# Fall arrest individual protection Permanent systems



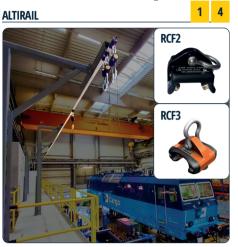




## **Vertical fall protection**



#### **Horizontal fall protection**





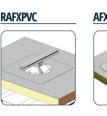




#### **Flexible coatings**

PVC













**Metallic sheatings** 

STEEL DECK

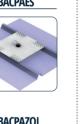
**Standard** 

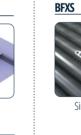














**Ondulit covering** 

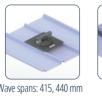


Wave spans: 193.25, 264, 299 mm

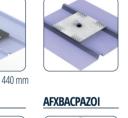


AFX2ES RAFXSTES

AFX2ZOI



RAFXSTZOI







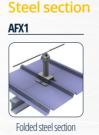


Anchors & ladder hooks









### Anchors & ladder hooks







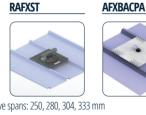


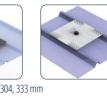


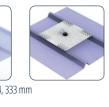
**ALUMINIUM** 

**Standard** 



















### **Tiled roofing**

Standard







**Structures** FIBER-CEMENT

















Squared



Isolated

CONCRETE **Standard** 







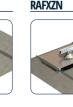
Squared Stainless steel **PLFIXVI** 





















## Working at height: what you need to know

#### What do we call "fall factor"?

Fall factor represents the proportional degree of fall

Its value lies between 0 and 2 and can be calculated by dividing the height of fall by the rope/lanyard lenght. There is a danger above a 0.3 fall factor.

There are two solutions to limit fall factor:

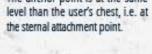
- raising the anchor point position
- increasing the braking distance to reduce the force of the fall impact.

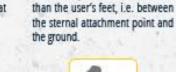
#### Factor 0: limited free fall

Factor 1: free fall up to one time lanyard/rope system Factor 2: free fall up to two times lanyard/rope system

The anchor point is at the same level

The anchor point is above the user's The anchor point is at the same head and the lanyard is tightened.



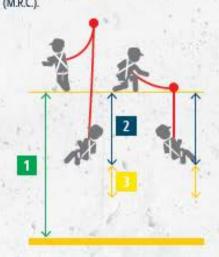




What do we call "fall clearance"?



Fall clearance represents the distance between the anchor point and the ground. Two different notions of fall clearance must be distinguished: the Fall Clearance Available (F.C.A.) and the Minimum Required Clearance



F.C.A.: represents the distance between the structure on which the user is working and the nearest obstacle (ground, wall,...).

M.R.C.: represents the minimum required distance, so that the user can fall without any risk of collision with the nearest obstacle.

F.C.A.

Lanyard lenght + extension of the energy absorber

Safety distance (1m)

#### What do we call "swinging effect"?

The swinging effect or pendulum effect represents the risk of swing if a fall occur. During the swing and the fall, you may strike the structure you are working on or even an obstacle nearby (wall, ground,...).

It usually occurs when the anchor point is not located

exactly above the user while working at height.

To limit the swinging effect, you need to keep an angle between the P.P.E. and the anchor point below

## **Working at height situations**



Great horizontal Great movements on horizontal, vertical travel, suspension and/or work in and inclined surfaces

tension possible



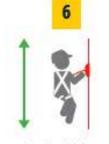
Horizontal movements



Horizontal continuous movements



Vertical movements



Great vertical movements



Small horizontal movements (-3m)



Tailor-made solutions



## **Accessories**

## Accessories

**Fixations** 

#### Structure WATERPROOFING



FALU1 Aluminium FALUPVC



**COLL3** plastic **COLL6** metal

STEEL

Standard

Folded steel section

KV1M

KV1A

KVBAC

COLLX

Entry & Exit bracket for

**Metallic sheatings** 

**ALUMINIUM** 

KVBACALUS

Sinusoidal

KVBACALU

CONNECTOR

Rail systems

**SWITCHES** 

RAIGxDM

KVZN

Wooden sheating

#### **RAIG3D** and **RAIG3DM** 3 directions **RAIG4D** and **RAIG4DM** 4 directions

#### Structure ZINC

#### CONCRETE ANCRM12

FIBER-CEMENT

Framework

TILES

Wooden rafters

KVFC

#### Guided type fall arresters including a flexible anchor line

against falls from a height.

**Anchor devices** 

#### EN 353-2

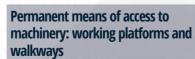
Defines the requirements, test methods, marking, manufacturer information leaflet, and packaging of the mobile fall arresters including a flexible anchor line that can be attached to an upper anchor.

Defines the requirements and test methods, the user

manual and the marking of the anchor devices dedicated

exclusively to be used with personal protective equipment





#### EN ISO14122-2

EN ISO14122-4

Applies to working platforms and walkways that are part of a machine. May also apply to platforms and walkways providing access to parts of the building where the machine is installed, provided that the main function of this part of the building is to provide access to the

Permanent means of access to machinery: fixed ladders

simultaneously CEN TS 16415: 2013

than one user simultaneously.

**Normative reminder** 

#### **Guided type fall arresters including a rigid** anchor line

#### EN 353-1

Defines the requirements for design, material and construction, blocking methods, and requirements for static strength and dynamic performance, corrosion resistance, marking and information.



#### Permanent means of access to machinery: stairs, stepladders and guardrails

#### EN ISO14122-3

Applies to stairs, stepladders and guardrails that are part of a machine. May also apply to stairs, stepladders and guardrails providing access to parts of the building where the machine is installed, provided that the main function of this part of the building is to provide access to the machine.



**DELTAPLUS** 

f D in

### **KEFPTUILES** Tiles

Flexible coatings

PVC & BITUMEN



Isolation ≤ 330 mm **KVRBAC** 











Floor precast wideslab



KC2P

80 > 150 mm 150 > 250 mm 235 > 330 mm

80 > 150 mm

150 > 250 mm

235 > 330 mm

Framework

80 > 150 mm 150 > 250 mm 235 > 330 mm

80 > 150 mm KB2 150 > 250 mm

where the machine is installed, provided that the main function of this part of the building is to provide access to the machine. Also applies to ladders that are not permanently attached to the machine and can be disassembled, moved or 🗧 rotated to the side for some operations on the machine.

Applies to fixed ladders that are part of a machine. May also apply to fixed ladders providing access to parts of the building