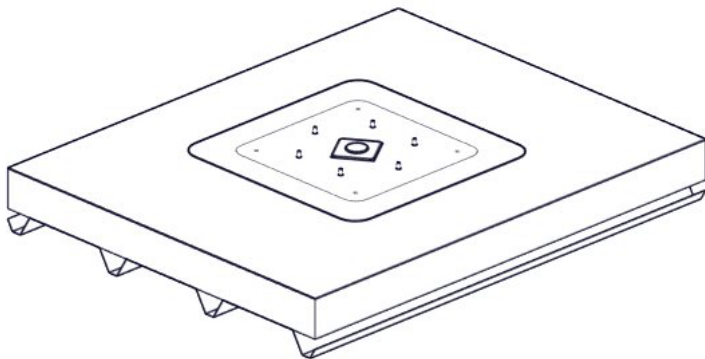
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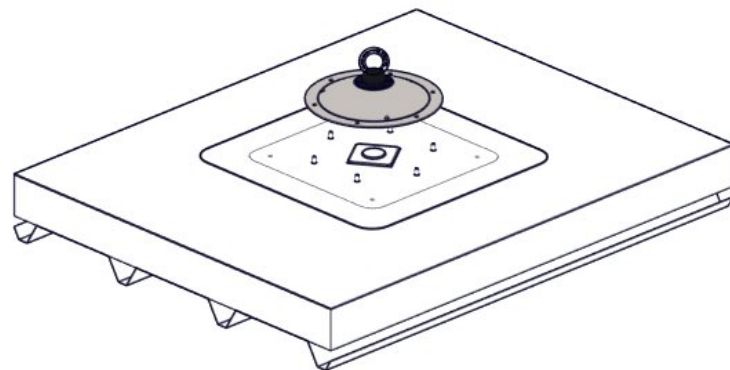
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15 Min



19



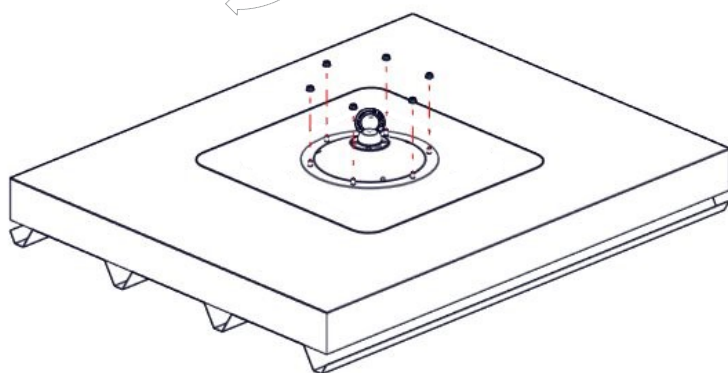


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Support & anchoring point

ALTIFIX

20





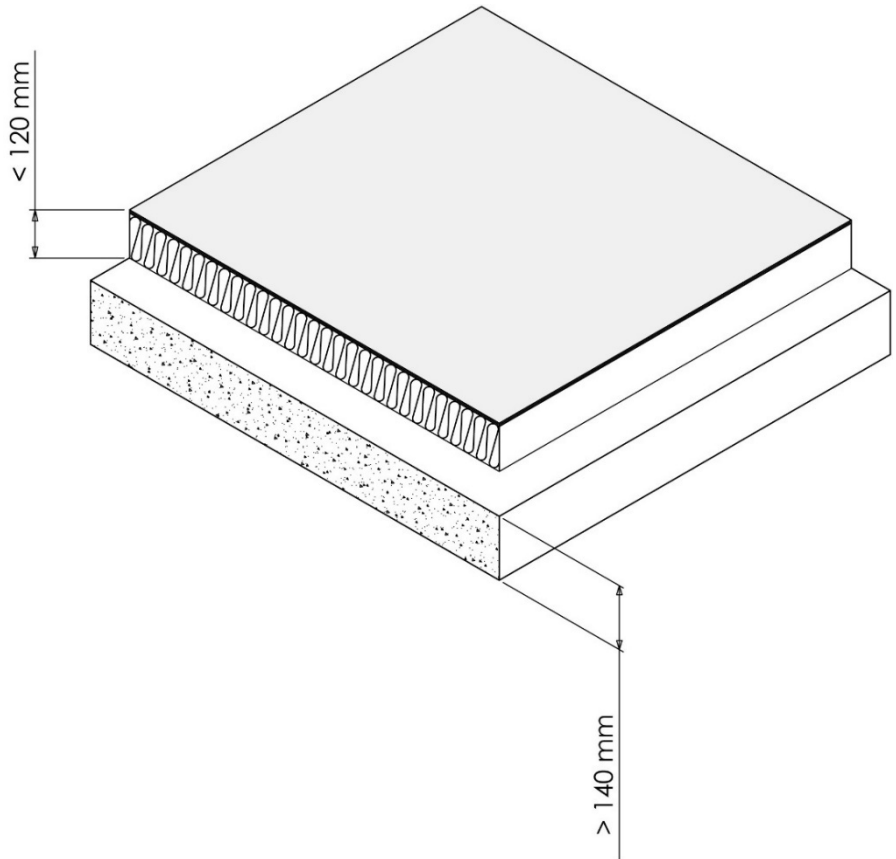
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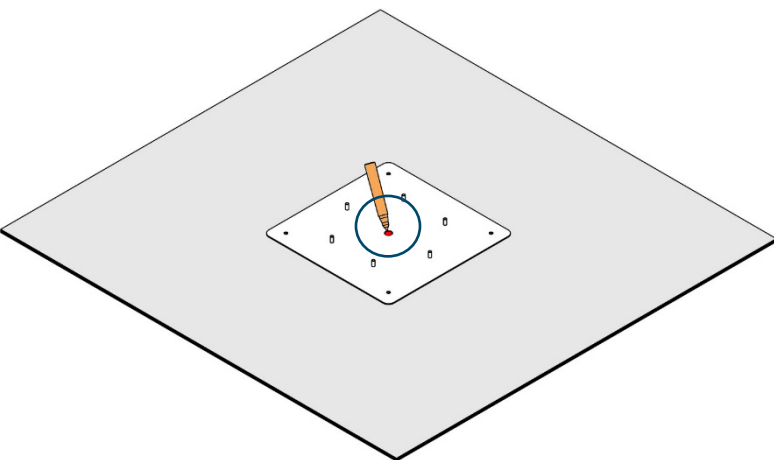
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PRE-REQUISITES

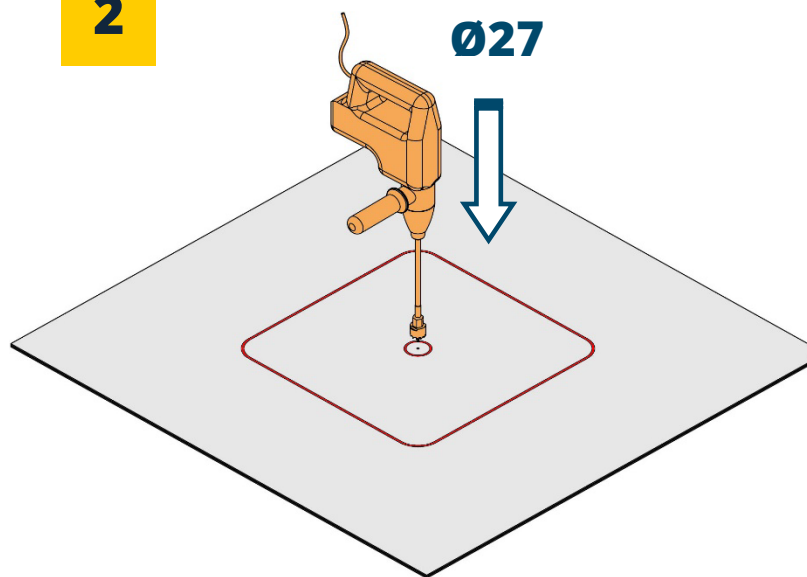
Concrete slab
Concrete pave
Plachas de hormigón
Betonnen dakvloer
Platte Beton
Lastra di calcestruzzo
Betão armado



1



2



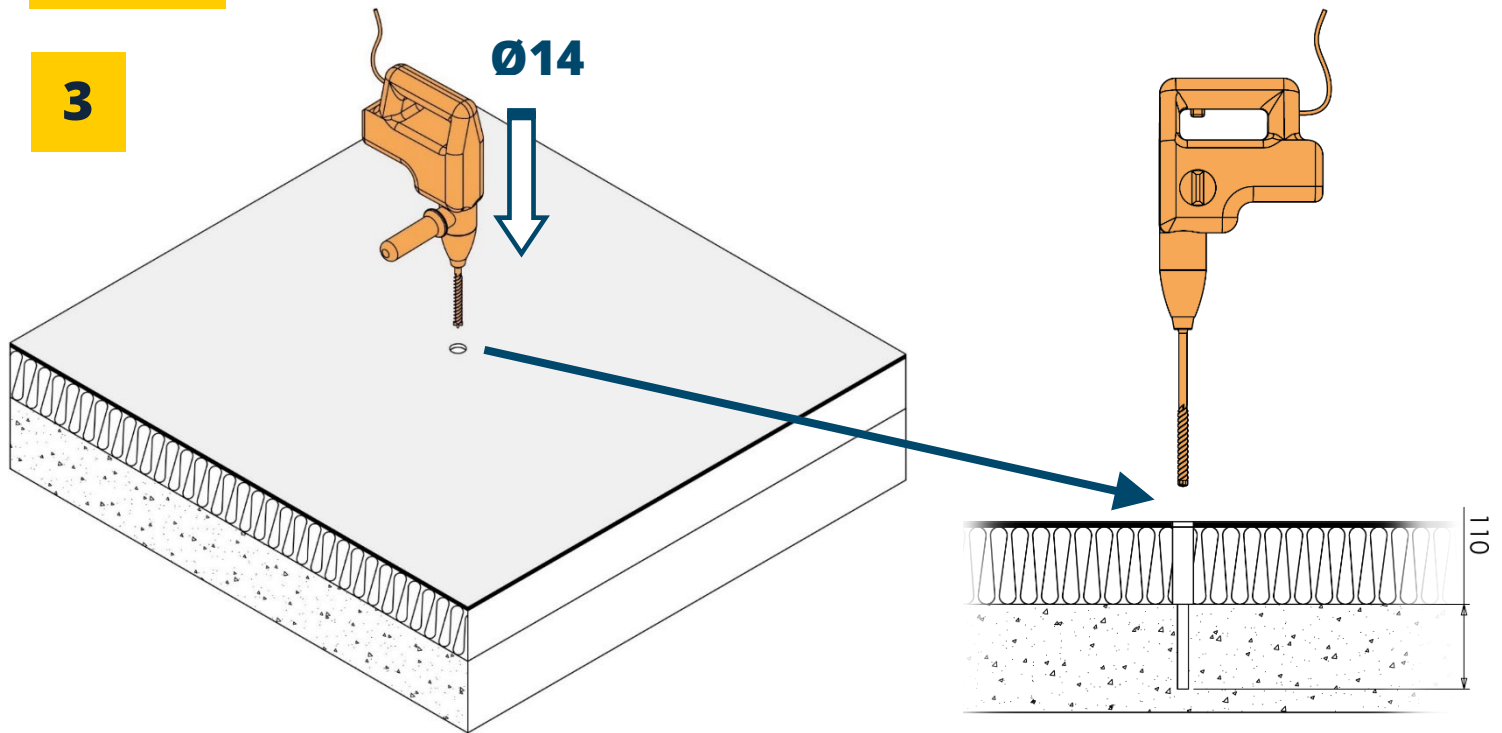


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Support & anchoring point

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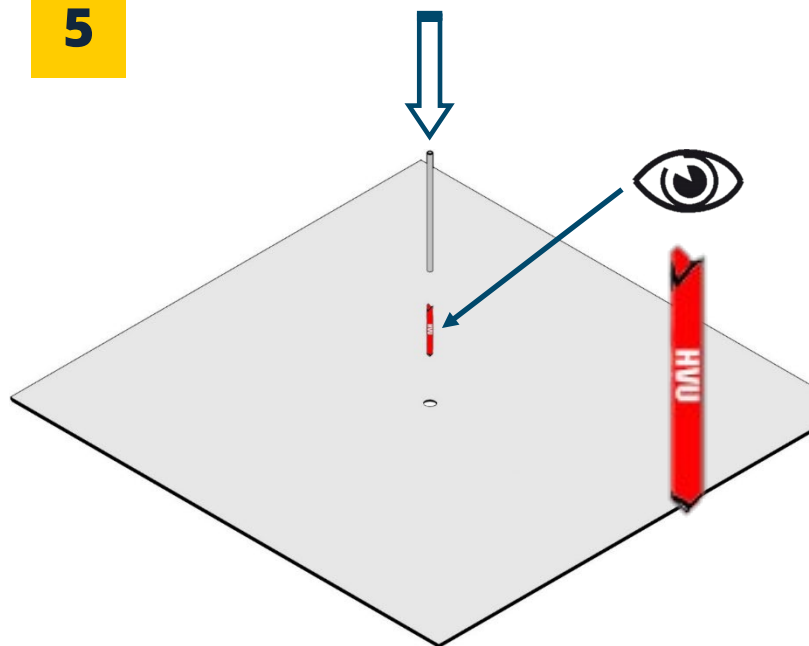
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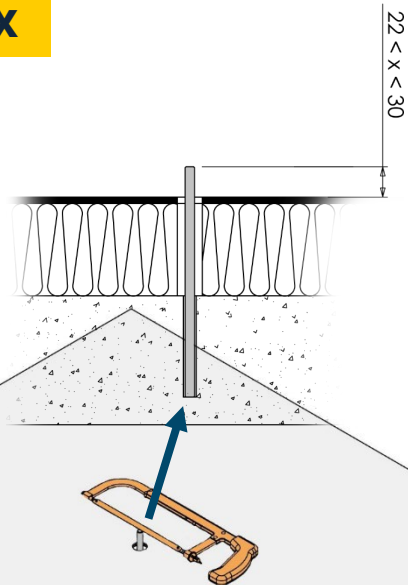


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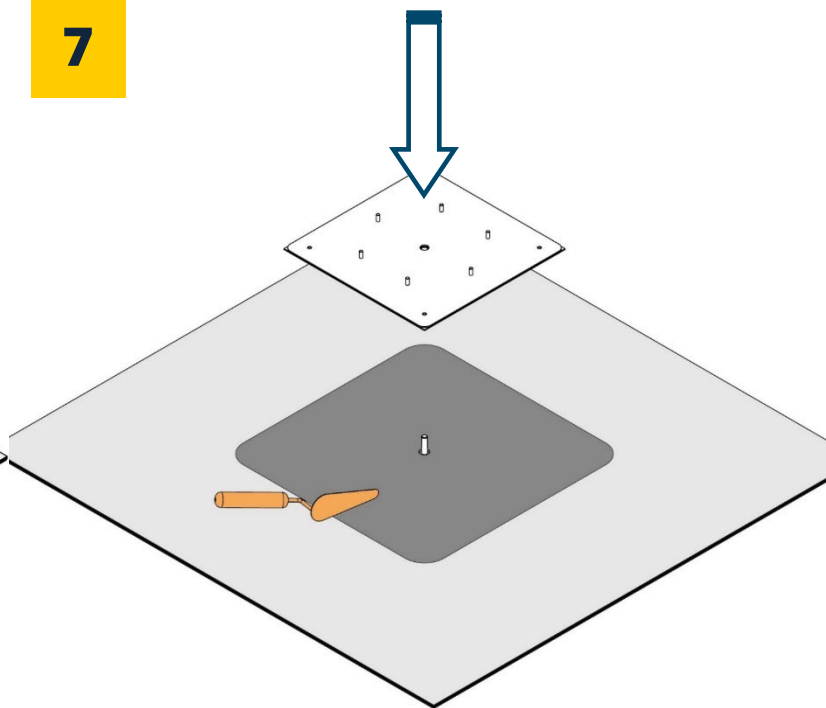
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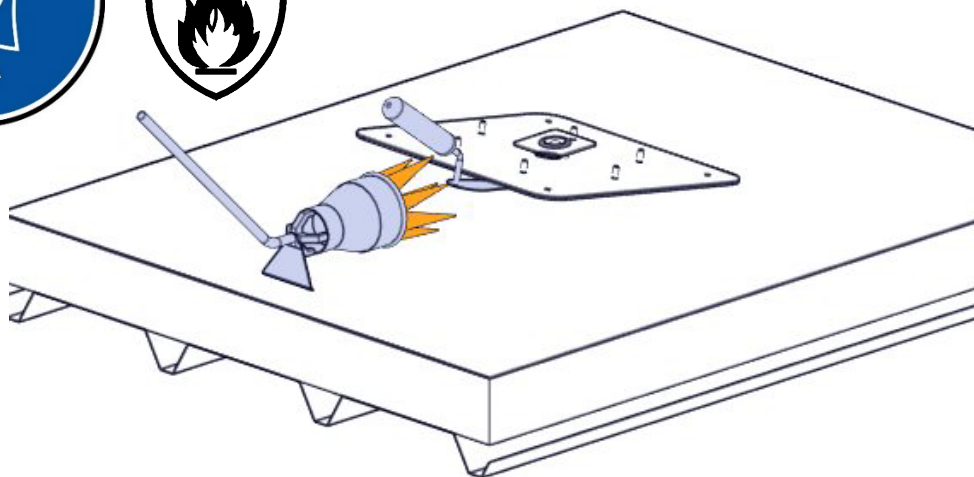
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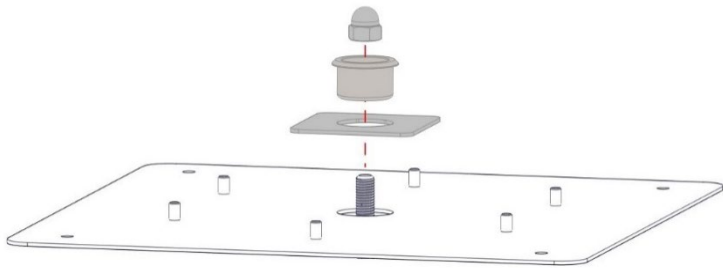


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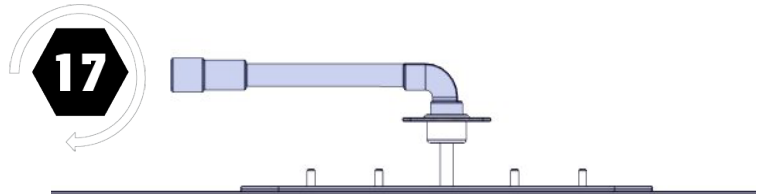
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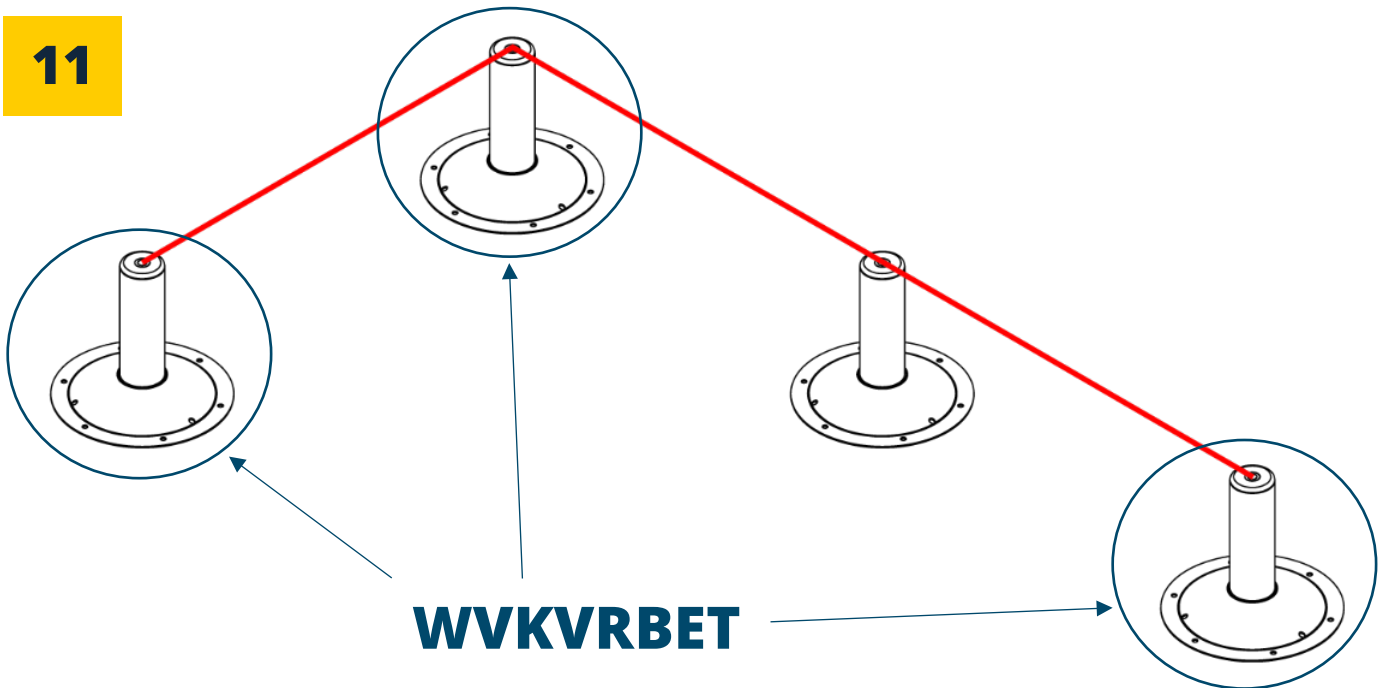
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10



11



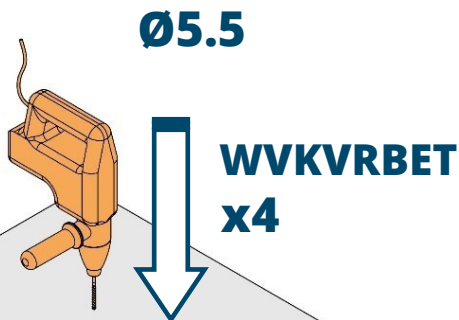


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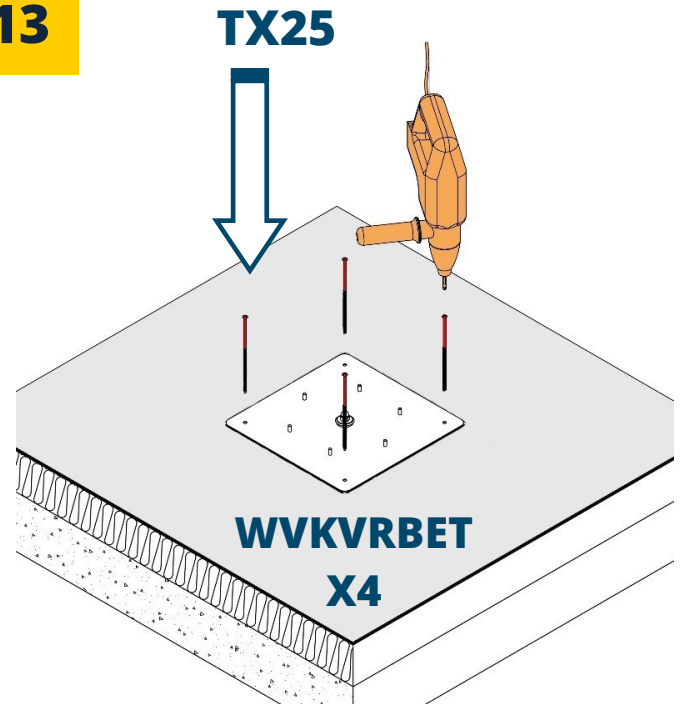
Support & anchoring point

ALTIFIX

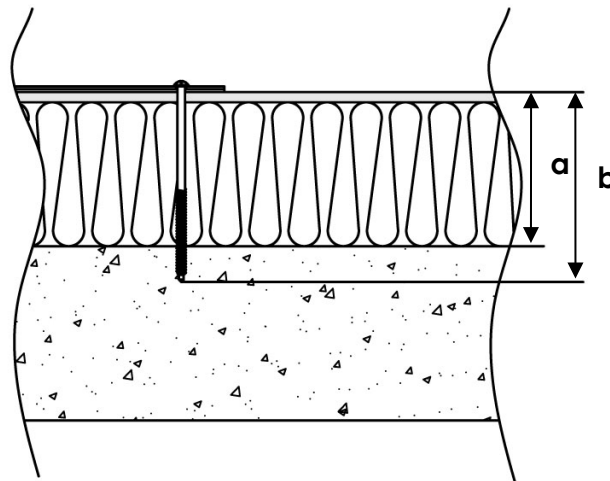
12



13



a	0 < a < 70	80 < a < 105	120 < a < 140
b	95 mm	125 mm	165 mm



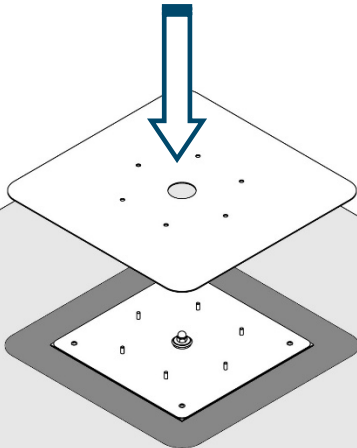


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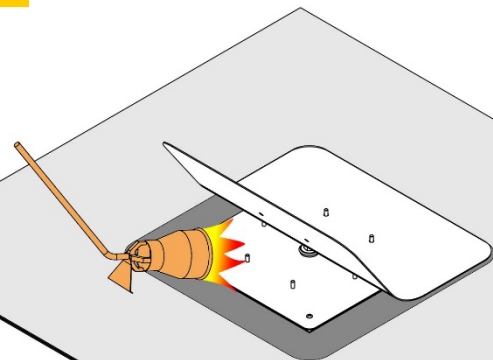
Support & anchoring point

ALTIFIX

14



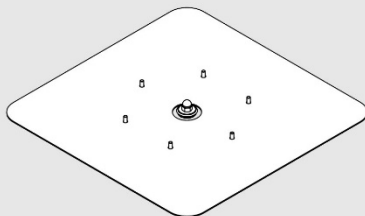
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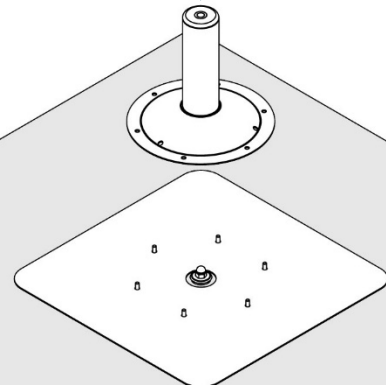
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15 Min



17



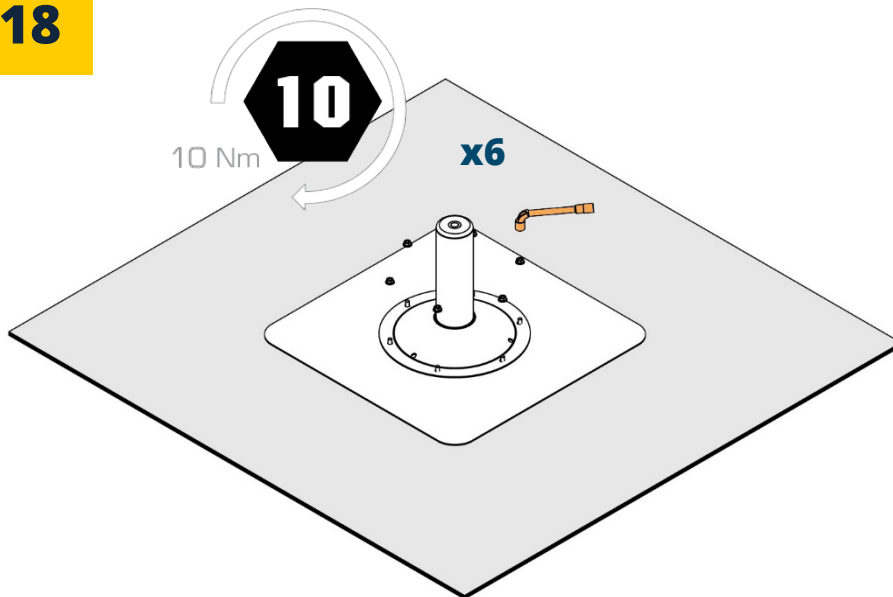


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Support & anchoring point

ALTIFIX

18





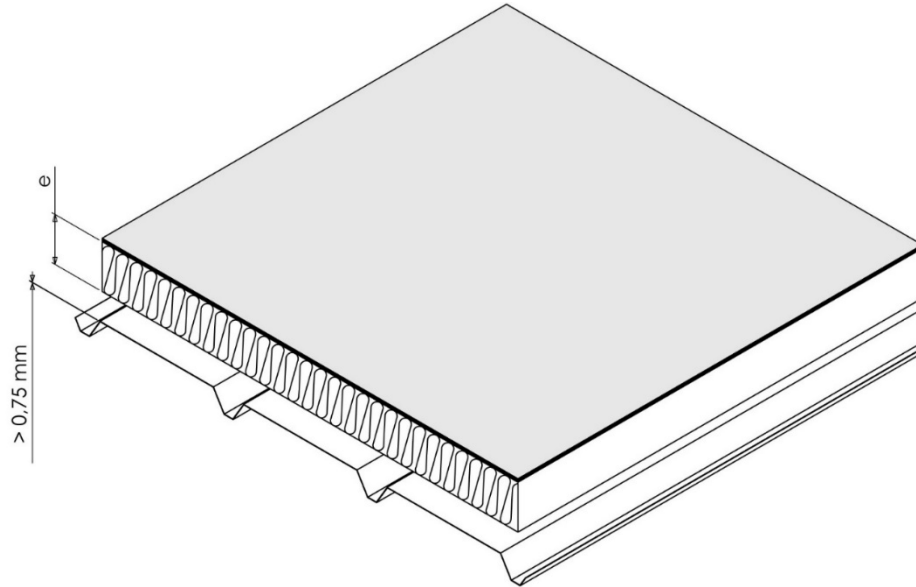
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Support & anchoring point

ALTIFIX

PRE-REQUISITES

Perforated steel pan
Isolated perforated steel roof
Cubierta de acero perforado
Staalplaat dakplaat geperforeerd
Trogstahl perforiert
Yetto di acciaio perforato
Cobertura metálica perforado



		0 < e < 130 mm	100 < e < 230 mm	200 < e < 330 mm
Fixing kit Fixing kit Kit de fijación Bevestigingskit Befestigungssatz Kit di fissaggio Kit de fixaçãõ		KV4FIX2	KV4FIX230	KV4FIX330

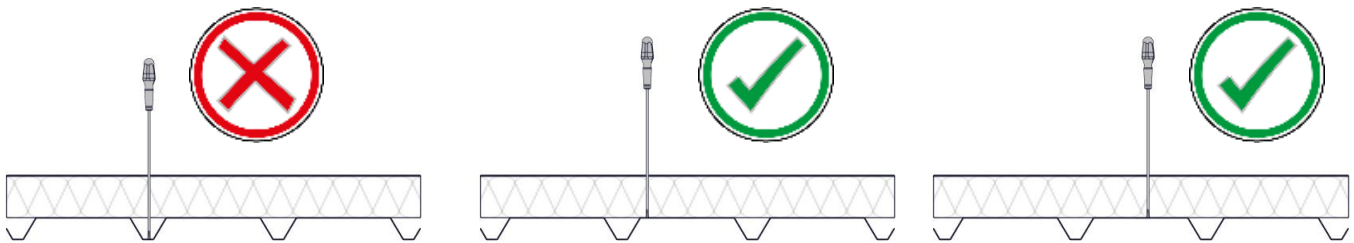


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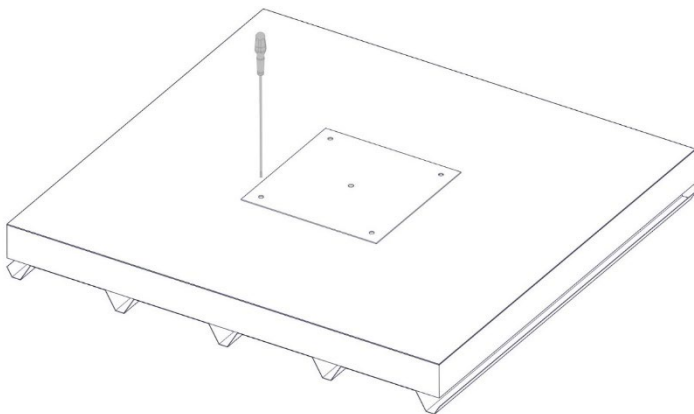
Support & anchoring point

ALTIFIX

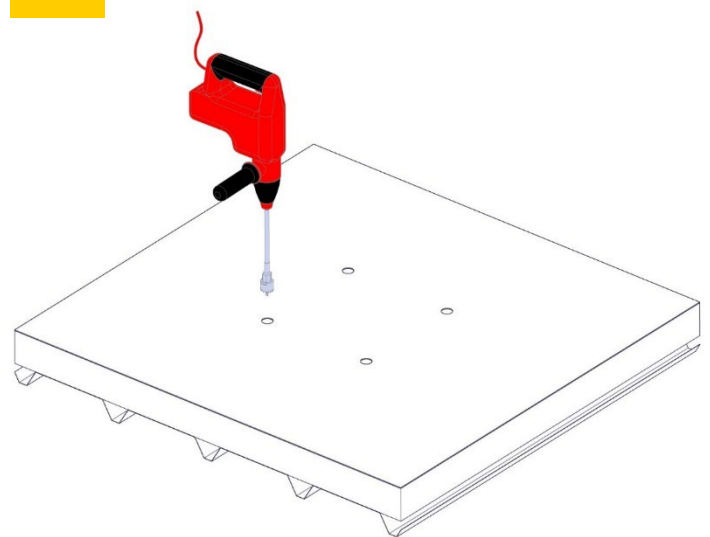
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2



3



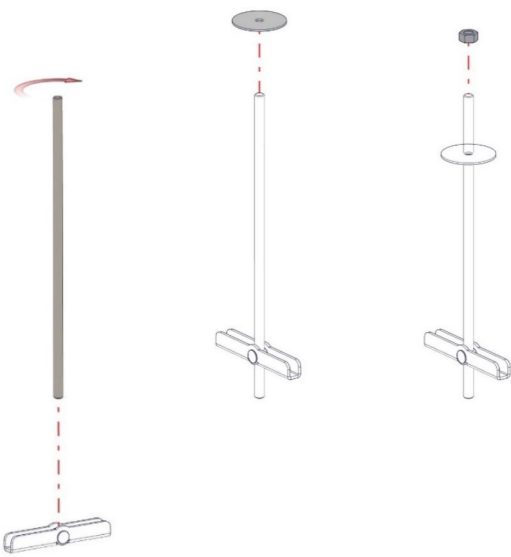


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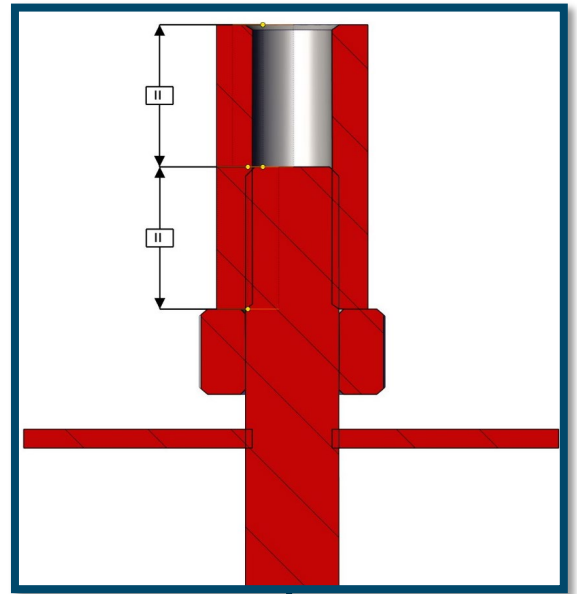
Support & anchoring point

ALTIFIX

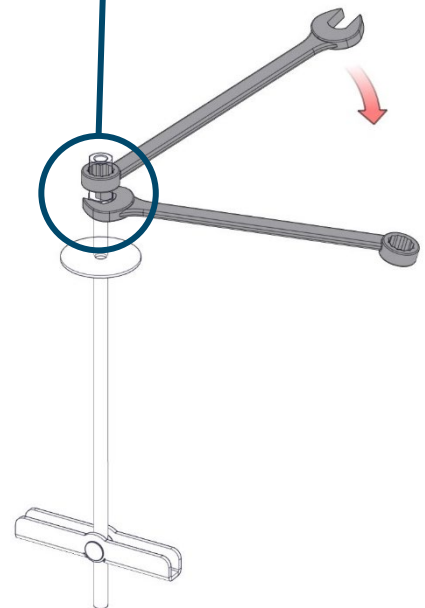
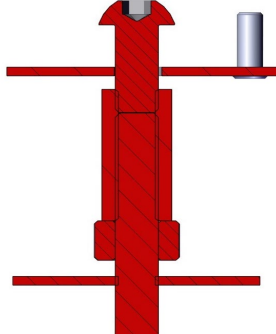
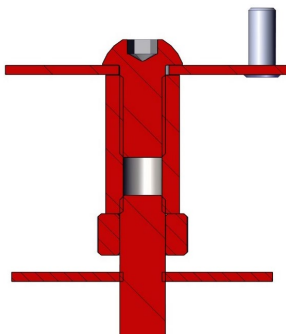
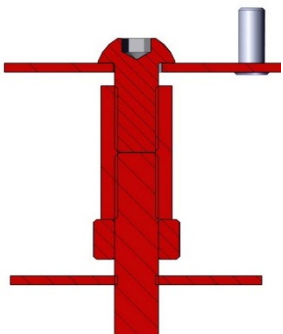
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5



6



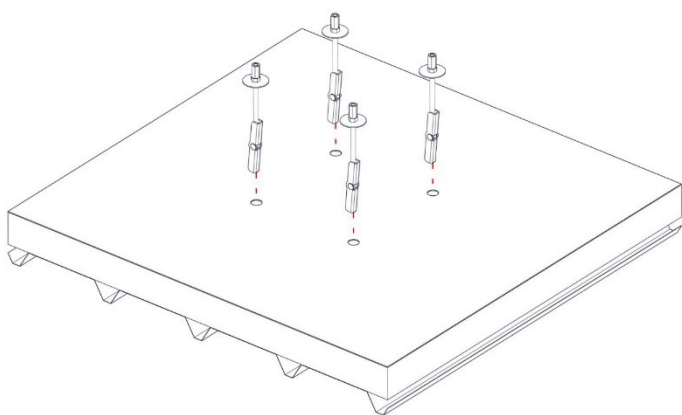


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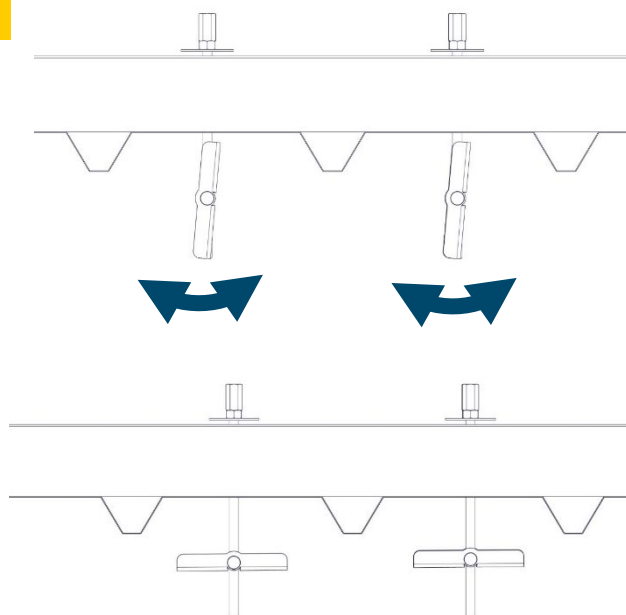
Support & anchoring point

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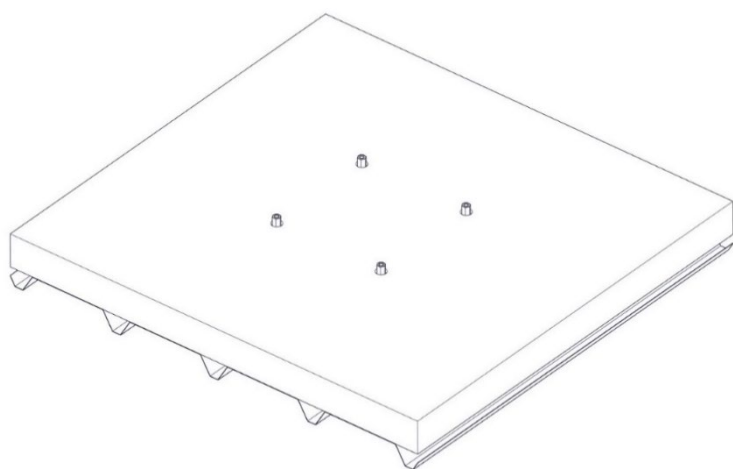
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8



9



10



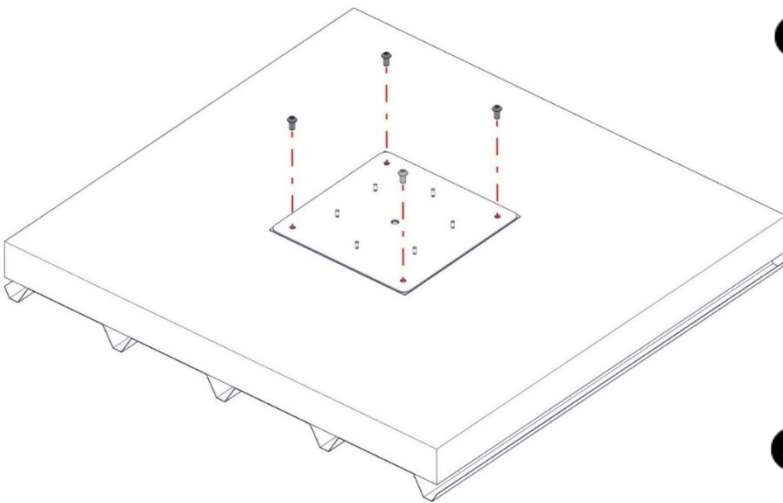


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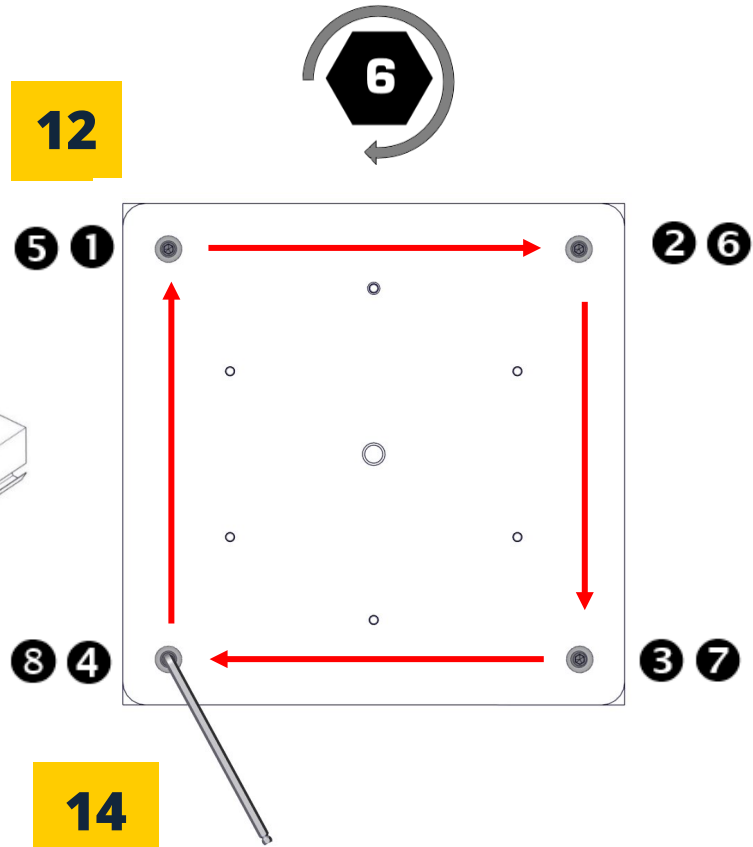
Support & anchoring point

ALTIFIX

11



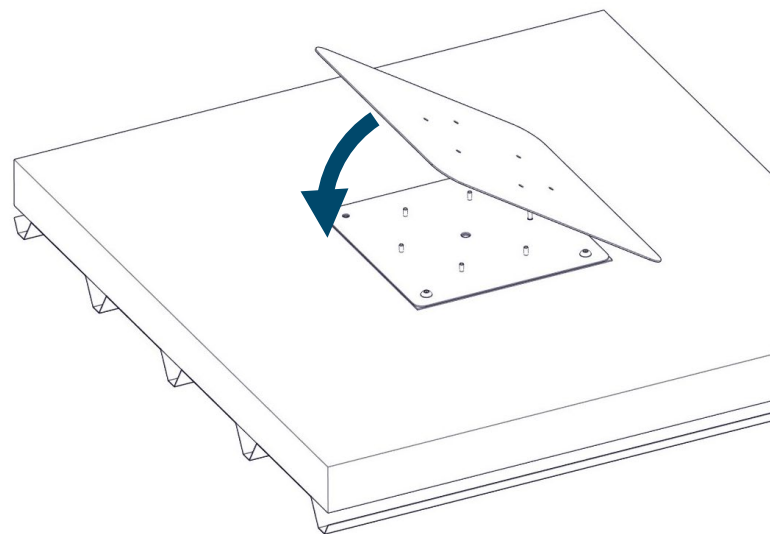
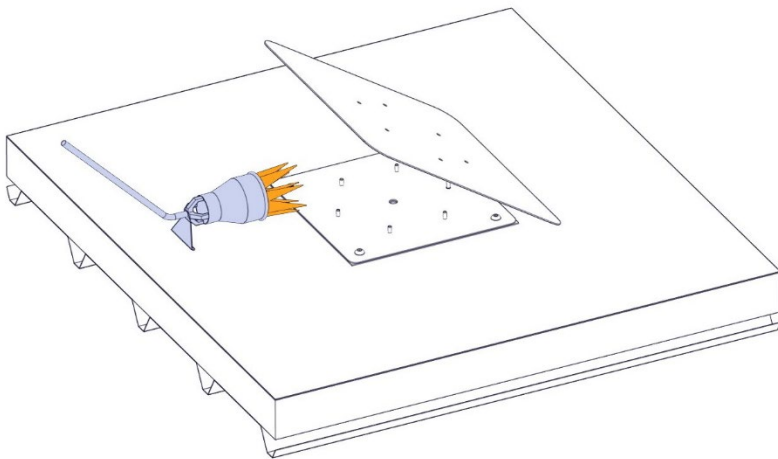
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13



14





Distributed by

Support & anchoring point

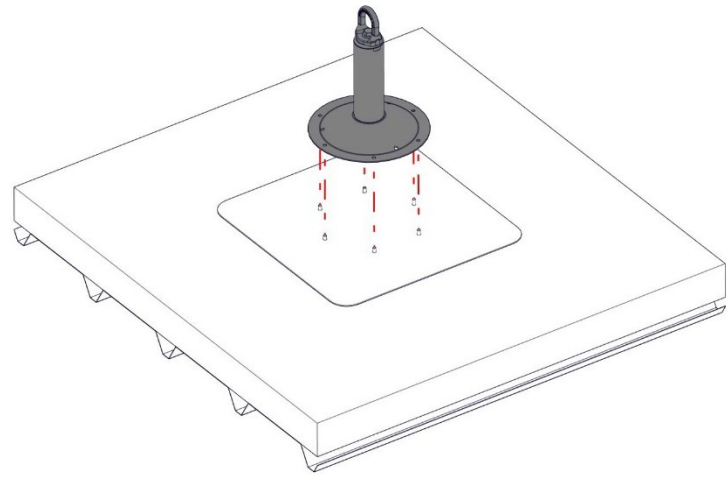
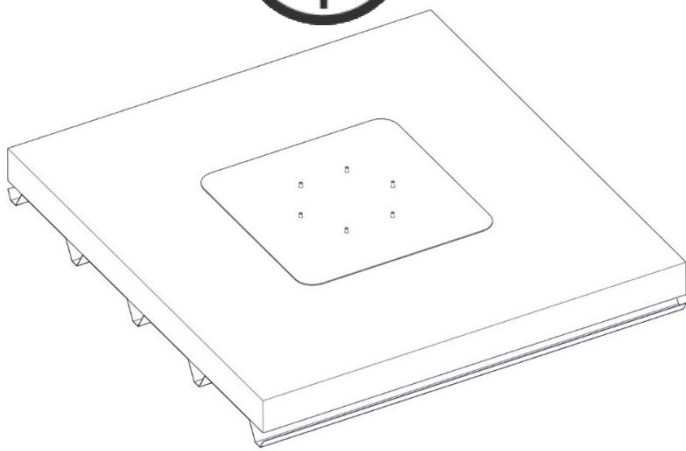
ALTIFIX

15

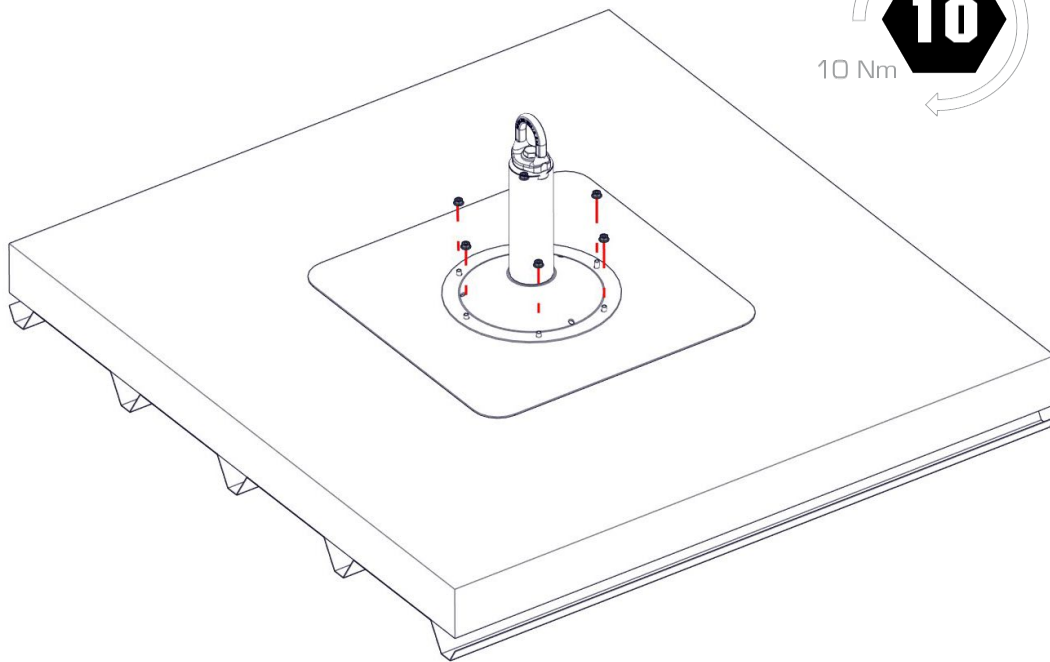


15 Min

16



16





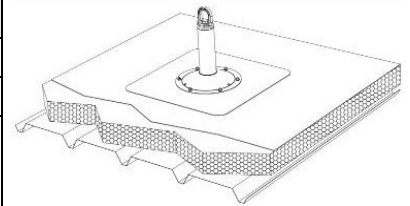
Distributed by

Support & anchoring point

ALTIFIX

ALTIFIX BM ANCHOR POST

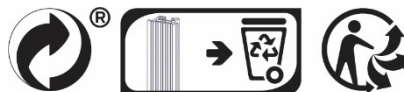
Product identification	
Manufacturer / Supplier	Delta Plus Systems
Product name / Reference	Altifix BM anchoring post - WAFXBM
Normative references	Standard EN 795 : 1996/2000 Class A1 Standard EN 795 : 2012 Class A Standard CEN/TS 16415: 2013



User identification			
Name		Company	
History check			
Year of manufacture		Date of first use	
		Date of purchase	

The controller declines all responsibility in the event of inaccuracy in the information concerning the historical verification which must be carried out by the user. The user is obliged to keep the entire history of the periodic examinations and repairs carried out.

Service life / Disposal
<p>For Delta Plus Systems products, plastics and textiles, the maximum service life is 10 years from the date of manufacture. There is no limit for metal products.</p> <p>CAUTION, an exceptional event may lead you to reject a product after a single use (type and intensity of use, environment of use: aggressive environments, marine environment, sharp edges, extreme temperatures, chemicals, etc.).</p> <p>A product must be scrapped when :</p> <ul style="list-style-type: none"> - It is over 10 years old and made of plastic or textile, except for the seals, which need to be inspected regularly. - He has suffered a serious fall (or strain). - The results of the product checks are not satisfactory. You have doubts about its reliability. - You don't know its full history of use. - When its use is obsolete (changes in legislation, standards, technology or incompatibility with other equipment, etc.). <p>Destroy these products to prevent future use.</p>





Distributed by

Support & anchoring point

ALTIFIX

Comments

Good

To watch out for

Repaired

To be discarded

Visual check of components					
General condition of the anchoring post (post tripped, deformations, wear, corrosion, etc.)					
Condition of anchor fixing (tightness of cap nut, corrosion, etc.)					
Condition of the attached BM membrane (peripheral welds, cracks, etc.)					
Presence of markings with normative information					

Functional verification of components					
Correct location of the anchoring post in relation to the area to be secured					
Anchoring ring rotates correctly (if ring rotates)					

Comments :

Inspection verdict

The product is fit to remain in service	The product is unfit to remain in service
--	--

Identification and visa of the controller

Name		Company	
Date of inspection		Controller's stamp (Signature / Stamp)	
Date of next inspection			



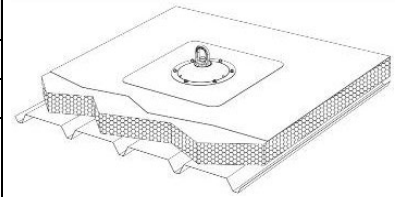
Distributed by

Support & anchoring point

ALTIFIX

ALTIFIX BM PA WITH ROTATING ANCHOR

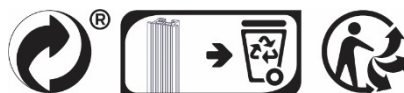
Product identification	
Manufacturer / Supplier	Delta Plus Systems
Product name / Reference	ALTIFIX-PA swivel anchor - WAFXBMPA
Normative references	NF EN 795 September 1996 - Class A1



User identification			
Name		Company	
History check			
Year of manufacture		Date of first use	
		Date of purchase	

The controller declines all responsibility in the event of inaccuracy in the information concerning the historical verification which must be carried out by the user. The user is obliged to keep the entire history of the periodic examinations and repairs carried out.

Service life / Disposal
<p>For Delta Plus Systems products, plastics and textiles, the maximum service life is 10 years from the date of manufacture. There is no limit for metal products. CAUTION, an exceptional event may lead you to reject a product after a single use (type and intensity of use, environment of use: aggressive environments, marine environment, sharp edges, extreme temperatures, chemicals, etc.).</p> <p>A product must be scrapped when :</p> <ul style="list-style-type: none"> - It is over 10 years old and made of plastic or textile, except for the seals, which need to be inspected regularly. - He has suffered a serious fall (or strain). - The results of the product checks are not satisfactory. You have doubts about its reliability. - You don't know its full history of use. - When its use is obsolete (changes in legislation, standards, technology or incompatibility with other equipment, etc.). <p>Destroy these products to prevent future use.</p>





Distributed by

Support & anchoring point

ALTIFIX

Comments

Good

To watch out for

Repaired

To be discarded

Visual check of components					
General condition of the anchoring point (deformation, wear, corrosion, etc.)					
Condition of anchor fixing (tightening of cap nut, corrosion, compression of EPDM seal, etc.)					
Condition of the attached BM membrane (peripheral welds, cracks, etc.)					
Presence of markings with normative information					

Functional verification of components					
Correct location of the anchoring point in relation to the area to be secured					
Anchoring ring rotates correctly (if ring rotates)					

Comments

Inspection verdict

The product is fit to remain in service	The product is unfit to remain in service
--	--

Identification and visa of the controller

Name		Company	
Date of inspection		Controller's stamp (Signature / Stamp)	
Date of next inspection			