



The Height Safety Specialist

FALL ARREST SYSTEM AKROBAT





FALL ARREST SYSTEM

Akrobat Lifeline System

The Akrobat lifeline is designed to be permanently installed on buildings and other structures where maintenance workers are exposed to a risk of falling when performing their work.

The Akrobat lifeline systems incorporates two energy absorbing devices which limits structural loads to 10kN in the event of fall. This allows the system to be mounted on relatively delicate structures.

The Akrobat lifeline is designed to protect 1 to 4 workers attached simultaneously to the same line. Each worker needs to be fitted with a full body harness and a lanyard with a suitable energy absorber, the workers connect themselves on the lifeline via a glider which can move along the line.

The Akrobat lifeline has been designed, tested according to BS EN 795 Class C and certified by the notified body APAVE.



Figure 1: Akrobat Lifeline in use

FALL ARREST SYSTEM COMPONENTS DESCRIPTIONS

The Akrobat lifeline system comprises the following components:

- The mobile anchor or glider (one per use)
- The cable
- The intermediate brackets
- Two end brackets

In addition to the lifeline, PPE are also required to form a complete system:

- One lanyard with a textile energy absorber.
- A full body harness.

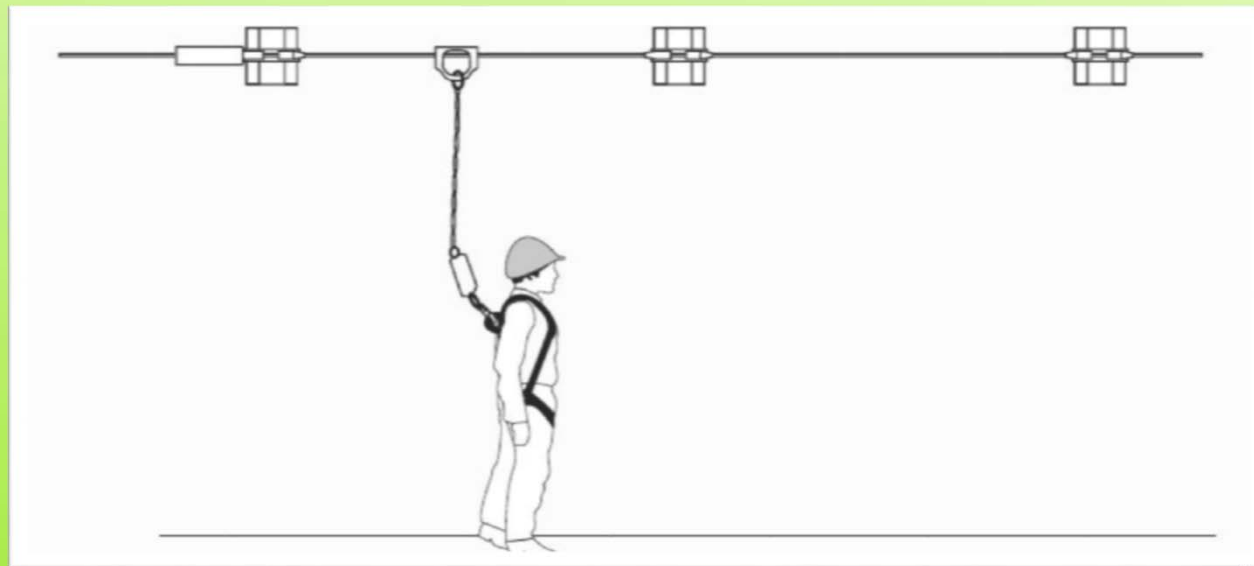


Figure 2: All Components of Akrobat lifeline system.

FALL ARREST SYSTEM COMPONENTS DESCRIPTIONS

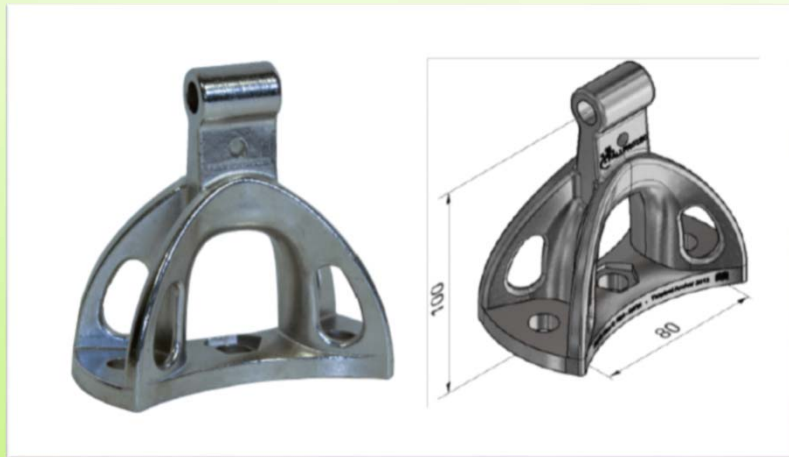


Figure 3: End Bracket

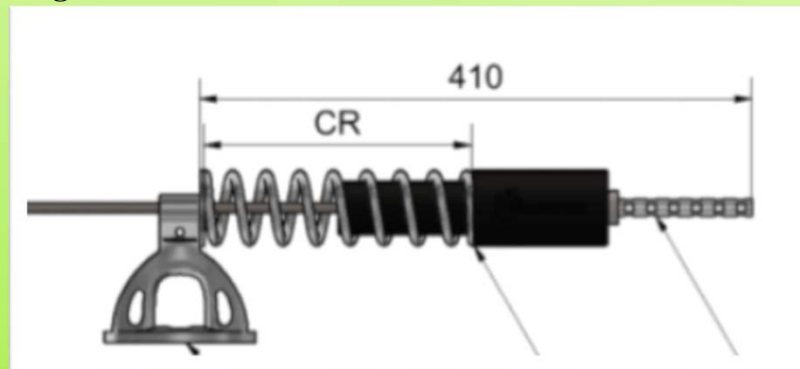


Figure 4: End Bracket with absorber

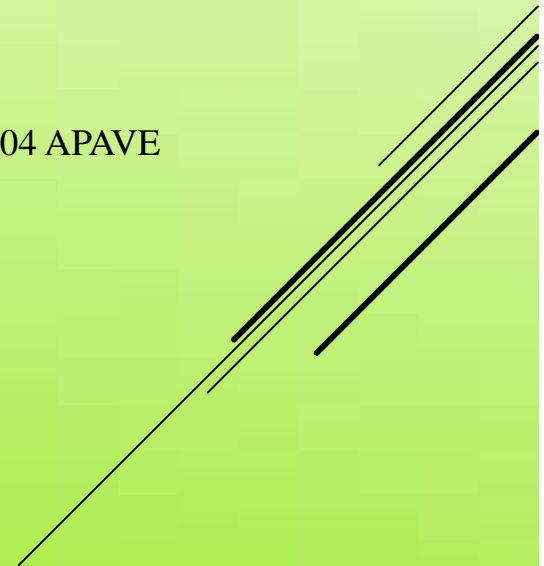
For the lifeline having a length below 20m, it is required to install an energy absorber device which control the force transmitted to the structure. In the event of a lifeline is installed on a fragile structure like corrugated roof. It is advisable to install the energy absorber device.

End Bracket

The End Anchor is equipped with an energy absorber which reduces the force transmitted to the host structure in case of a fall. The spring prevents an overloading an overloading in case of large temperature variation. the anchor could be attached to the structure with 2 pcs of M12 Bolts or Chemical Plugs.

Technical Specification:

Material: Stainless Steel 316
 Allowable Load: 18.5 kN
 Breaking Strength: 50 kN
 Compliant: EN795 Class C
 Test Certificate: n°AT6495704 APAVE
 Made in Europe



FALL ARREST SYSTEM COMPONENTS

Intermediary Bracket

The energy absorbing intermediate bracket is designed so the cable guide slides past the ring bows at a constant force in the event of a fall and will absorb the energy build up during the fall. Another advantage of the energy absorbing intermediate bracket is to minimize the loading on the M12 bolt which is not subject to any wrenching moments in case of fall.

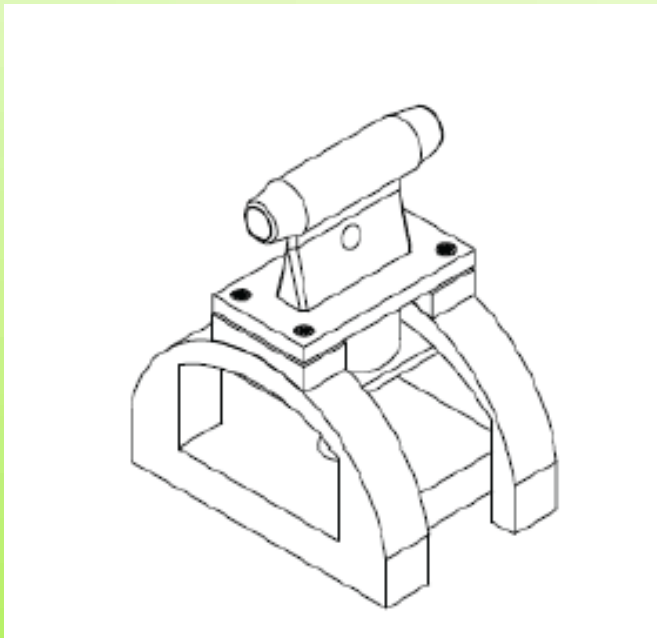


Figure 5.1: Intermediary Bracket

Technical Specification:

Material: Stainless Steel 316

Breaking Strength: 15 kN

Compliant: EN795 Class C

Test Certificate: n°AT6495704 APAVE

Made in Europe



FALL ARREST SYSTEM COMPONENTS

Intermediary Bracket Curved Section

An intermediary bracket is installed at each end of the curved section. The cable is bent manually with a radius between 300 and 400mm.

The curved section is kept in position by 15mm crimping rings crimped at both ends of the curved section

The crimping rings start to slide on the cable for a force above 3kN



Figure 6: Curved Section on a Standing Seam Roof



Figure 7: Curved Section on a Concrete Stump

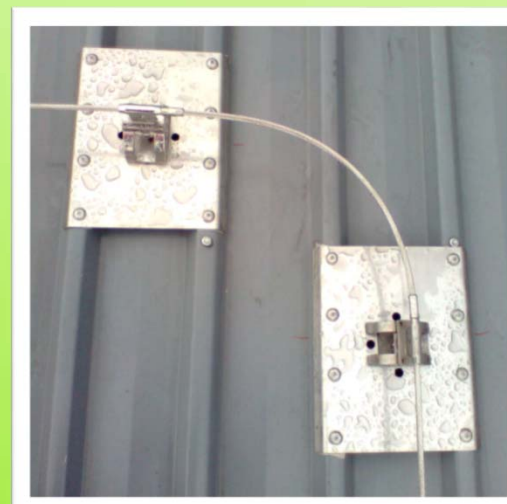


Figure 8: Curved Section on a Trimdek Roof

FALL ARREST SYSTEM COMPONENTS DESCRIPTION

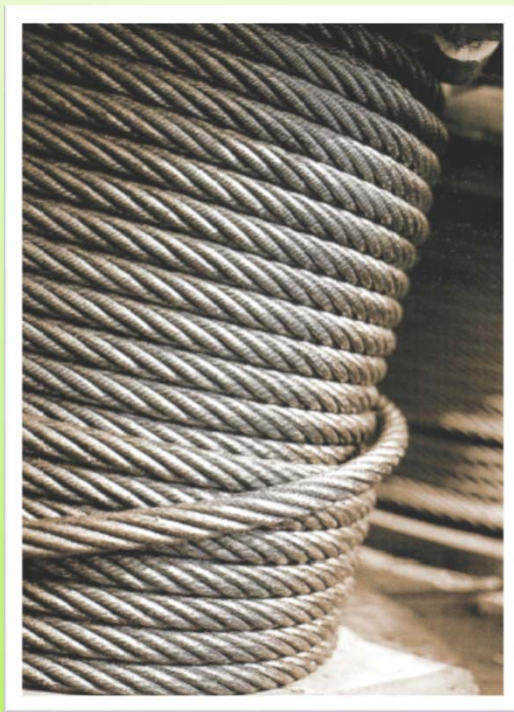
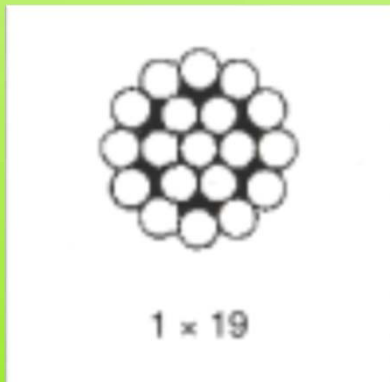


Figure 9: Stainless Steel Wire rope



Wire Rope

The cable is made of stainless steel 316 and its tensile strength > 52kN.

The cable must be continuous from one end bracket to the other, including curves, each section of the cable between curved sections is tensioned individually during installation, using a specific tensioning tool.

For very long systems, two or more cable section may be joined end to end with a large crimping ring.

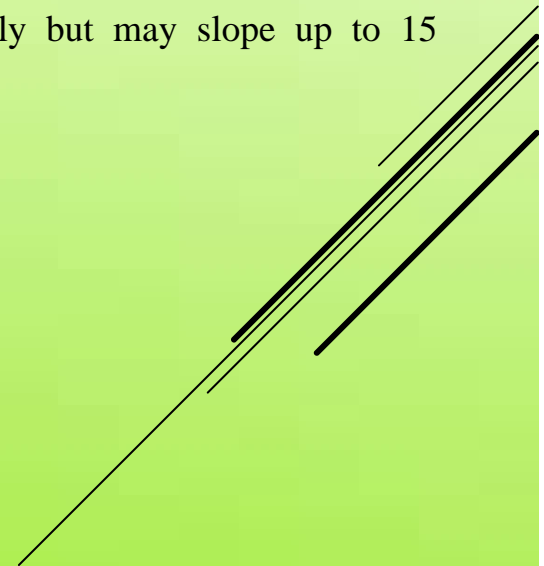
The cable should be installed horizontally but may slope up to 15 degrees or 25%

Technical Specification:

Material: Stainless Steel 316

Construction : 1x19

Diameter: 8mm



FALL ARREST SYSTEM COMPONENTS DESCRIPTION

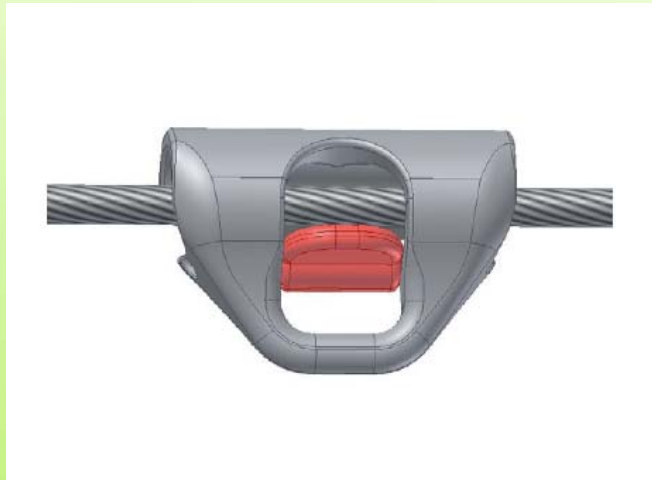


Figure 10: Glider

Technical Specification:

Material: Stainless Steel 316
 Allowable Load: 6 kN
 Breaking Strength: 15 kN
 Compliant: EN795 Class C
 Test Certificate: n°AT6495704 APAVE
 Made in Europe

Glider

The worker wearing a full body harness and energy absorbing lanyard is continuously attached to the lifeline system with the glider, which can travel along the cable and pass through the intermediate brackets.

The glider should be attached to the cable at a point which is clear of any mounting brackets and where there is no risk of fall.

The glider comprises a body and locking device.

As soon as the worker connects himself to the glider via a karabiner, the glider is locked on the cable. When the karabiner is in place, it prevents the locking device from the opening and prevents the cable from escaping from the glider unintentionally. The user must first disconnect the karabiner, only then he will be able to disconnect the glider from the line.



Figure 11: Glider Unlocked & Locked on the cable

FALL ARREST SYSTEM APPLICATIONS

Kliplok Roof

Option 1: Clamped Spider No penetration on the Roof



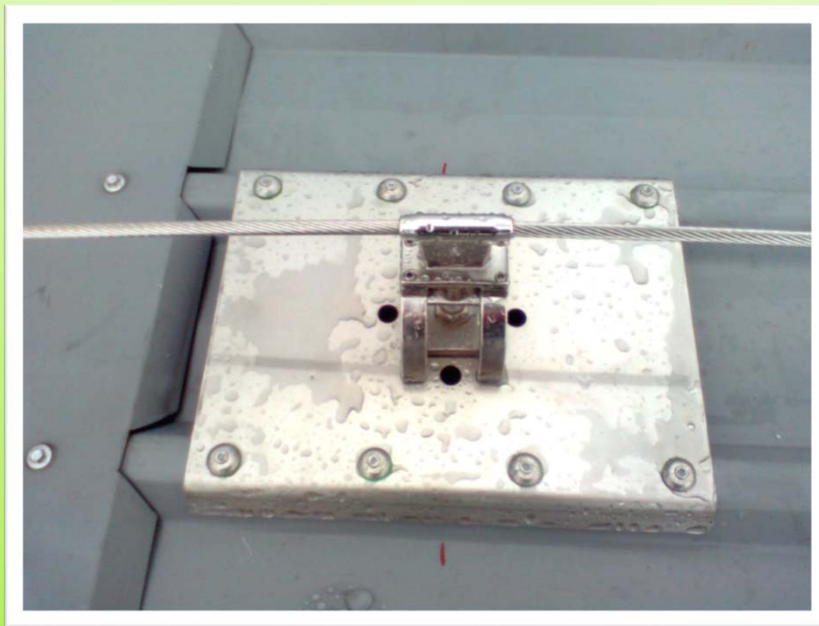
AK Clamp

Especially designed for Kliplok Roof



Kliplok Roof

Option 2: Riveted Plates with penetration on the Roof

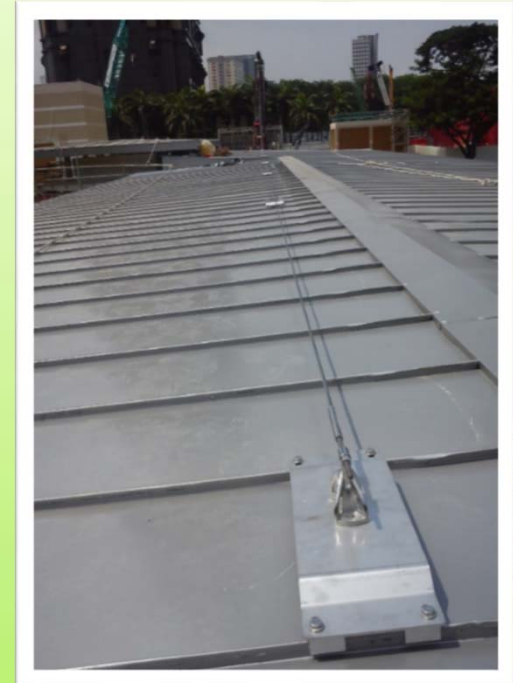




FALL ARREST SYSTEM APPLICATIONS

Standing Seam Roof (Double Folded)

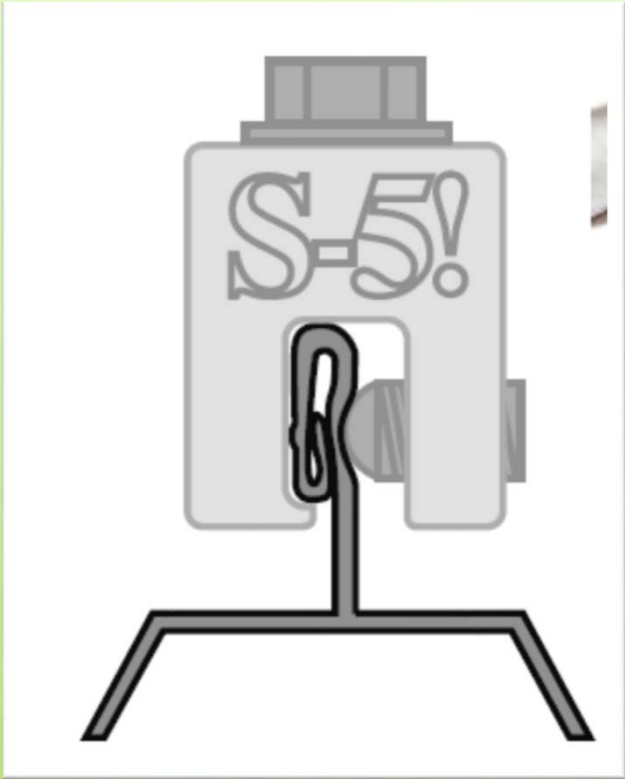
Clamped Plates No penetration on the Roof



FALL ARREST SYSTEM APPLICATIONS

S5 -E Clamp

Especially designed for Standing Seam Roof (Double Folded)



Standing Seam Roof (Round Seam)

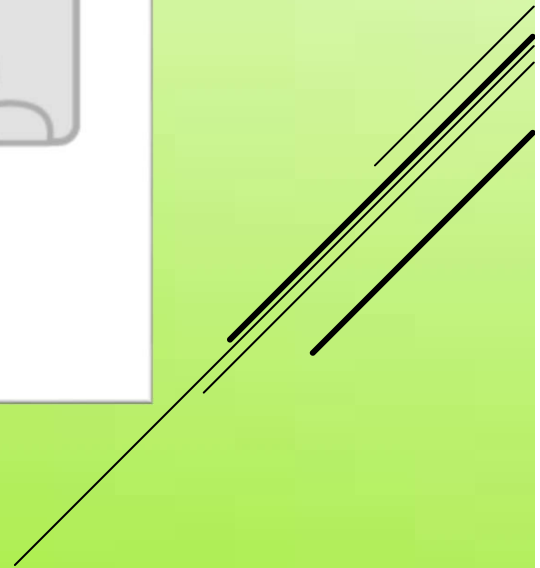
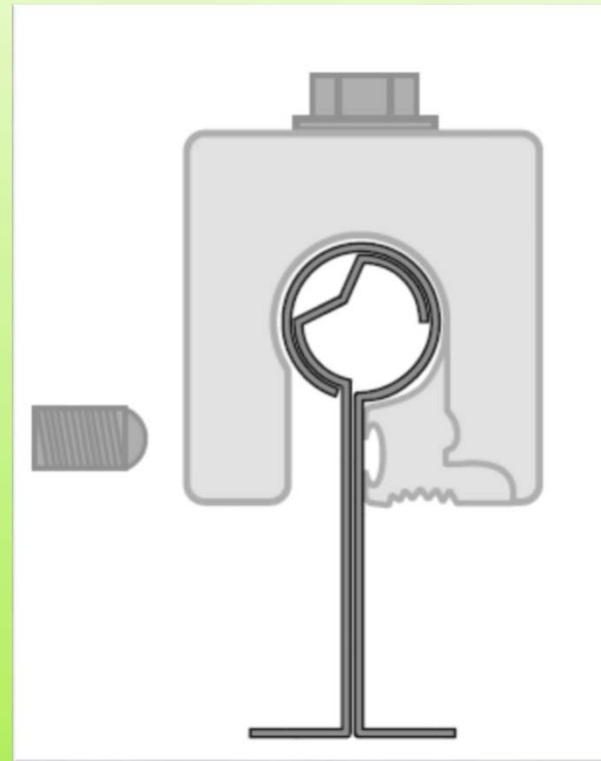
Clamped Spider No penetration on the Roof



FALL ARREST SYSTEM APPLICATIONS

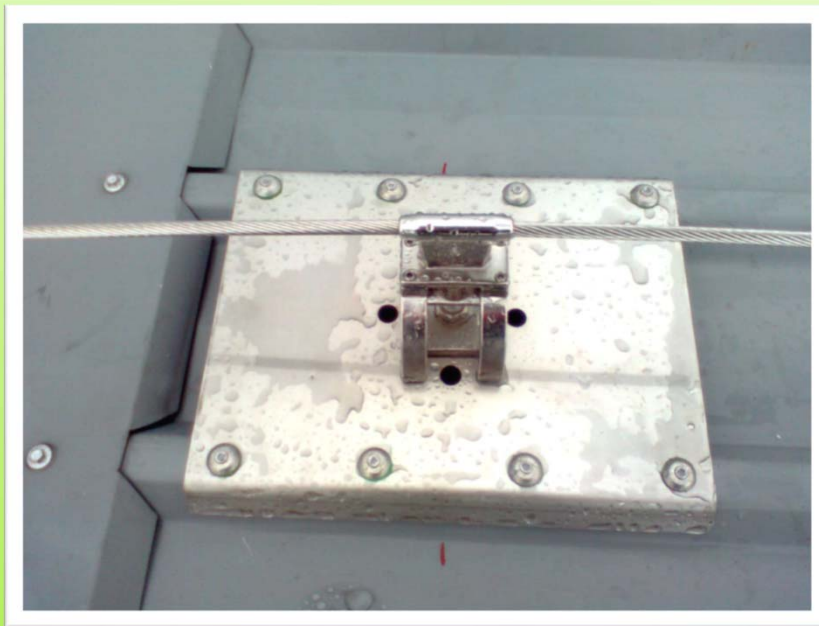
S5 -Z Clamp

Especially designed for Standing Seam Roof (Round Seam)



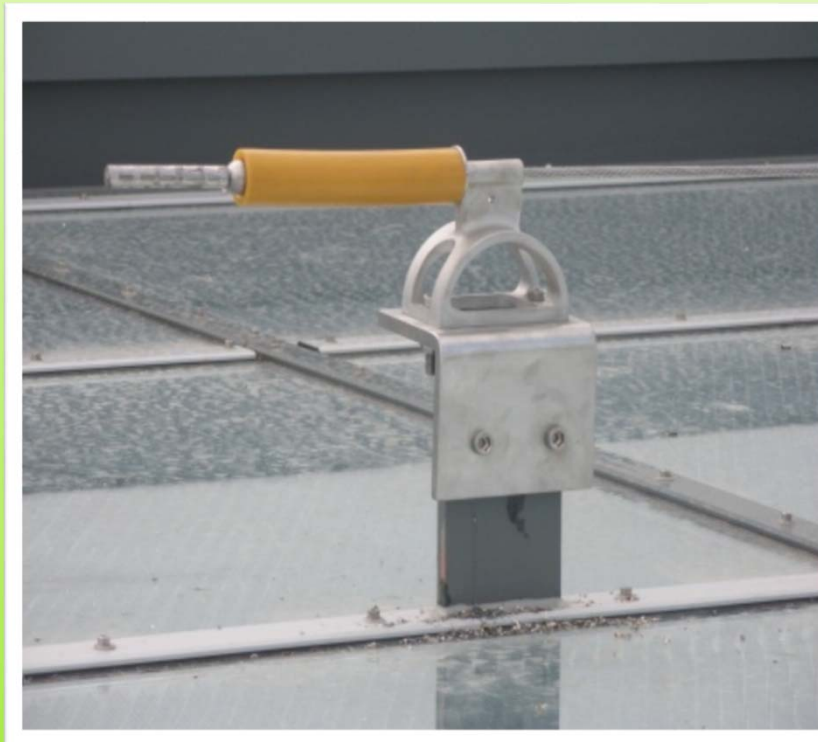
Corrugated Roof

Riveted Plates with penetration on the Roof



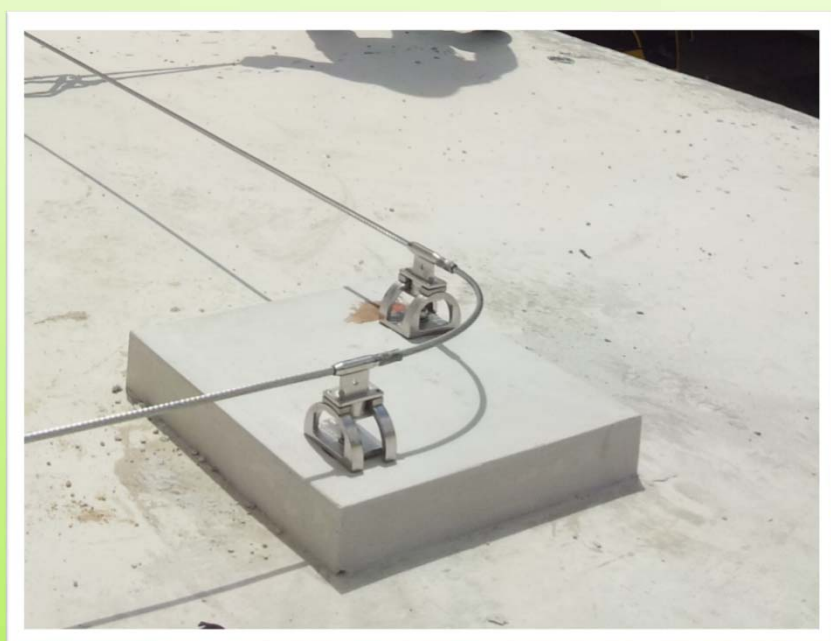
Glass Canopy or Aluminum Cladding Roof

A support bracket fixed on the structure below will protrude through the glass or cladding



Concrete Roof or Wall

The lifeline can fixed directly on concrete.



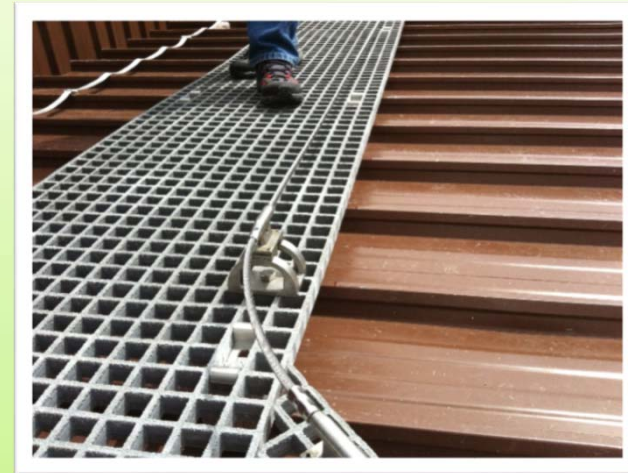
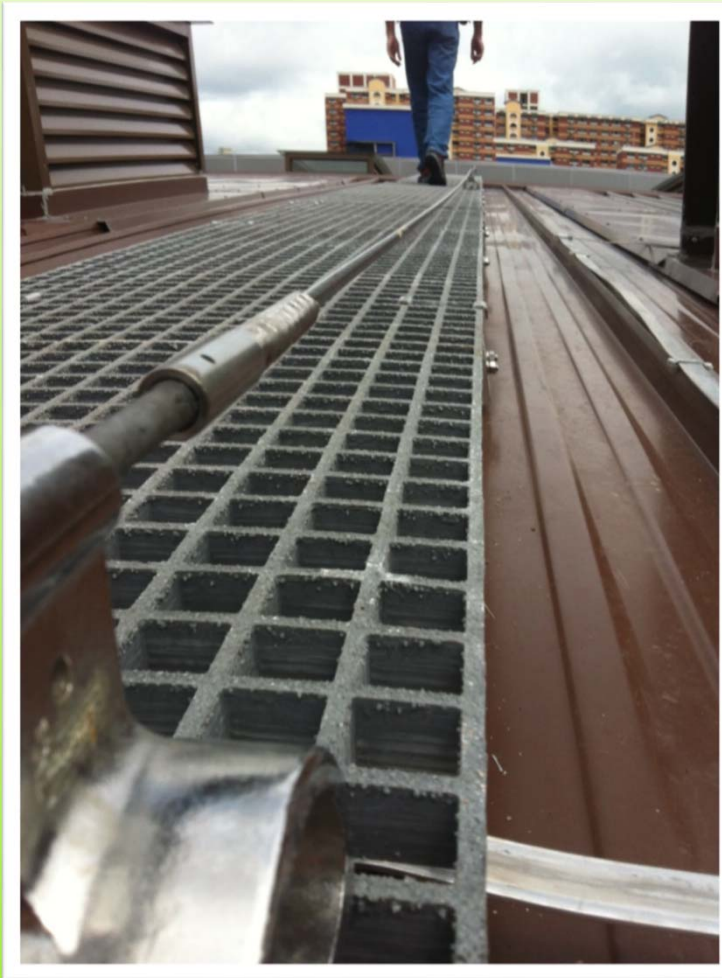
Lifeline on Post



Lifeline on Sandwich Brackets



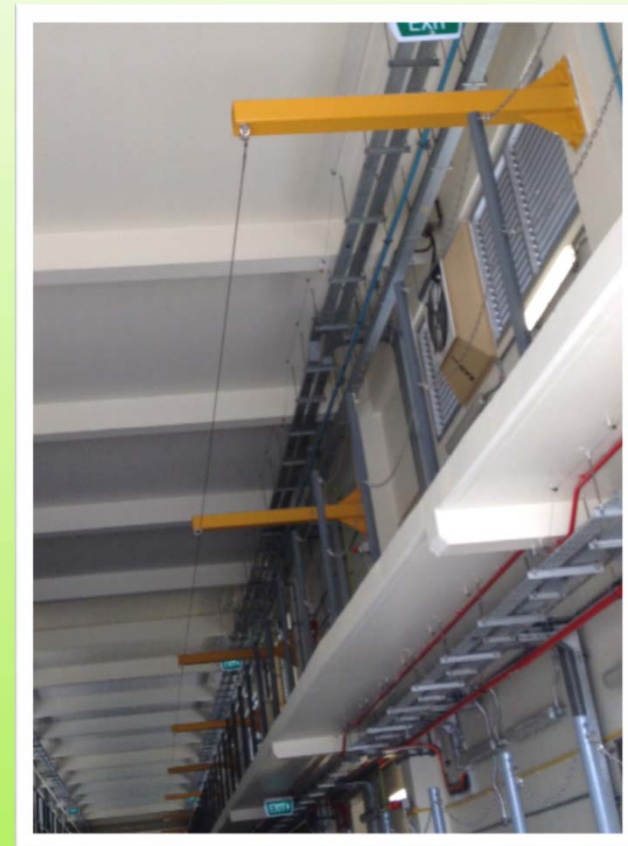
Walkway with integrated Lifeline





FALL ARREST SYSTEM APPLICATIONS

Overhang Lifeline





FALL ARREST SYSTEM APPLICATIONS

Special Cases



CERTIFICATE OF CONFORMITY



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CERTIFICATE OF CONFORMITY N° 19.0720/A

1. Applicant

Applicant : Mr Leonard Arnold
Manufacturer : AKROBAT Pte Ltd - 53 Ubi Avenue 1 #05-13 - Paya Ubi Industrial Park - SINGAPORE 408934

2. Equipment

Type of equipment: anchor device Type C EN 795:2012 and TS16415:2013
Manufacturer and Trademark: AKROBAT Model: AKROLINE

3. Description

Main characteristics	Components	References
Span: single and multi span, mini.2m and max. 12m	• Flexible anchor: - Cable 7x7 Ø 8mm in stainless steel AISI 316 - Cable 1x19 Ø 8mm in stainless steel AISI 316	LDV006 LDV005
User : 4 person (*)	• Energy absorber + Crimping ring	LDV032 + LDV008
Cable tension : 70 daN	• Terminal anchor	LDV002
Direction of use: wall and floor	• Intermediate anchor	LDV004
Angle of use: max. 15°	• Mobile anchor: can be used with the 3 following anchors	LDV001 LDV060 LDV111
Energy absorber: at one end	• Junction ring of cable	LDV010
This device has no: entry/exit line fitting, flexible support fixed on anchor, no metallic material without evidence of durability	• Tensioner	LDV137
This device cannot be used with EN 360 and EN 353-2	• Tensioner on middle line	LDV138

(*) : Equipment also assessed according to requirement of Technical Specification CEN/TS 16415 of January 2013, for use by 4 people.

4. Technical referential

The Anchor device Type C was assessed taking into account the provisions of technical specification TS 16415:2013 on anchor device type conforms to EN 795 of July 2012 to the exclusion of any other standard.

5. Conclusion

The Anchor device Type C, of trademark "AKROBAT", model "AKROLINE", presented by AKROBAT, conforms to the requirements EN 795:2012 and technical specification TS 16415:2013.

27/01/2020
The PPE Technical Manager



This certificate includes one page. This certificate is edited in two original copies. No duplicate will be issued.

This certificate cancels and replaces the one edited the 23/06/2019 under the same number.

This type of equipment is not a Personal Protective Equipment against falls from height, the present certificate of conformity is not an EC type examination certificate delivered by a notified body.



Thank You!!!
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www.akrobat.com.sg

