



***PERMANENT
FALL PROTECTION
SOLUTIONS***



www.deltaplusystems.com

SUPPORTS & ANCHOR POINTS

P. 6-13 Supports & anchor points for all types of roofings

FALL PROTECTION CABLE SYSTEMS

P. 14-15 BATILIGNE: horizontal lifeline
P. 16-17 ALTILIGNE: horizontal lifeline
P. 18-19 VERTILIGNE: vertical lifeline

FALL PROTECTION RAIL SYSTEMS

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P. 22-23 ALTIRAIL LR: long-range rail
P. 24-25 COMBIRAIL: inclined fall protection rail
P. 26-27 VERTIRAIL: vertical fall protection rail

COLLECTIVE PROTECTION

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ACCESS MEANS

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EXPERIENCE & INNOVATION FOR YOUR SAFETY



RANGES LEGEND:

PREMIUM RANGE

High-tech products for special uses

EVOLUTION RANGE

High-performance multi-purpose products

ESSENTIAL RANGE

Multi-purpose standard products

PICTO LEGEND:



Patented fall arrest solution



Different colors and coatings available upon request (RAL colors)



Number of users allowed simultaneously and in accordance with the associated calculation note



Recyclable material



OUR MAIN CONCERN: THE USER

Every day, we put your issues at the heart of our concerns, in order to design personal protective equipments and permanent fall arrest systems, adapted to your needs and your work environments.



AN EXTENSIVE RANGE OF PRODUCTS

No matter what your structure is or the shape of your building, our in-house engineers will work on your requirements and design a custom user-friendly safety solution perfectly adapted to your needs.



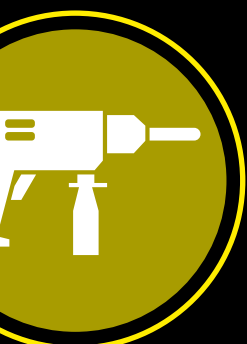
THE GUARANTEE OF HIGH STANDARD PRODUCTS

In our constant effort to maintain quality, our products are tested and certified with the current standards. Our products undergo extensive testing in our own quality control lab before they are certified by notified independent test bodies.



CLOSE TO YOU

Because we are convinced that human support is the key to everything, find our teams in France and abroad, ready to provide you trainings and all the engineering and installation supports you will need.



READY-TO-USE

Rely on our trained and certified installation partners across the world and benefit from a turnkey solution.

AUDIT

ENGINEERING

CONTROL

SUPPORT

INSTALLATION

THE PROMISE OF A TURNKEY SAFETY

To ensure **technical expertise** for your safety, DELTA PLUS has created the **SYSTEMS entity** by bringing skills in the field of **permanent protection against falls from height**.

Since then, **DELTA PLUS SYSTEMS** has provided you **complete support**, from the **audit of your needs to the installation of your fall protection solutions**, for an ever more qualitative customer experience and support.

Every safety issue's got its proper fall protection solution!



CERTIFIED SOLUTIONS FOR YOUR SAFETY

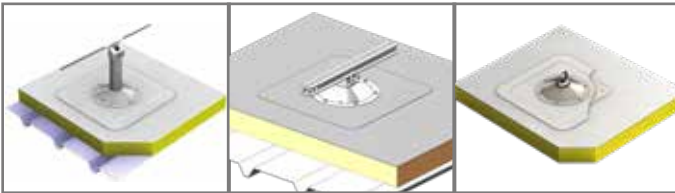
Our ISO 9 001 and ISO 14 001 certifications are the outcome of our daily commitment and will, to constantly improve the quality level of our products and services, as well as our safety, health and environmental management.



FLEXIBLE COATINGS



BITUMEN OR PVC



Lifeline support
AFXPVC

Rail support
RAFXPVC

Anchor point
AFXPVCPA



Lifeline support
AFXBM

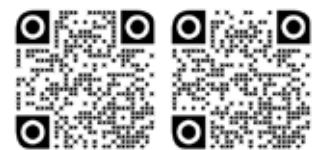
Rail support
RAFXBM

Anchor point
AFXBMFA

- Installation directly on the waterproofed membrane
- A single central fixing is used to ensure the link with the steel deck
- Independant location from the framework
- Version available for wooden support
- Version available for perforated steel deck



Flash the QR code to get access to the installation video



BM

PVC

RIBS
&
BLOCKS

HOLLOW
CORE
SLAB

STEEL
DECK

CONCRETE
SLAB

FLOOR
PRECAST
WIDESLAB

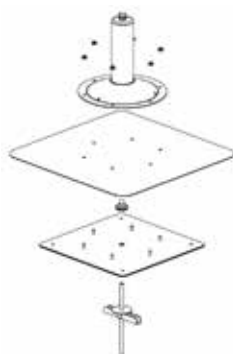
PERFORATED
STEEL
DECK

Fixing kit KVBSEx

KVBSE1
0 < insulation th. < 130 mm

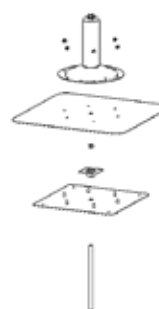
KVBSE230
100 < insulation th. < 230 mm

KVBSE330
200 < insulation th. < 330 mm



Important: reinforced fixing kit (KVRBAC) on extremity and angle posts needed, for HLL systems.

Fixing kit ANCRAFX



Important: reinforced fixing kit (KVRBET) on extremity and angle posts needed, for HLL systems.

Fixing kit KV4FIXx



METALLIC SHEATINGS



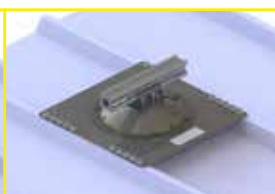
STEEL DECK



Lifeline support

AFX2FR

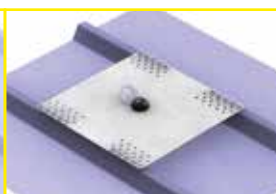
Specific wave spans:
AFX2ES or ZOI



Rail support

RAFXS

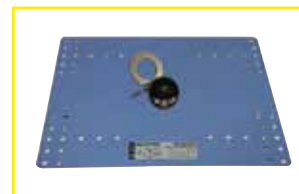
Specific wave spans:
RAFXSTES or ZOI



Anchor point

AFXBACPA

Specific wave spans:
AFXBACPAES or ZOIPA



Anchor point

AFXBACOPA

(dedicated to Ondulit covering
steel deck)

- Compatible with following wave spans:
250, 280, 304 & 333 mm
*Specific wave span available upon request
for cable or rail supports as well as anchor
point (AFXxSPECIF)*



- Wave spans for the 'ES' versions: **415 & 440 mm**
- Wave spans for the 'ZOI' versions: **300, 352, & 386 mm**

Flash the QR code to get access to
the installation video



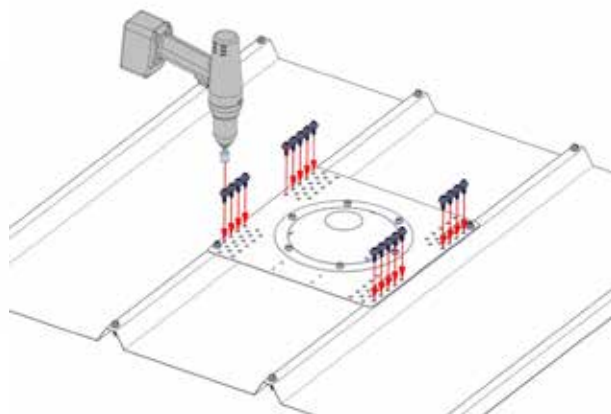
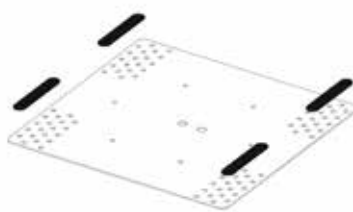
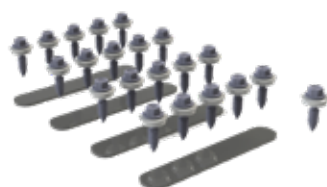
- Compatible with
following wave
spans:
**193.25, 264
and 299 mm**

STANDARD STEEL DECK

Fixing kit
KVBAC



Thickness $\geq 0.6\text{mm}$
Fixing with self-drilling screws



METALLIC



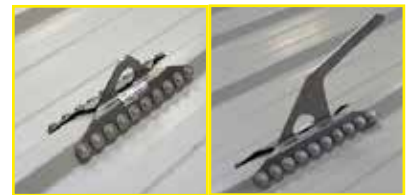
STEEL DECK



Lifeline support
AFX1



Anchors & ladder hooks
BFXT & BFXTC



Anchors & ladder hooks
BFXAT & BFXATC//BFXAS & BFXASC

Compatible with

- Folded steel sections:**
L > 50mm; thickness > 1,5mm
- Hot-formed profiles:** IPN or UPN 80
L > 50mm; thickness > 1,5mm

FOLDED STEEL SECTION or I/UPN 80

Fixing kit: folded steel section
KV1A

x 8

Fixing kit: IPN or UPN 80
KV1M



Anchors & ladder hooks
BFXS & BFXSC

Flash the QR code to get access to the installation video for metallic sheathing




- Single anchor point/
ladder hook available
either for sinusoidal
or trapezoidal decks:



Ref. BFXS (simple)
Ref. BFXSC (hook)



Ref. BFXT (simple)
Ref. BFXTC (hook)

- Fixing kit included

- Single anchor point/
ladder hook either
for sinusoidal or
trapezoidal decks:



Ref. BFXAT (simple)
Ref. BFXATC (hook)



Ref. BFXAS (simple)
Ref. BFXASC (hook)

- Fixing kit included

SHEATINGS



ALUMINIUM



Lifeline support
AFX2FR

Rail support
RAFXST

Anchor point
AFXBACPA



Lifeline support
AFXKAL1

Rail support
RAFXKAL

Anchor point
AFXKAL2



- Compatible with following wave spans:
250, 280, 304 & 333 mm

Specific wave span available upon request for cable or rail supports as well as anchor point (AFXxSPECIF)

- Fixed directly on the standing seam - diameter 20mm (such as Kalzip, Bemo...)
- 100% stainless steel
- Standing seams span: 400 mm
Specific span available upon request
- Aluminium deck thickness $\geq 0.9\text{mm}$
Fixing with rivets

Fixing kit included

SINUSOIDAL

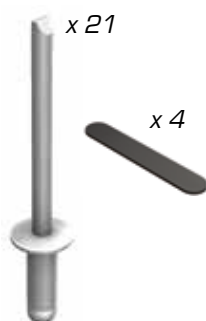
Fixing kit KVBACALUS

Deck thickness $> 0.9\text{mm}$



TRAPEZOIDAL

Fixing kit KVBACALU



METALLIC SHEATINGS



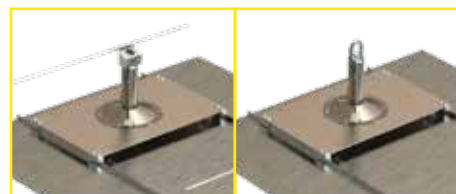
ZINC



Lifeline support
AFXZN

Anchor point
AFXZNPA

Rail support
RAFXZN



Lifeline support
AFXZNJD

Anchor point
AFXZNJDPA

- Installation without going under-surface, with free zinc expansion
- Can be stressed in all axis
- Certified on wooden sheating - 12mm thickness
- Available in clamping versions ("JD" references) for 430 or 580mm spanned- standing seams.

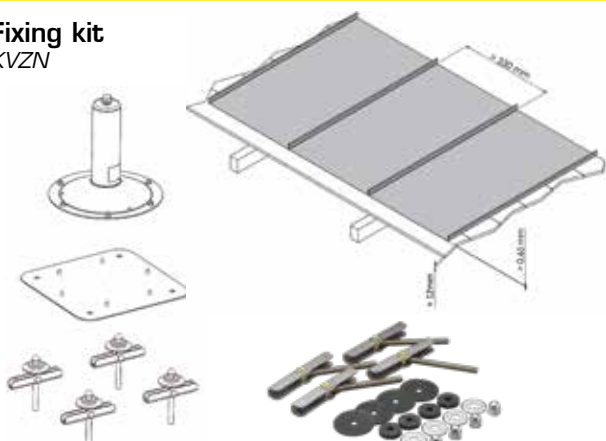
Fixing kit included

Flash the QR code to get access to the installation video



WOODEN SHEATING

Fixing kit
KVZN



CONCRETE



Standard post
PST2



Squared post
PSTC



Anchor ring
ANOV



Anchor points
PLFIXVI (stainless steel) & PLFIXV

Fixed with:

Chemical or mechanical anchors

Available in **4 different versions**: standard, squared, insulated and stainless steel

ENVIRONMENTS OF USE

inside & outside
from -40°C to +80°C

- Facilitates the carabiner connexion
- 100% 316L stainless steel
- Easy & quick installation

ENVIRONMENTS OF USE

inside & outside
from -20°C to +50°C

- Installation on vertical or horizontal structures and slopes
- Can be stressed in all the axis
- Adapted for work in suspension

Fixing kit

4 x ANCRM12
fixing of Ø12mm
HILTI HVU M12



Accessories for waterproofing:

- Aluminium sleeve (FALU1)
- PVC sleeve (FPVC1)



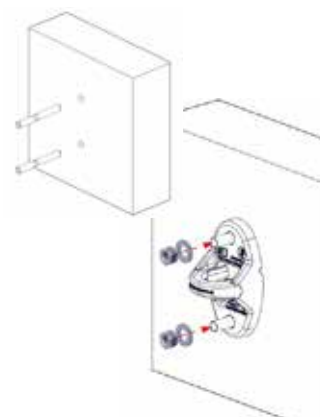
Fixing kit

1 x ANCRM12
fixing of Ø12mm
HILTI HVU M12



Fixing kit

2 x ANCRM12
fixing of Ø12mm
HILTI HVU M12



FRAMEWORK



FIBER-CEMENT



Lifeline support
AFXFC

Anchor point
AFXFCPA

Rail support
RAFXFC

- Installation without going under-surface
Installation-friendly
- Fixed on metallic framework: minimum IPN 80 or UPN 80
- Seals ensure waterproofing for fiber-cement slabs with 5.5 waves



FRAMEWORK



Standard post
PST1

Standard anchor point
PEXAFX

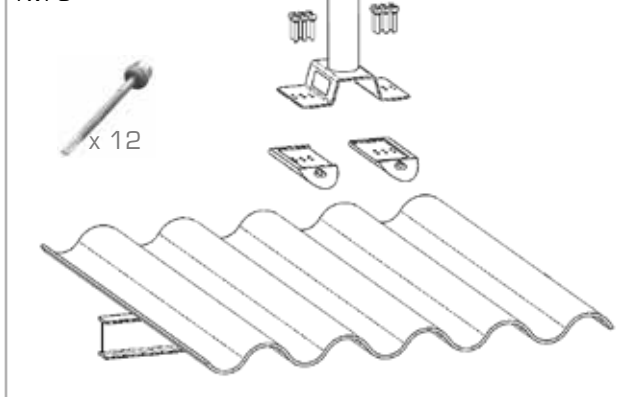
- Fixed with**
Clamping kit (KBxP)
Wrapping-around kit (KCxP)
- Available in different versions:
insulated and squared
- Accessories for waterproofing:
 - Aluminium sleeve (FALU1)
 - PVC sleeve (FPVC1)
 - Lead sleeve (KEFP-TUILE)

FRAMEWORK

FRAMEWORK

FRAMEWORK

Fixing kit
KVFC



Fixing kit
KCxP or KBxP

KCx:
Double clipping

KBx:
Double clamping



KC1
80 to 150 mm
KC2
150 to 250 mm
KC3
235 to 330 mm

KB1
80 to 150 mm
KB2
150 to 250 mm
KB3
235 to 330 mm

Fixing kit
KCx or KBx

KCx:
Simple clipping

KBx:
Simple clamping



KC1P
80 to 150 mm
KC2P
150 to 250 mm
KC3P
235 to 330 mm

KB1P
80 to 150 mm
KB2P
150 to 250 mm
KB3P
235 to 330 mm

TILED ROOFING



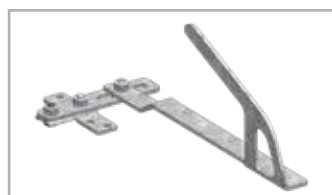
TILES



Single anchor
BWOOD



Single anchor
BWOODS



**Single anchor + ladder
hook - BWOODC**



**Single anchor + ladder
hook - BWOODSC**

- ▶ 100% galvanised steel
- ▶ Adjustable anchor point, with or without ladder hook and can be used with any type of connectors
- ▶ Includes a patented activation mechanism, which allows keeping the load in the rafter axis
- ▶ Installation-friendly: fixed from above, without any cut-outs or sealing
- ▶ Can be installed on all types of trusses, even small sections

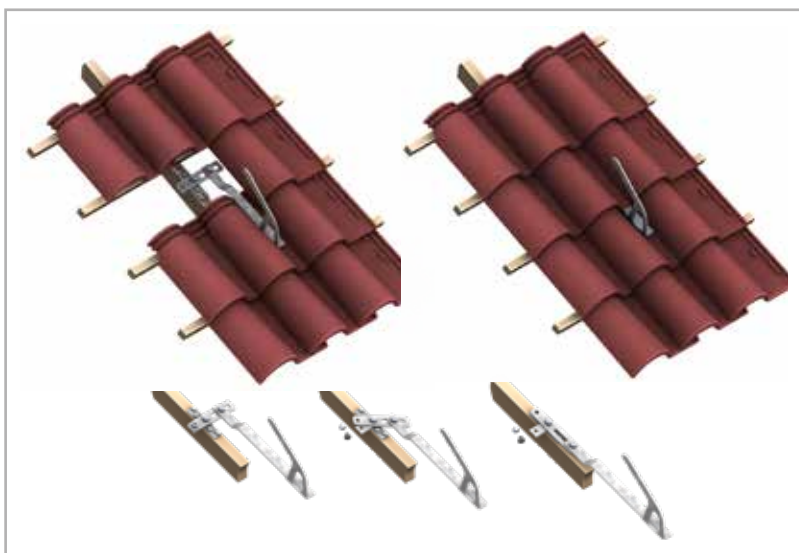
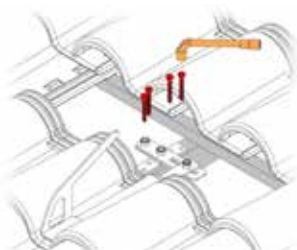
Fixing kit included

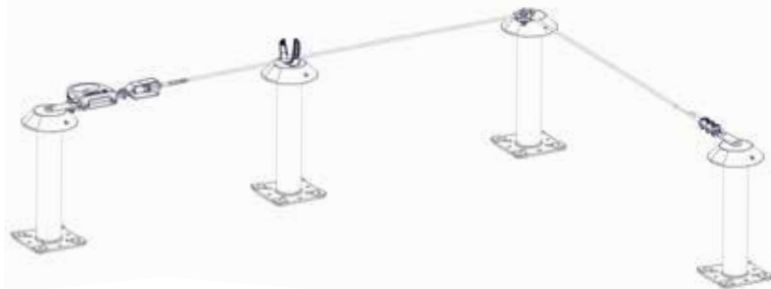
WOODEN RAFTER

Fixing kit included

4 Lag screws

Screwing the bolts without pre-holes
Wooden rafter section 3.6 x 6 cm mini





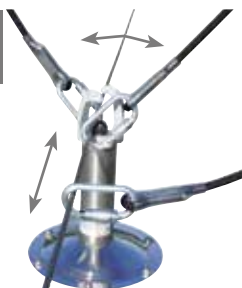
PRODUCT BENEFITS

- ▲ **USER-FRIENDLY:** can be used with a simple carabiner
- ▲ **INSTALLATION-FRIENDLY:** no need of special tools to install the end-brackets on the cable
- ▲ **CORROSION RESISTANT:** manufactured in stainless steel
- ▲ Always clipped while passing the supports
- ▲ Distance between supports is certified up to 15m
- ▲ Visual indicator allowing an optimum adjustment of the cable tension



SAFETY WITHOUT UNCLIPPING

The operator, already attached to the cable, can move around without unclipping while passing the intermediate supports.



ONLINE TUTORIALS

For more information regarding the use or the installation of our BATILIGNE HLL system, please go to our YouTube channel and check out our online tutorials!

CALCULATION PROGRAM

According to the requirements of the EN 795, DELTA PLUS SYSTEMS offers a specific program to calculate the lifeline features. Available online 24/24 and 7/7. Do not hesitate to contact us to get your personal IDs.

READY-TO-INSTALL KIT



For even greater simplicity, the HLL BATILIGNE system is also available in ready-to-install kit.

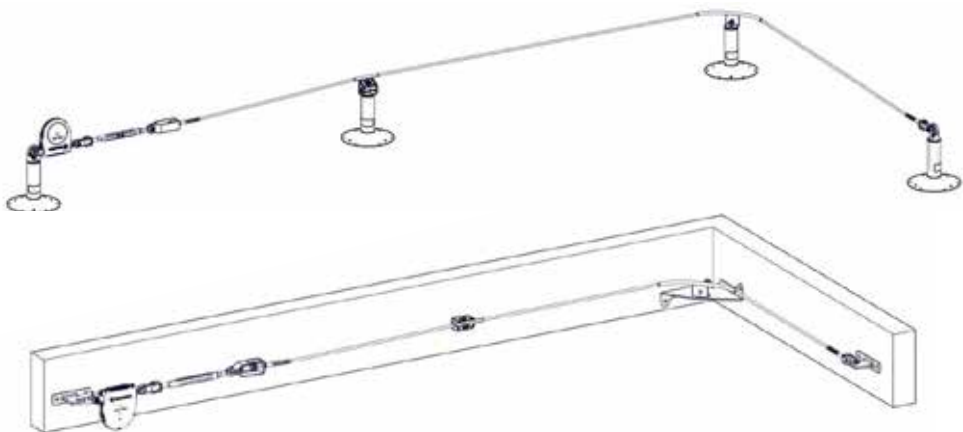
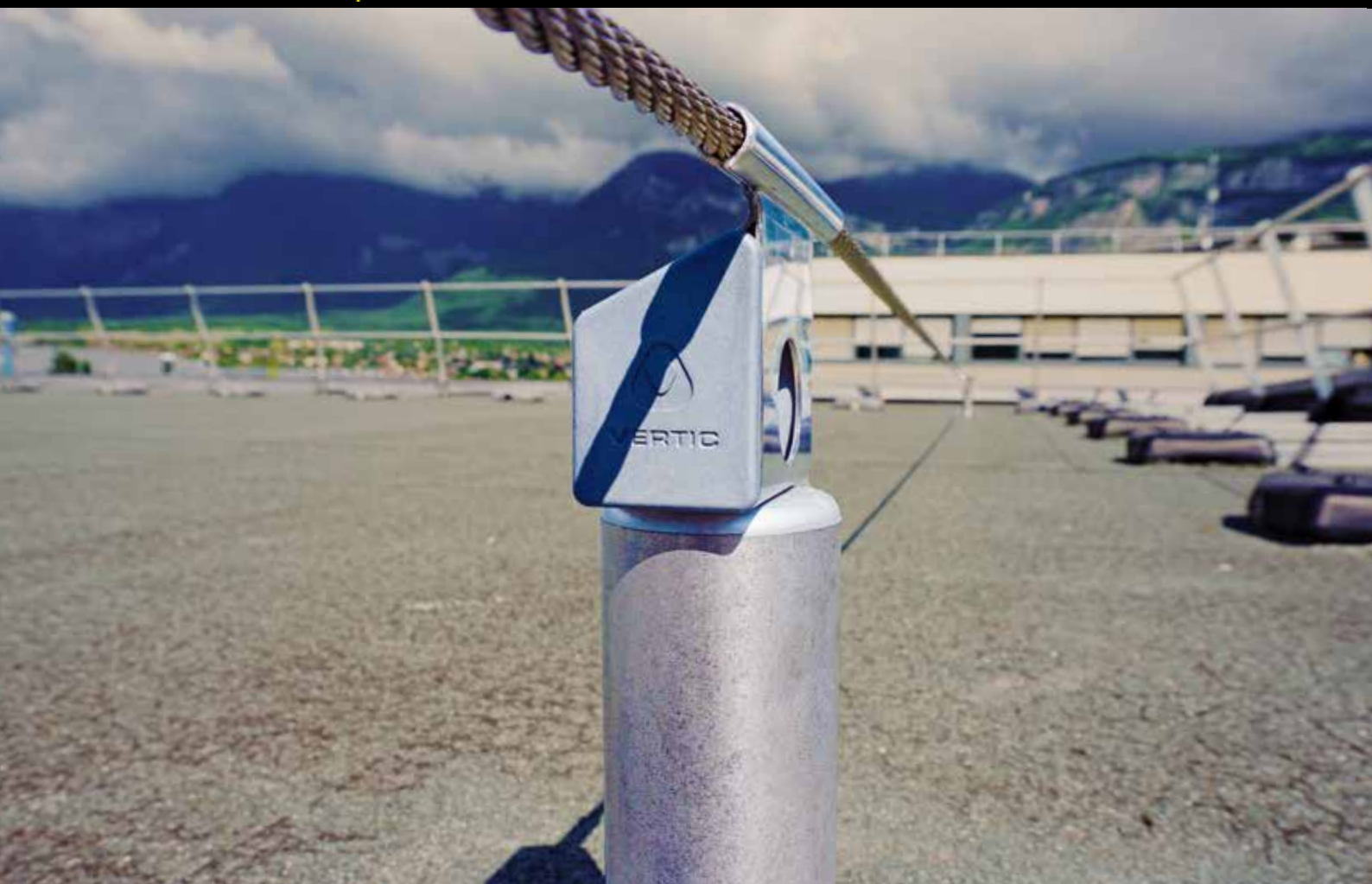
Lengths available:

- 15m
- 30m
- 40m



COMPONENTS BATILIGNE®

Cable 8mm , 7x7 stainless steel cable. VERTIC Bolduc incorporated in the core of the cable for a better traceability.	 C18	 BAINT2	Intermediate bracket Spacing 15m maximum. Allows the circulation of the carabiner without unclipping.
Energy absorber Fitted at the end of the lifeline, it reduces the loads applied to the structure.	 ABS55	 BAANG2	Angle bracket Allows making adjustable angles on posts.
Manual tensionner Installation between energy absorber and manual/crimped tensionner (ref. BATSLx50). Allows the lifeline to be tensioned at the end without special tools.	 TSL4	 BAANGSA	Angle bracket for facade Enables the angle bracket to be mounted on a salient or reentrant corner. Adjustable according to the corner radius.
Manual fall indicator Allows to adjust the tension of the lifeline to 50kg. Includes a tension indicator. Manual assembling, without special tools.	 BATSL250	 ES2	Crimping tip with end-bracket Extremity part of the lifeline with the cable crimped at points.
Crimped fall indicator Allows to adjust the tension of the lifeline to 50kg. Also allows controlling if the lifeline is over or under tensioned.	 BATSL350	 BAEXT2	Manual extremity bracket Manually fitted to the end of the cable without special tools.
End bracket Extremity part of the lifeline. Can be installed on standard rigid post PSTx.	 PEX	 T	T bracket Extremity part of the lifeline. Can be installed on concrete, on steel structure or on beam (clamping and wrapping-around kits not included).
Anchor ring Versatile, it can be used either as an anchor point or as a lifeline end support.	 PEXAFX	 PS	Safety sign Must be installed at the access of the secured area. Allows the identification and the control of the system.



ONLINE TUTORIALS

For more information regarding the use or the installation of our ALTILIGNE HLL system, please go to our YouTube channel and check out our online tutorials!



PRODUCT BENEFITS

- ▲ **USER-FRIENDLY:** a specific runner allows the connection at any point of the cable and movement without any restriction
- ▲ **DESIGN:** careful design and finish of the line giving a perfect integration with the various architectural constraints
- ▲ **SECURE:** visible safety, thanks to the built-in tension and fall indicators
- ▲ **INSTALLATION-FRIENDLY**
- ▲ **CORROSION RESISTANT:** made of stainless steel
- ▲ Maximum span between intermediate brackets: 15m
- ▲ Ideal when the operator is working at some distance from the device



DEDICATED RUNNERS

Single moving runner

The mobile runner allows uninterrupted movement of the operator at any distance from the life line. The large diameter hooking eyelet allows the use of any type of connector.



CMS3

Runner with roller bearing kit

For heavy loads, a roller kit can be added to the runner. The CMS3KR is meant to be used on a lifeline in overhead applications or unreachable to the user. It smoothes the use while using a self-retractable block, or a long lanyard.



CMS3KR

CALCULATION PROGRAM




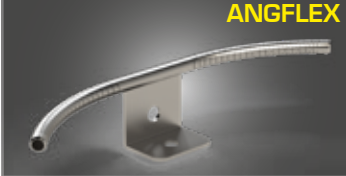











According to the requirements of the EN 795, DELTA PLUS SYSTEMS offers a specific program to calculate the lifeline features.

Available online 24/24 and 7/7.

Do not hesitate to contact us to get your personal IDs.



COMPONENTS ALTILIGNE®

Cable 8mm , 7x7 stainless steel cable. VERTIC Bolduc incorporated in the core of the cable for a better traceability.	 CIB	 ANGFLEXSA	Flexible angle bracket for facade Follows the cable curve allowing multiple orientations without cutting.
Energy absorber Fitted at the end of the lifeline, it reduces the loads applied to the structure.	 ABS55	 ANGFLEX	Flexible angle bracket Follows the cable curve allowing multiple orientations without cutting. It also makes it possible to adapt to variations in the slope of the roof.
Manual tensionner Installation between energy absorber and manual/crimped tensionner (ref. BATSLx50). Allows the lifeline to be tensioned at the end without special tools.	 TSL4	 ES2	Crimping tip with end-bracket Extremity part of the lifeline with the cable crimped at points.
Manual fall indicator Allows to adjust the tension of the lifeline to 50kg. Includes a tension indicator. Manual assembling, without special tools.	 BATSL250	 EC	Manual extremity bracket Can be installed manually at the end of the cable, without using any specific tool, nor unstranding the cable.
Crimped fall indicator Allows to adjust the tension of the lifeline to 50kg. Also allows controlling if the lifeline is over or under tensioned.	 BATSL350	 PEXAFX	Anchor ring Versatile, it can be used both as an anchor point and as a lifeline end support.
Fix intermediate bracket Rigid piece enabling the runner to pass easily on both sides of the lifeline without unhooking. Several possibilities of orientations.	 IFR90	 PEX	End bracket Extremity part of the lifeline. Can be installed on standard rigid post PSTx.
Moving intermediate bracket The mobility of the piece enables the operator to work on both sides of the line, without unclipping.	 IMR	 T	T bracket Extremity part of the lifeline. Can be installed on concrete, on steel structure or on beam (clamping and wrapping-around kits not included).
	 PS		Safety sign Must be installed at the access of the system. Allows the identification and the control of the secured area.

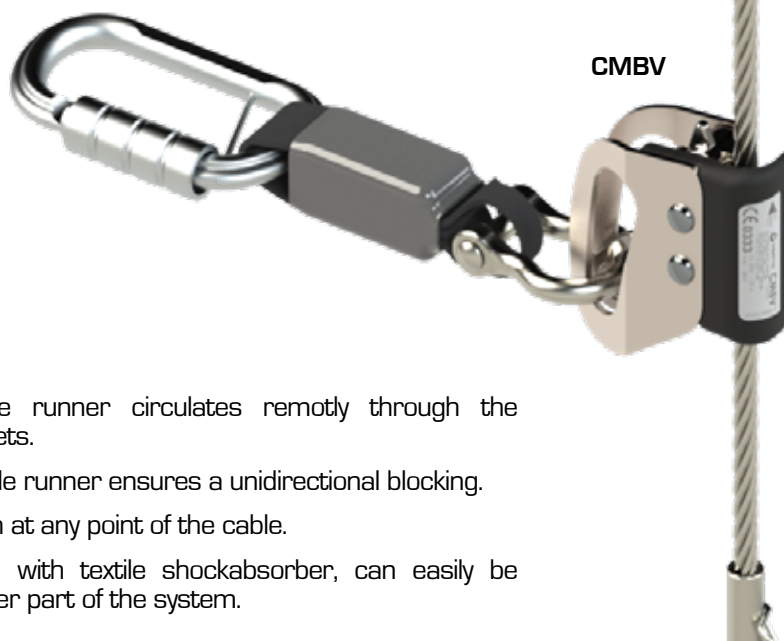


PRODUCT BENEFITS

- ▲ Weight capacity by runner: 125 kg maximum (user & tools included)
- ▲ 8m between 2 intermediate brackets
- ▲ **PRATICITY:** can be used by simultaneous people: 3 users at 3 meters distance
- ▲ **VERSATILE:** installation on a wide range of vertical structures
- ▲ **USER-FRIENDLY:** easy runner installation on the cable, even with gloves
- ▲ **SECURE:** includes a tension control device
- ▲ **RESISTANT:** 100% made of stainless steel



FALL-ARREST MOBILE RUNNER



CMBV



The CMBV mobile runner circulates remotely through the intermediate brackets.

The fall-arrest mobile runner ensures a unidirectional blocking.

Possible connection at any point of the cable.

Certified EN-353-1 with textile shockabsorber, can easily be inserted on the lower part of the system.

COMPONENTS VERTILIGNE®

Crimped extremity bracket

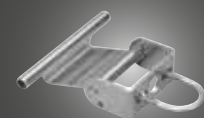
Extremity bracket of the lifeline with the cable crimped at points.



ES2

Mobile intermediate bracket

Gives freedom of movement when travelling.
Delivered with 3 sizes of staples to adapt to the ladder rungs.



IMV

Fixed intermediate bracket

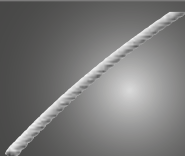
Delivered with 3 sizes of staples to adapt to the ladder rungs.



IFV

Cable

8mm , 7x7 stainless steel cable.
VERTIC Bolduc incorporated in the core of the cable for a better traceability.



CI8

Lower bracket

Pretensions the cable and enables rapid attachment of the runner on the lower part of the system.



EVB3

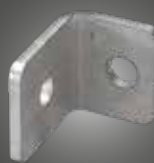
Safety sign

Must be installed at the access of the system.
Allows the identification and the control of the system.



PSV

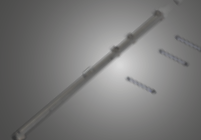
SBP



Wall offset for lower bracket

Allows fixation on concrete wall.

PHR2



Extension bracket

Attached to the top of the ladder.
Facilitates passage of the ladder operator onto the roof.

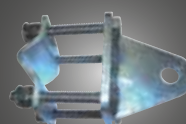
SVH



Top fixing support

Allows the fixing on top of the ladders.
Compatible with different types of ladder uprights.

SHL4



Bottom fixing support

Adjustable support for bottom fixing.
Compatible with several sizes of uprights.

SHL1



Tubular mast fixing

Standard part usable as top or bottom part.
Adjustable model suiting the diameter of the mast.

BAG01 / ESC8



Cable-locking ring

Allow curves and changes of directions.
Available in removable or crimped versions.



PRODUCT BENEFITS

- ▲ Perfectly adaptable for high or overhead installations, or when the fall clearance is incompatible with a cable system
- ▲ **VERSATILE:** ideal for working at a distance, or in association with a high weight block
- ▲ **MODULAR:** various routes may be used, thanks to the switch which enables continuous movement
- ▲ **SECURE:** reduced height of fall due to the system rigidity
- ▲ **HANDY:** can be installed on the majority of the roofs, thanks to the AFX supports suitable for the rail system

Can be specially bent upon request



Several possible uses



Lateral circulation

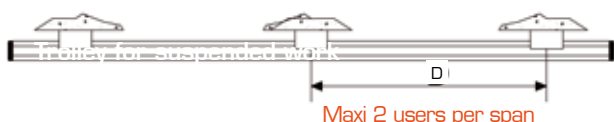


Circulation on the top of the rail



Overhead position

Recommendations of use



Fall arrest system only: $D = 4$ meters
Work in suspension: $D = 2$ meters

Rail runner with rollers

The mobile DELTA PLUS SYSTEMS runner is fitted with multiple rollers to provide perfect movement, whatever position is used. Is intended for intensive use.



RCF2

Runner dedicated to suspension use

The mobile DELTA PLUS SYSTEMS runner is made to roll under loads. It allows mobility when working in suspension.



RCF3

ONLINE TUTORIALS



For more information regarding the use or the installation of our

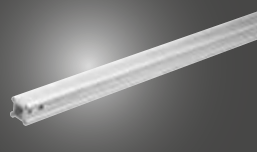
ALTIRAIL rail system, please go to our YouTube channel and check out our online tutorials!

COMPONENTS ALTIRAIL®

Aluminium rail

Drilled and milled.
Available in 1, 1.5 and 3 meters.

RRAIL



RAIG3D/RAIG4D



Switch

Allows a continuity of the movement, and the change of circulation of the runner. Available in 3 or 4 directions.

Entry/Exit bracket for runner

Can be installed at any location on the rail, to allow the installation of the different runners.

RRO



RAIG3DM/RAIG4DM



Motorized switch

Ensures the safety of warehouses with a significant height. Can be used and activated at distance with a remote control. Available in 3 or 4 directions.

Retractable end stop

This end stop enables the runner to be fitted at the end of the rail. Automatic locking.

RBE



RA90E/RA90S



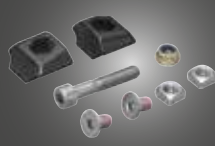
90° angles for lateral movement

Interior or exterior angles allowing the runner to circulate sideways.

Fixed end stop

Blocks the runner at the end, securing the system. Finishes the extremity of the rail nicely.

REXTF



RA90S2/RA90E2



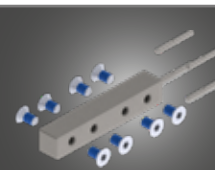
90° angles for overhead applications

Interior or exterior angles allowing the runner to circulate overhead.

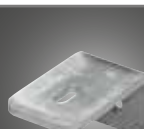
Rail coupling block

Allows assembling two lengths of rail. The 4 pins ensure a perfect lining up of the rail.

RECL



REQG



Wall offset

Allows mounting the rail on a facade, when circulation is done overhead. Also available in stainless steel (Ref. REQI).

Rail support

Made of copper-aluminium, it facilitates the fitting and removal of the rail. Also permits free expansion of the rail.

RSUP



RPS



Safety sign

Must be installed at the access of the system. Allows the identification and the control of the secured area.



PRODUCT BENEFITS

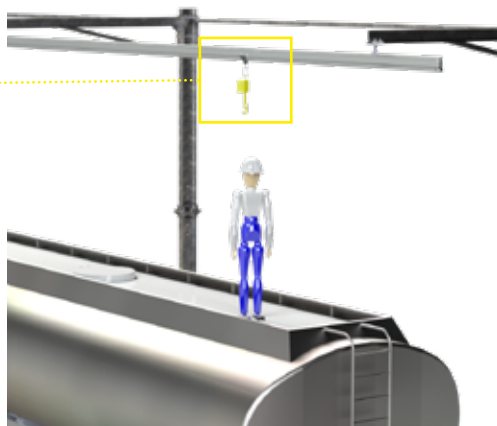
- ▲ **INNOVATION:** ideal solution for installations requiring significant fixing spans
FIXING SPAN: 8M
- ▲ **USER-FRIENDLY:** runner with plastic roller on bearing for a smooth circulation
- ▲ **LONG-TERM RUNNER:** made of stainless steel 316, perfectly adapted to aggressive environments
- ▲ **VERSATILE:** fixing support adaptable to any features
- ▲ **RESISTANT:** high robustness of the profile and runner, allowing use in aggressive (dusty) environments
- ▲ **SECURE:** runner fitted with 2 security hooks
 Screws pre-coated with threadlocker against untightening

Mobile runner

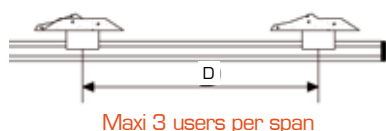


The RCLR mobile runner is permanently installed on the rail.

Thanks to its unique fluidity of movement, it allows you to move freely along the rail.



Recommendations of use



Fall arrest system only:
D = 8 meters

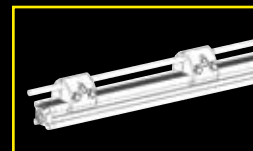
Work in suspension:
D = 5 meters

TO ALWAYS GO FURTHER ON...

For particular uses where the available supports are more than 8 meters apart, we offer to combine our rigid ALTIRAIL system with a 10mm galvanised cable.

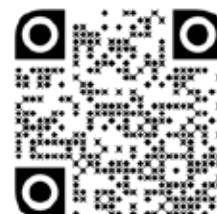
This solution makes it possible to cover very large spans, provided that the load-bearing structure to which the slings will be attached is capable of covering the necessary loads.

Working in tension and suspension is possible.



ONLINE
TUTORIALS

For more information regarding the use or the installation of our ALTIRAIL long-range rail, please go to our YouTube channel and check out our online tutorials!



COMPONENTS ALTIRAIL LR®

LR rail profile

Robust profile that can be cut or drilled as required on site (ROUTP tool).

Compatible with DELTA PLUS SYSTEMS runners: RCLR, RCF2 and RCF3.

Available in 4.4 meters.



RECLR

LR rail joint

Allows the perfect assembly and alignment of 2 rail lengths. Screws pre-coated with threadlocker against untightening for greater safety.



LR end corner bracket

Allows a perfect finishing of the LR rail, in the case of the installation of a RASO corner.



RSUPLR1

LR rail support

Allows the LR rail to be oriented in the axis of the fall. Galvanised steel bracket.



LR end bracket

Locks the runner at the end of the LR rail without damaging it. Allows a perfect finish of the LR rail.



RSUPLR2

LR rail support

Allows the LR rail to be fixed perpendicular to the structure. Galvanised steel bracket.



LR rail safety sign

Must be installed at the access level to the system. Allows identification and tracking of the secured area.



RSUPLR3

LR rail support

Allows the LR rail to be fixed parallel to the structure. Galvanised steel bracket.





Photo credit: JORGE LOZANO

PRODUCT BENEFITS

Can be specially bent upon request

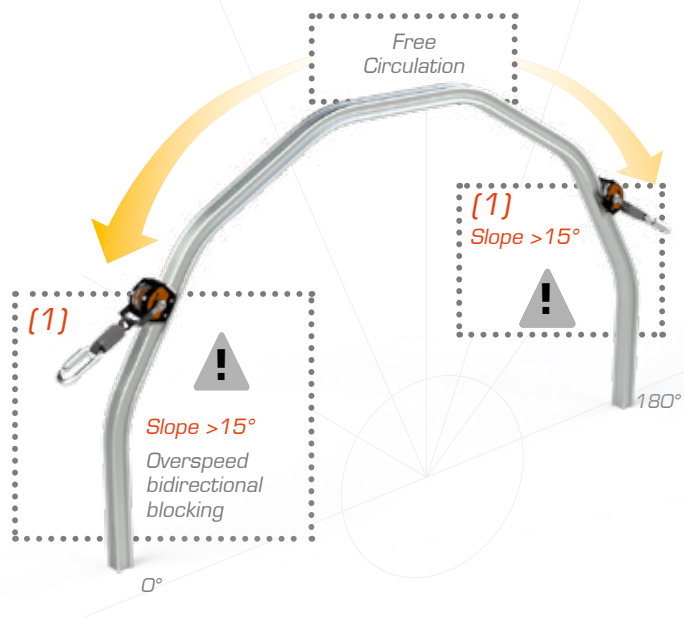
- ▲ **VERSATILE:** optimum safety on all types of tilts from 0 to 180°
- ▲ **USER-FRIENDLY:** allows easy changes of directions:
 - certified with shockabsorber, sternal connected, for a vertical use,
 - certified with & without shockabsorber, for a horizontal use.
- ▲ **MODULAR:** various routes may be used, thanks to the switch enabling a continuous movement
- ▲ Load capacity by runner: 150 kg maximum (user & tools included)





COMBIRAIL

Bidirectional blocking system on slopes from 15 to 90°



Bidirectional self-locking runner

Our runner is equipped with numerous track rollers in order to ensure a perfect circulation, no matter the use position.

(1) Centrifugal bidirectional blocking, only when the user needs it. Overspeed blocking no matter the bracket's slope.

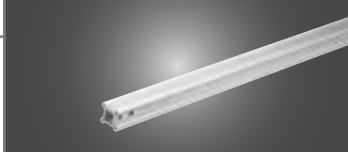


COMPONENTS COMBIRAIL®

Aluminium rail

Drilled and milled.
Available in 1, 1.5 and 3 meters.

RRAIL



RAIG3D/RAIG4D



Switch

Allows a continuity of the movement, and the change of circulation of the runner. Available in 3 or 4 directions.

Runner blocking system

Allows to block the runner in a specific zone. Also available in aluminium (Ref. RANTIRALU).

RANTIR



RRO



Entry/Exit piece for runner

Can be installed at any location on the rail, to allow the installation of the different runners.

Retractable end stop

This end stop enables the runner to be fitted at the end of the rail.
Automatic locking.

RBE



RA90E/RA90S



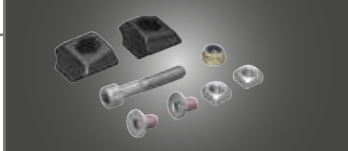
90° angles for lateral movement

Interior or exterior angles allowing the runner to circulate sideways.

Fixed end stop

Blocks the runner at the end, securing the system.
Finishes the extremity of the rail nicely.

REXTF



RA90S2/RA90E2



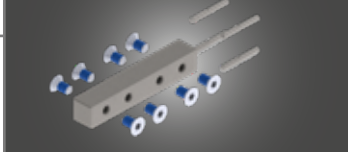
90° angles for overhead applications

Interior or exterior angles allowing the runner to circulate overhead.

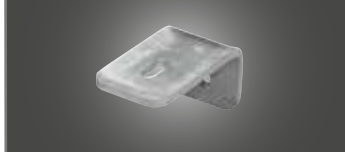
Rail coupling block

Allows assembling two lengths of rail sections. The 4 pins ensuring a perfect lining up of the rail.

RECL



REQG



Wall offset

Allows mounting the rail on a facade, when circulation is done overhead.
Also available in stainless steel (Ref. REQI).

Rail support

Made of copper-aluminium, it facilitates the fitting and removal of the rail.
Also permits free expansion of the rail.

RSUP



RPS



Safety sign

Must be installed at the access of the system.
Allows the identification and the control of the secured area.



PRODUCT BENEFITS

- ▲ Load capacity per runner: 150 kg maximum (user & tools included)
- ▲ **FLUIDITY:** smooth travelling upwards and downwards
- ▲ **USER-FRIENDLY:** circulation on the same rail: 3 users at 3 meters distance
- ▲ **HANDY:** can be installed directly on the ladder rungs

COMPONENTS VERTIRAIL®

Aluminium rail

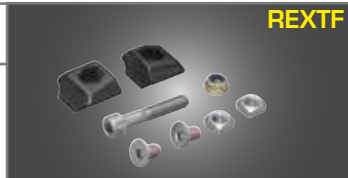
Drilled and milled.
Available in 1, 1.5 and 3 meters.



RRAIL

Fixed end stop

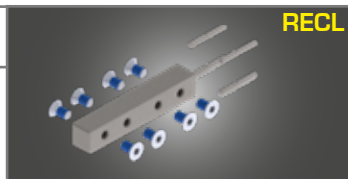
Blocks the runner at the end, to secure the system.
Adds a nice finish to the rail.



REXTF

Rail coupling block

Allows the assembling of two lengths of rails. The 4 pins ensure a perfect rail lining up.



RECL

Retractable end stop

This end stop enables the runner to be fitted at the end of the rail.
Automatic locking.



RBE

Mistake-proofing device

Allows preventing any mistake when inserting the runner on the system.



RDET

Safety sign

Must be installed at the access of the secured area.
Allows the system identification and control.



RPS

Fixing bracket for ladders

Can be positioned along the rail.
Adjustable to the size and the spacing of the ladder rungs.
Compatible with all the spacings.



RSUPECH

Switch

Allows a continuity of the movement, and the change of circulation of the runner. Available in 3 or 4 directions.



RAIG3D/RAIG4D

ONLINE
TUTORIALS

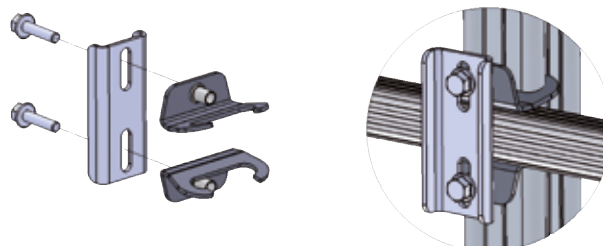
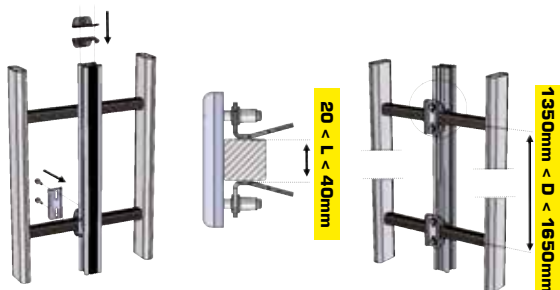
For more information regarding the use or the installation of our VERTIRAIL rail system, please go to our YouTube channel and check out our online tutorials!



For a frontal exit, an extension bracket can be added. (Ref. PHR2)



RSUPECH rail support fixing principle on ladder

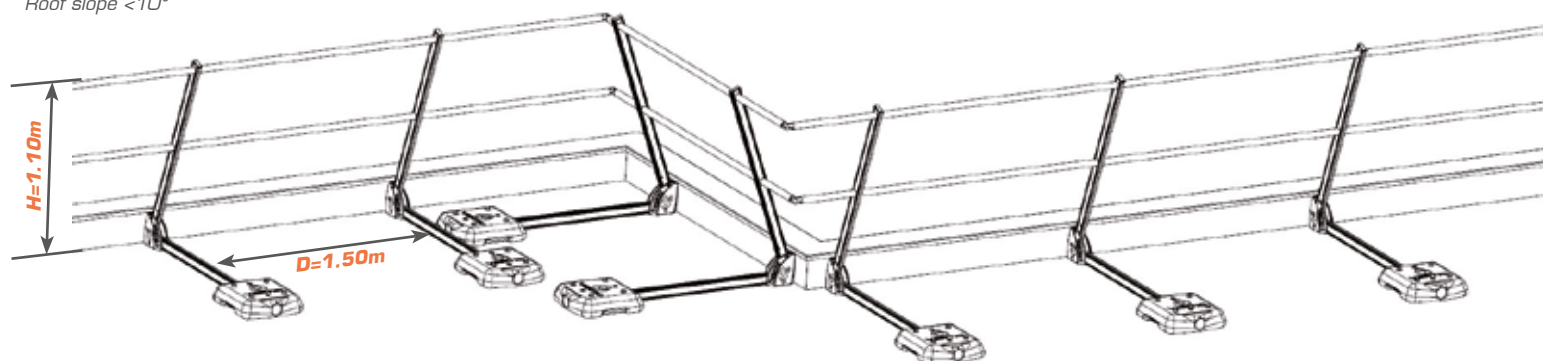




PRODUCT BENEFITS

- ▲ **RESISTANT:** made of aluminium
- ▲ **PROTECTION OF THE WATERPROOFING MEMBRANE:** thanks to the ergonomic, rounded shape of the counterweight and the front bumper. The plastic covering of the counterweight prevents from any cracking of the concrete block
- ▲ **EASE OF INSTALLATION:** pre-assembled unit
- ▲ **STABILITY OF THE SYSTEM:** the counterweight, that can be handled by one single person, includes an ergonomic handle, and ensures the stability of the system
- ▲ **OPTIMISED STORAGE:** four locating pins ensure stacking and facilitate storage of the counterweights
- ▲ Free circulation of the rainwater under the crossbar

Roof slope <10°



ONE SINGLE PRODUCT: TWO POSITIONS

=> **STRAIGHT**: 5° to avoid parapet covers

=> **BENT AT 20°**: to adapt to architectural constraints, and make safety equipment less visible from the bottom of the building

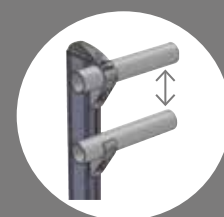
Delivered folded, the assembly is therefore optimized to facilitate transport and storage. The bolted upright post will be installed in the desired position.

EASY STORAGE AND TRANSPORT



Standard pallet
1200 x 800 mm

To complete and harmonize your existing installations, this upright post can be supplied with adjustable clamps.



COMPONENTS ATILISSE®

Top and middle rail

In 36mm extruded aluminium.
Supplied in length of 3m, reduced at one end.

ALLISSE



ALEAA



Articulated corner coupling

Allows making corners from 70° to 180°. Easily adjustable on site. Material: plastic

Bent corner

Can be fitted into the rails to ensure an aesthetic continuity. Easy installation.

ALANG90



ALERF



Fixed straight coupling

For assembling longitudinal sections of non-reduced rails and middle rails. Fits directly inside the top and middle rails.

Assembly unit with counterweight

Rail and upright made of aluminium. Concrete counter-weight with plastic covering. Folded to optimize storage.

ALAEI



ALBOUCH



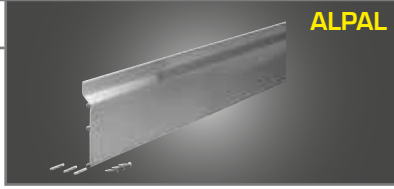
End plug

Discret ribbed plug for a perfect safety of the ends of top and middle rails.

Aluminium plinth

The railing must be fixed with a plinth if the parapet measures less than 100mm (roofs) or 150mm (machines) in relation to the circulation area. End plugs and corners available.

ALPAL



ALEXTM

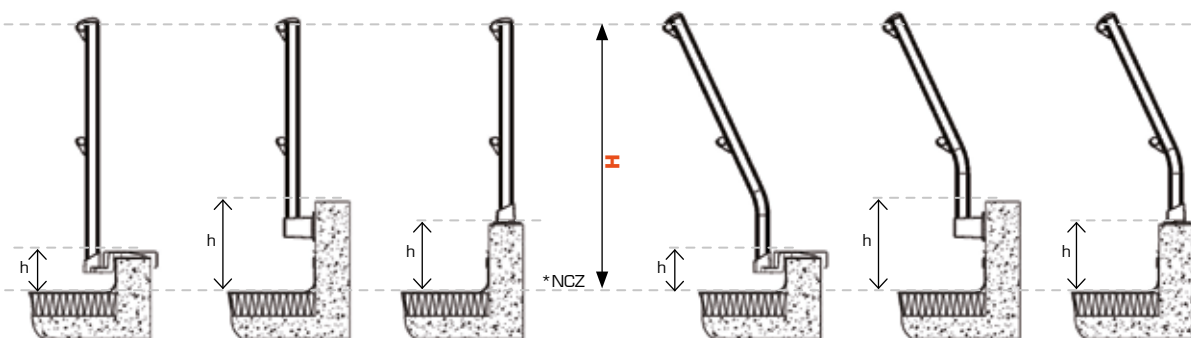


Wall end-bracket

Enables the mounting of rails on any wall. Fixed directly onto the wall with 2 fixings diameter 10mm maxi (not included). Material: plastic



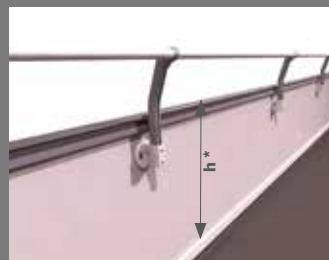
Different choice of upright according to the type of mounting plate and the height of the parapet



1000 < **H** < 1100 mm (NF E85-015)
H > 1100 mm (EN ISO 14122-3)

*NCZ: Normal circulation zone
(if there is some gravel, take the measurements above the gravel)

 Parapet collar

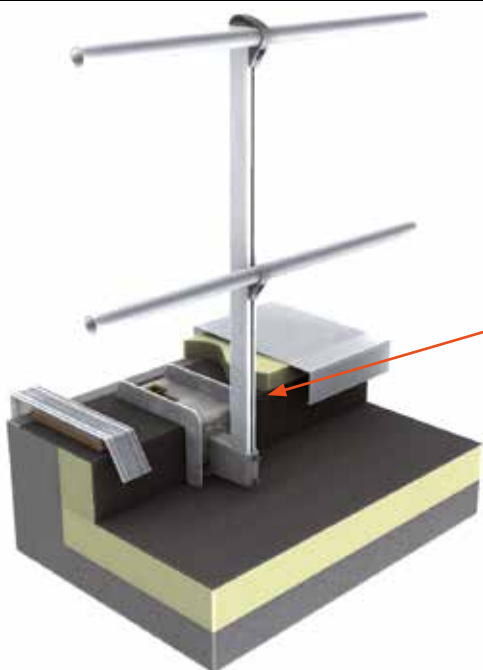


Used if the peripheral parapet of a building is at least equal to $h^* =$

50cm for roofs
60cm for machines



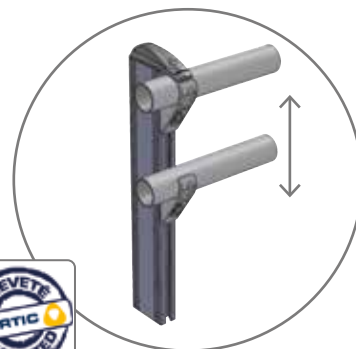
ALILISSE ON PARAPET



RAIL ADJUSTABLE FIXING SYSTEM

The top and middle rails are maintained by a **patented clamping mechanism**.

Possible adjustment of the middle rail on the upright to standardize the spans depending the height of the parapet.



COMPONENTS ALILISSE®

Top and middle rail

In 36mm extruded aluminium.
Supplied in length of 3m, reduced at one end.

ALLISSE



ALAM /
ALAMC



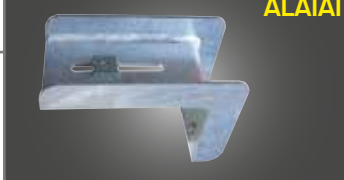
Extruded aluminium upright

Delivered with the fixing kit for top and middle rail pre-assembled. Allows the adjustment of the height of the middle rail on site.

Interface for insulated parapet

Reinforced bracket, made of galvanized steel, to be used with the side mounting plate.

ALAI AI



ALEAA



Articulated corner coupling

Allows making corners from 70° to 180°. Easily adjustable on site.
Material: plastic

Side mounting plate

Used when installing a guardrail against the parapet.
Has a significant 70mm offset to make it compatible with the existing parapet cover.

ALSL / ALSS



ALANG90



Bent corner

Can be fitted into the rails to ensure an aesthetic continuity.
Easy installation.

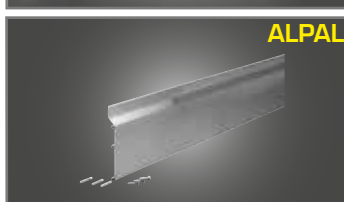
Vertical mounting plate

Used when installing a handrail on the parapet.
Can be mounted on a metallic or concrete support. Possible adjustment of the verticality.

ALASV



ALPAL



Aluminium plinth

The railing must be fixed with a plinth if the parapet measures less than 100mm (roofs) or 150mm (machines) in relation to the circulation area.
End plugs and corners available.

Offset mounting plate

Installation on a concrete (2 fixings M10 or 1 fixing M12 - not supplied) or metallic parapet (6 self-drilling screws - not supplied).
Possible adjustment of the verticality.

ALZ



ALEXTM



Wall end-bracket

Enables the mounting of rails on any wall.
Fixed directly on the wall with 2 fixings diameter 10mm maxi (not included).
Material: plastic

End plug

Discret ribbed plug for the ends of top and middle rails.

ALBOUCH

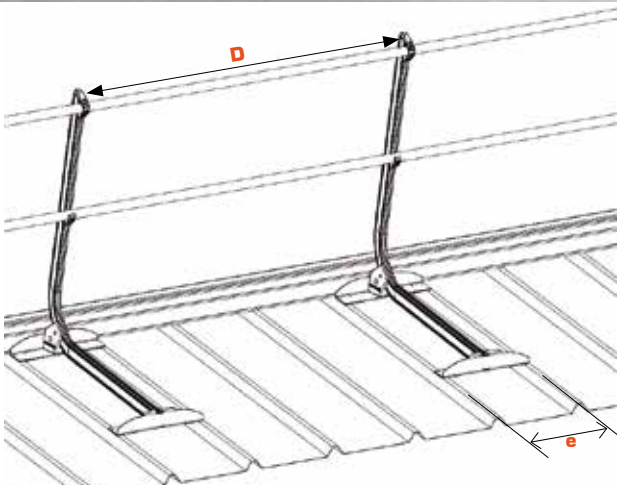


ALERF



Fixed straight coupling

For assembling longitudinal sections of non-reduced rails and middle rails.
Fits directly inside the top and middle rails.



ADAPTATION TO PITCH OF CORRUGATIONS

The distance «**D**» between the uprights depends on the spacing «**e**» of the corrugations:

=> For $e = 250\text{mm}$: $D = 1.5\text{m}$

=> For $e = 333\text{mm}$: $D = 1.332\text{m}$

Note: for buildings with a peripheral, horizontal parapet, the rail may not follow the horizontal line, since the system is mounted directly on the roof itself which may have a slope.

In this case, choose the cranked upright option, which is less visible.



ALILISSE ON STEEL DECK

COMPATIBILITY

Can be installed on all steel decks or sandwich panels.

The arm, fitted with modular mounting plates, **can be installed in either direction of the roof waves**.

In the **standard** version, they can be fitted with a distance **between waves of 250 or 333 mm**.

MODULAR INSTALLATION

Can be mounted on the support **perpendicular** or **parallel** to the waves.

WATER TIGHTNESS OF THE ROOF

The waterproofing of the roof is guaranteed thanks to **EPDM** seals and **waterproof rivets**.

EASY OF INSTALLATION

The top and middle rails use an **smart, patented clamping mechanism**.

Possible adjustment of the middle rail on the upright to standardize the intervals depending the height of the parapet.



STANDARD HEIGHT

Since they are **fitted directly on the pedestrian area**.

COMPONENTS ALILISSE®

Top and middle rail

In 36mm extruded aluminium.
Supplied in length of 3m, reduced at one end.



Bent corner

Can be fitted into the rails to ensure an aesthetic continuity.
Easy installation.



Straight Assembly unit

Pre-drilled bottom plates at 250 and 333mm waves.

Quickly installed, and strong assembly (6 rivets per upright).

Delivered with assembly kit of top and middle rail pre-assembled.



Bent assembly unit

Pre-drilled bottom plates at 250 and 333mm waves.

Quickly installed, and strong assembly (6 rivets per upright).

Delivered with assembly kit of top and middle rail pre-assembled.



ALEAA



Articulated corner coupling

Allows making corners from 70° to 180°. Easily adjustable on site.
Material: plastic

ALPAL



Aluminium plinth

The railing must be fixed with a plinth if the parapet measures less than 100mm (roofs) or 150mm (machines) in relation to the circulation area.

ALERF



Fixed straight coupling

For assembling longitudinal sections of non-reduced rails and middle rails.
Fits directly inside the top and middle rails.

ALBOUCH



End plug

Discret ribbed plug for the ends of top and middle rails.

ALEXTM



Wall end-bracket

Enables the mounting of rails on any wall. Fixed directly on the wall with 2 fixings diameter 10mm maxi (not included).
Material: plastic



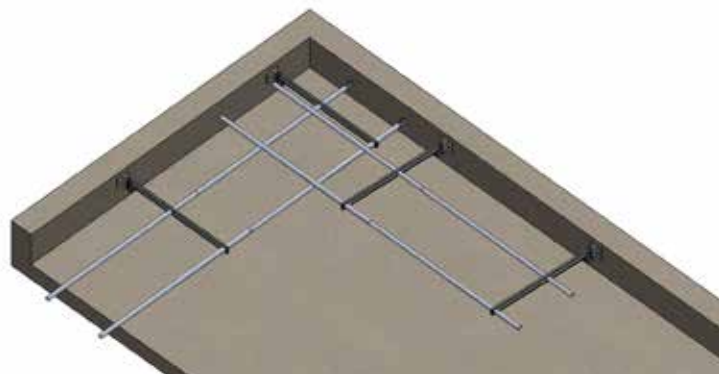
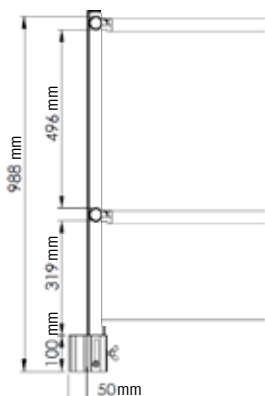
CAN BE FOLDED BY ONE SINGLE PERSON



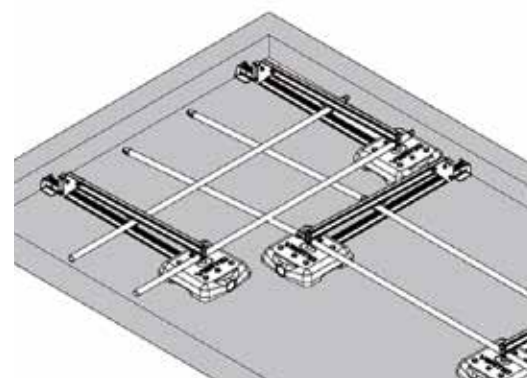
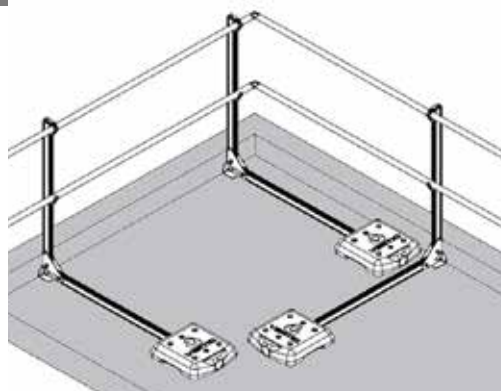
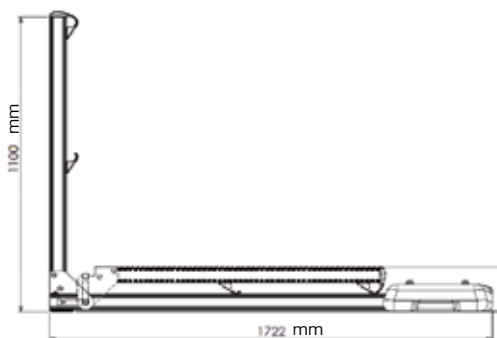


FOLDING ATILISSE

FOLDING STRAIGHT GUARDRAIL AGAINST PARAPET



FREE STANDING STRAIGHT OR CURVED GUARDRAIL



COMPONENTS ATILISSE®

Top and middle rail

In 36mm extruded aluminium.
Supplied in length of 3m, reduced at one end.



Folding unit: Straight, with counterweight

Concrete counterweight.
Front bumper made of galvanised steel with EPDM protection.
A single tool (#10) is used for tightening the counterweight and the clamps.



Fixed straight coupling

For assembling longitudinal sections of non-reduced rails and middle rails.
Fits directly inside the top and middle rails.



End plug

Discret ribbed plug for the ends of top and middle rails.



ALAR



Articulated corner coupling

Allows making corners from 70° to 180°.
Easily adjustable on site.
Includes a captive winged screw.

PR000872



EDCO folding upright

Straight folding upright 1m high.

PR000880



Folding plates + screw kit

All plates are sold with screw kit (ref. PR000254) including:
- one spacer M8x35
- two BHC screws M8x16
- one butterfly screw M8x16

PR000883



PR000950 à 952





▲ UNIVERSAL MODULAR RAILING adaptable to any type of hoppers skylights



Fixed



Central mechanism



Side mechanism

PRODUCT BENEFITS

- ▲ **HANDY:** fixed on the flat part of the metallic kerb (minimum th. 12/10) of the skylight
- ▲ Installed horizontally directly inside the hopper from outside, after removing or opening the dome
- ▲ Made of galvanised steel wire
- ▲ Mesh 90x90 mm
- ▲ Fixing is done directly with self-drilling screws
- ▲ Extensible fastener tabs made of galvanised steel (th. 10/10)

1200 joules resistance:

Tests done following the recommendations MR72 of the CRAM, and the testing protocol from the GIF (march 1997).



FOR TRANSLUCENT ROOF ELEMENTS



▲ A MODULAR GRID, adaptable to any type of configurations



Fixing on the steel deck wave adjacent to the translucent

Dimensions of the grid determined by:

L = translucent width

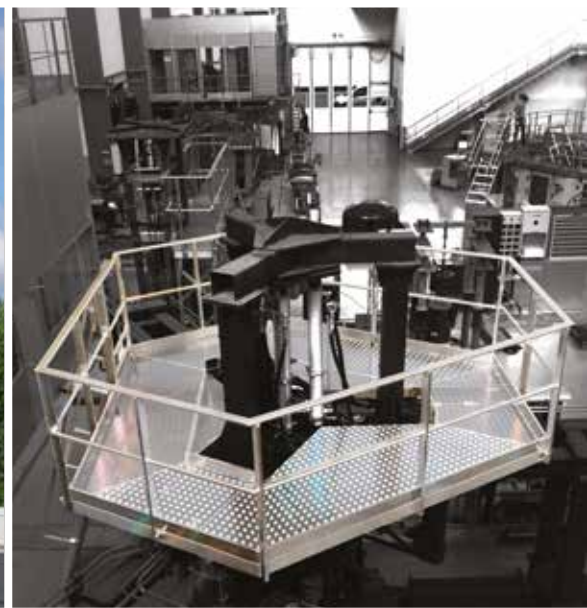
e = distance between waves

+ length required

PRODUCT BENEFITS

- ▲ **VERSATILE:** adaptable to any type of configurations
- ▲ **HANDY:** fixing done directly from the outside on the steel deck
- ▲ Grid easy to cut, in order to adjust it directly on site
- ▲ Resistance to 1200 joules
- ▲ Protective grid and brackets made of steel
- ▲ Fixing by self-tapping stainless steel screws
- ▲ Sealing ensured by EPDM seals + Vulca washers





PRODUCT BENEFITS

Walkways, step-over and maintenance platforms, steps... DELTA PLUS SYSTEMS offers a full range of tailor-made walkways in aluminium or hot-dip galvanised steel.

- ▲ **MODULAR:** fixing on all types of roofs
- ▲ **VERSATILE:** adapted to any configuration
- ▲ **TAILOR-MADE:** coating upon request



PRODUCT BENEFITS

Handy, affordable and versatile, they can be fixed on all types of roofs and structures with or without offset.

- ▲ **VERSATILITY:** adapted to any type of ladder
- ▲ **COST-EFFECTIVE:** no added equipment necessary
- ▲ **MODULAR:** fixing on all types of roofs or concrete facades, with or without offset
- ▲ **USER-FRIENDLY:** the ladder can be directly installed on the hook
- ▲ **PROTECTED WATERPROOFING:** no cutting or damaging on the roof membrane

ACCESS MEANS GANTRIES

PREMIUM RANGE

PRODUCT BENEFITS

Loading and unloading goods require appropriate equipments. DELTA PLUS SYSTEMS offers to your teams adapted safety solutions, such as gates, for them to work safe.

- ▲ **MODULAR:** tailor-made manufacturing
- ▲ **VERSATILE:** suitable to all types of configurations
- ▲ **TAILOR-MADE:** coating upon request



DELTA PLUS SYSTEMS

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THEY TRUST US

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Helicopters Alstom - Arte - Boiron
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Crédit mutuel - Dassault systèmes
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DELTAPLUS
YOUR SAFETY AT WORK