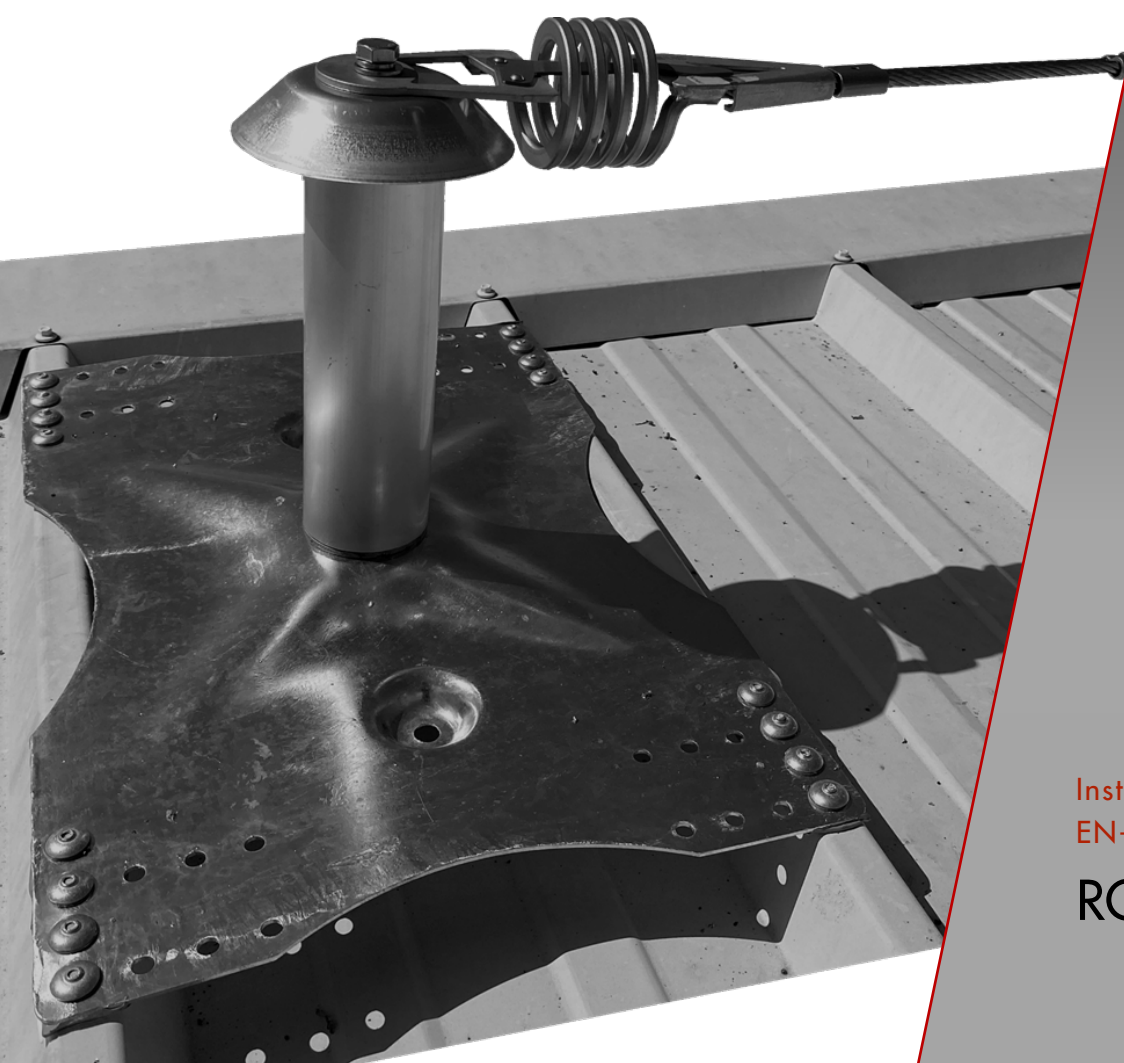


TECHNICAL SPECIFICATIONS AND INSTALLATION INSTRUCTIONS



Installation instructions NOT-
EN-098

ROOF INTERFACES

WWW.ECHELLE-EUROPÉENNE.COM

ROOF INTERFACES

1. PREAMBLE

Interfaces on roof coverings are part of the CONEKT range of anchors and lifelines from the Echelle Européenne network of height specialists.

These interfaces allow CONEKT lifelines and anchors to be attached directly to:

- Roofs consisting of batten + zinc panels (with batten thickness ≥ 12 mm).
- Standing seam zinc roofing.
- Standing seam aluminum roofing.
- Aluminum sheet metal roofing ≥ 0.75 mm thick.
- And other types of standing seam roofing.

CONEKT rail lifelines provide safe movement and secure worksites for all types of personnel or technical operators working at heights on a building or machine.

When used in conjunction with fall-protection PPE (Personal Protective Equipment), CONEKT lifelines and anchors provide workers with freedom of movement at heights while being securely attached to the lifeline at all times.

This lifeline system is manufactured by L'Echelle Européenne in Saint Jean de Védas (France):

L'Echelle Européenne SAS
 447 rue Henri Farman
 34430 SAINT JEAN DE VEDAS
 Tel: 04 67 27 36 55
 E-mail: info@echelle-europeenne.com
 Website: www.echelle-europeenne.com

The full-body harness is the only body-support device permitted for use in a fall arrest system.

2. USE

The instructions and conditions of use presented in this manual must be strictly observed.

Before each use, the equipment must be checked by the user to ensure that it is in serviceable condition and operates correctly.

The user must perform a visual inspection to verify that:

- the equipment is in apparent good order and condition.
- none of the components are damaged or deformed.

A system must be immediately withdrawn from service if doubts arise as to its safety, or if it has been used to stop a fall.

It may not be returned to service until it has been inspected and re-certified as safe for use in writing by a competent person.

It is important to note that:

- The lifeline must be used by a person in good health and in full physical control.

- The equipment must only be used by a competent person adequately trained to use it safely. The correct procedures for PPE lifeline connection and use must be demonstrated to all operators before use.

- A rescue plan and the means to implement it must be put in place to deal with any emergencies that could arise during the work.

Please note that no modifications or additions should be made to the equipment without the prior written consent of the manufacturer, and that all repairs must be performed in accordance with the manufacturer's operating procedures.

It is important to be aware of the danger that may arise from using a combination of equipment where the function of any one item is affected by or interferes with the function of any other item.

Please note that, to ensure safety when using any fall-arrest system, the anchor arrangement or anchor point must always be correctly positioned and the work must be performed in such a way as to minimize the risk of falls and the height of a fall.

For safety reasons, it is essential to verify the clearance required under the user on the worksite before each potential use of a fall arrest system so that, in the event of a fall, the worker is protected from striking the ground or any other obstacle in the fall path.

To ensure user safety, if the product is resold outside the original country of destination, the reseller must provide instructions for its use, maintenance, periodic inspection and repair, in the language of the country where the product is to be used. The rules for combining PPE products must be followed to ensure that a fall-arrest system complies with standard EN363 (chapter VII).

Before each use, the condition of the fall-protection system must be thoroughly checked. (Not deformed, not corroded, fasteners are tight).

The user must be equipped with a means of limiting the maximum dynamic forces exerted on the user during the arrest of a fall, to a maximum of 6 kN.

ROOF INTERFACES

A full-body safety harness is the only body-support device permitted for use in a fall-arrest system. The user must be connected to the anchorage point by means of a suitable fall-restraint system (fall-arrest device or lanyard), at the sternal or dorsal attachment point of the harness.

A sign near the anchorage informs the user of the date of the last periodic inspection.

3. LIMITATIONS OF USE

As the strength of the lifeline depends directly on the quality of the support base, compliance can only be established if the support material exhibits no manufacturing defects or drop in performance resulting from installation or use (aging, overloading, exposure to chemicals or extreme weather, etc.).

CONEKT lifelines and anchorages must be installed in accordance with good engineering practice, and in compliance with the recommendations of the manufacturer of the fixing elements (anchors, etc.).

For concrete or stone, through rods or chemical or mechanical anchors must be used. The quality of the installation of the structural anchors must be assessed by a test performed at 500 daN for 15 seconds. Please note that this test must be conducted before installing the CONEKT components. Performing this test with the lifeline components in place would result in deformation of the anchorage.

For wood, through rods or counter-plates must be used.

The parts and accessories, as well as the position and quality of the structural anchors, must be exactly as described in these technical specifications.

4. WARRANTY, CARE AND MAINTENANCE

CONEKT fall-protection systems are guaranteed for 5 years.

Lifelines designed with CONEKT system parts have an unlimited service life.

Only periodic inspection can determine whether certain components should be removed from service.

All CONEKT lifeline components are treated to protect them against corrosion and UV radiation.

5. SYSTEM CHECK

CONEKT lifelines should be inspected regularly, as the user's safety is directly dependent on maintaining the efficiency, strength and durability of the equipment.

Periodic examinations must be conducted by a competent person at least once every twelve months and strictly in accordance with the manufacturer's periodic examination procedures.

The periodic inspection of CONEKT fall-protection systems involves checking to ensure that all the components are in good overall condition. The CONEKT lifeline checklist defines all the inspection criteria. It is particularly important to check that all markings are present and legible and that signs are correctly filled in.

ROOF INTERFACES

6. DECLARATION OF CONFORMITY



L'ECHELLE EUROPEENNE
Parc Marcel Dassault
 447 Rue Henri Farman
 34430 SAINT JEAN DE VEDAS - FRANCE



L'Echelle Européenne atteste que les interfaces sur couvertures, ICZ, ICJD et ICA ont été testés sur différents supports de couverture. Lors de ces essais, une personne de l'Apave était présente en assistance aux essais.

Chaque interface a résisté à :

- Un test dynamique selon le mode opératoire de la norme EN 795 :2012.
- Un test statique jusqu'à 1800daN, sans rupture de l'interface et du support.

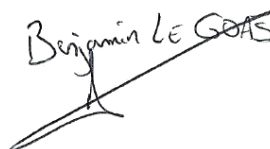
Les résultats de ces essais sont dans le rapport Apave 13210773-001-1 du 15 Juin 2023
 Ces essais ont été réalisés le 17/05/2023.

Ces interfaces sont donc suffisamment dimensionnées pour recevoir les systèmes antichute Conekt EN 795 : 2012, qu'ils soient de type A, C ou D.

Ces composants doivent toutefois être mis en place dans le respect des notices de montage.

Fait à Saint Jean de Védas, le
 21/06/2023

Benjamin LE GOAS
 Ingénieur Développement



L'Echelle Européenne SAS au capital de 1 038 112.25 euros - RCS Montpellier 378 658 827 00035
 APE 8229Z - N° TVA : FR84378658827
 Parc DASSAULT - 447, Rue Henri FARMAN - 34430 ST JEAN DE VEDAS - France
 Tél : 0033 (0) 4 67 27 36 55 - Fax : 0033 (0) 4 67 07 50 05
www.echelle-europeenne.com - email : info@echelle-europeenne.com

ROOF INTERFACES

7. OVERVIEW OF COMPONENTS

Interface on Zinc roofing Ref. no. A0014104 (ICZ)

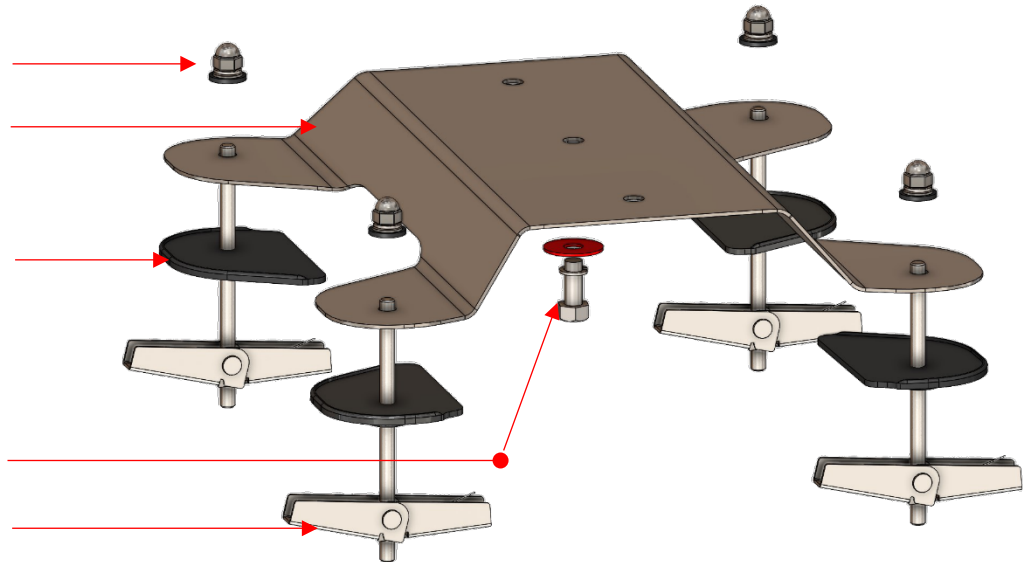
Cap nut + grower washer + flat washer
+ EPDM washer, 3 mm thick

2.5 mm thick zinc interface base plate in
hot-dip galvanized steel.

Moulded EPDM gasket, with spacer.

M12 bolt with grower washer and wide
washer.

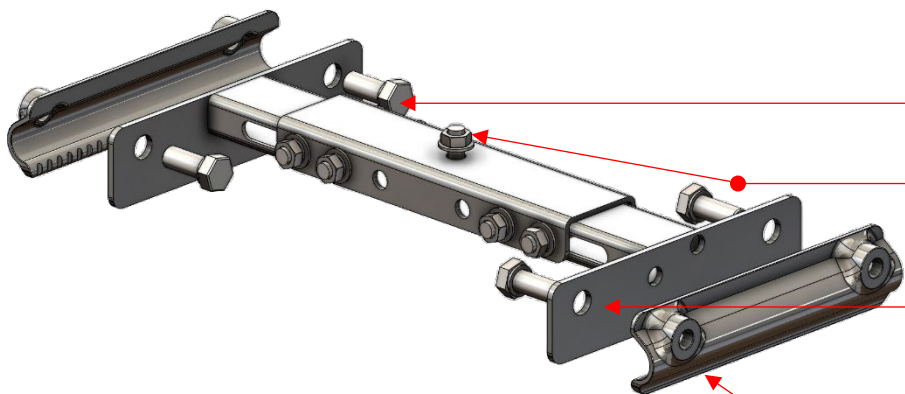
M12 spring-loaded stainless steel toggle
bolt.



Interfaces on round standing seams

- Short interface on round standing seams, Ref. no. A0014105 (ICJD S)

Wide interface on round standing seams, Ref. no. A0014105 (ICJD L)



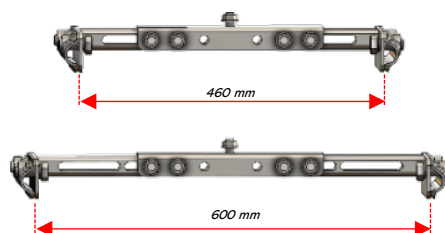
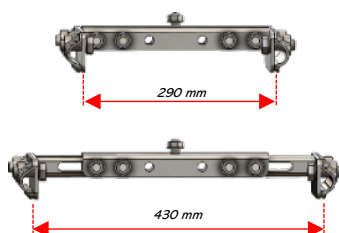
M16 screw 40 mm long + grower
washer + flat washer + EPDM washer
3 mm thick.

M12 bolt with grower washer and wide
washer.

Extendable part of the base plate allows
it to be adjusted to the wave crests.

Moulded part ensures uniform
tightening along the entire length of the
clamp.

ICJD S ICJD L



ROOF INTERFACES

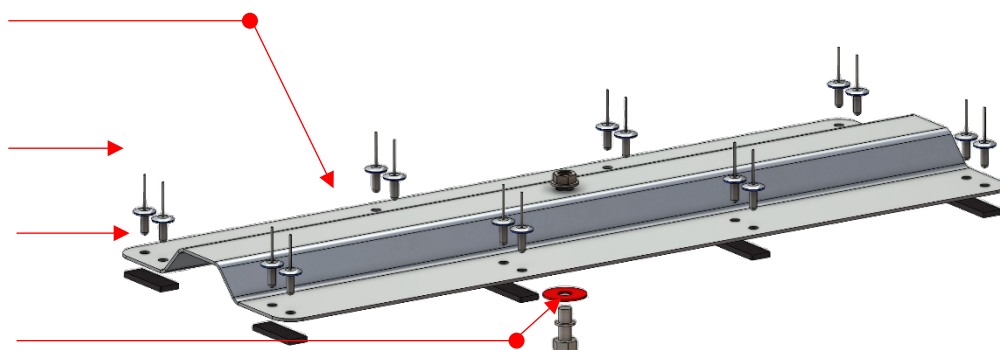
Custom interface aluminum deck roof (ICA)

Custom-made ICA base plate in 3 mm-thick aluminum. The base plate covers 3 or 4 waves.

Bulb-Tite 7.7 aluminum rivet with waterproof washer.

5 mm-thick sealant strip.

M12 bolt with grower washer and wide washer.



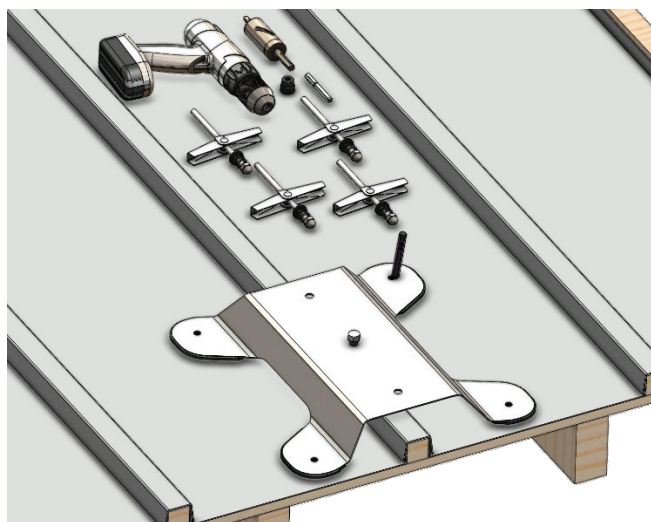
8. MOUNTING OF ZINC ROOFING INTERFACES (ICZ)

a. Installation of zinc roofing interfaces (ICZ).

ICZ interfaces are designed for zinc roofs composed of batten + 1 mm zinc sheet. **The waterproofing support must be built-in and the battens must have a thickness $\geq$ to 12 mm.**

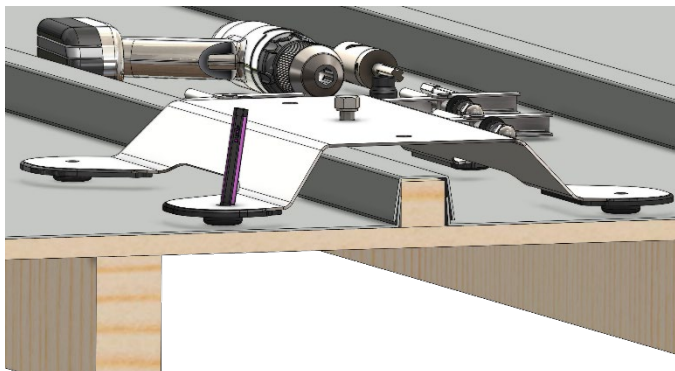
For installation, you will need a drill-screwdriver with a 17 mm socket and a 35 mm diameter hole saw + torque wrench.

Once the plate has been positioned, the areas to be drilled must be identified:

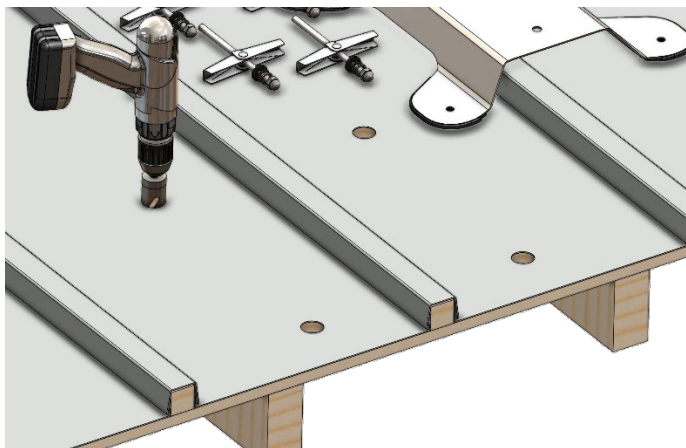


ROOF INTERFACES

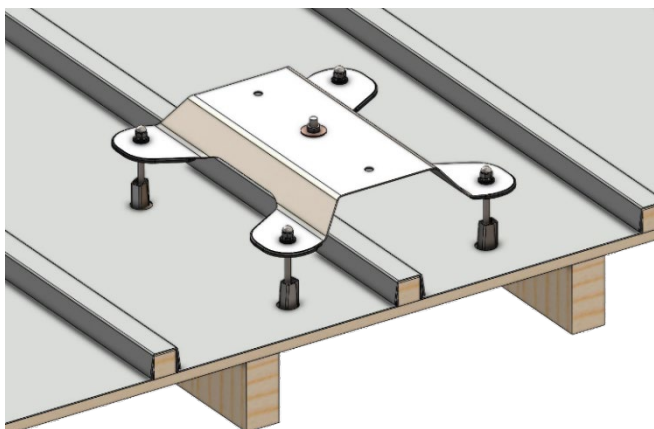
1-After positioning the interfaces on the roof, indicate the location of the toggle bolts with a marker.



2- Use a hole saw to drill 4 holes 35 mm in diameter.



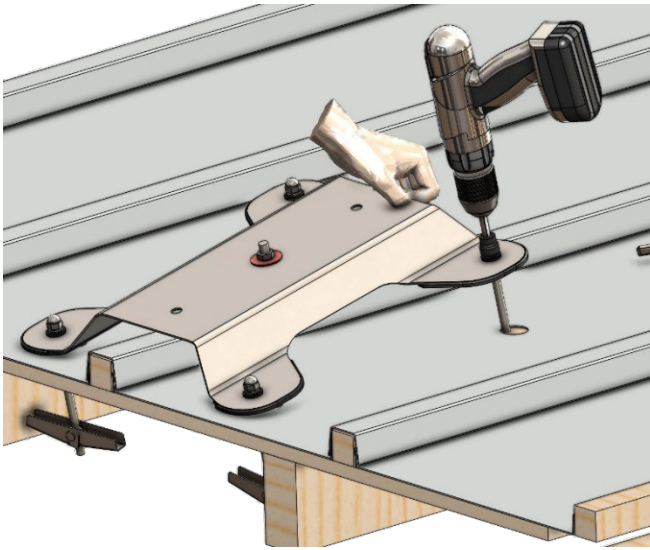
Install the plate using the 4 toggle bolts. It is easier to position the 4 stainless steel toggles on the plate before screwing them into the holes:



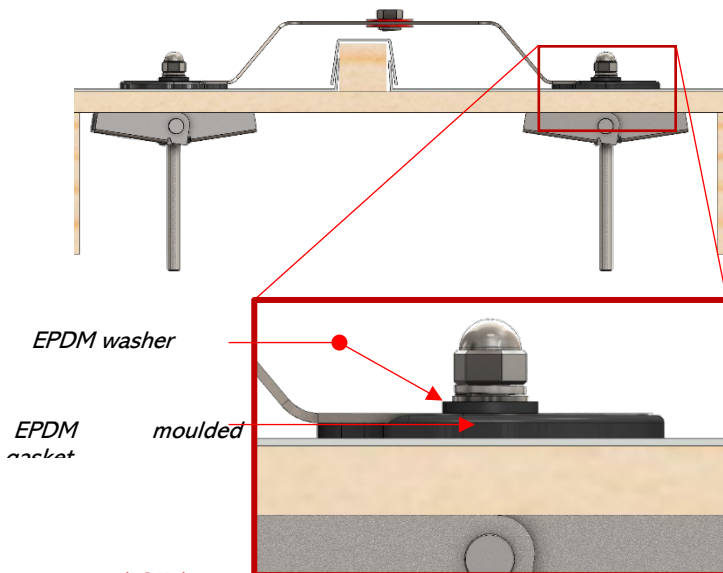
Once the toggle is engaged, pull up on the bolt to keep it in contact with the sealing support while tightening.

Torque to 15 Nm.

ROOF INTERFACES



The zinc roofing interface is now in place. Pressure on the EPDM gaskets ensures a tight seal:



MOUNTING INTERFACES ON STANDING SEAM ROOFING

These installation instructions outline the installation of an interface on standing seam roofing. This interface can be positioned on roofing made of steel (thickness ≥ 0.63 mm), aluminum (thickness ≥ 1 mm), or standing seam zinc (thickness ≥ 1 mm).

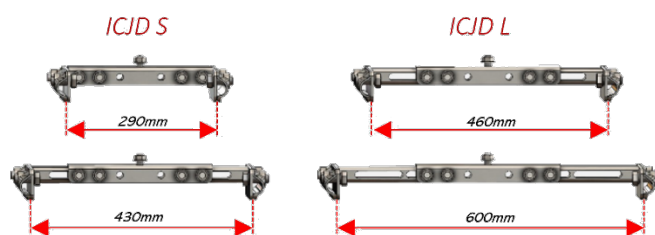
The following tools are required for mounting the base plate:

- 19 mm and 24 mm wrench
- Torque wrench with 19 mm and 24 mm sockets.

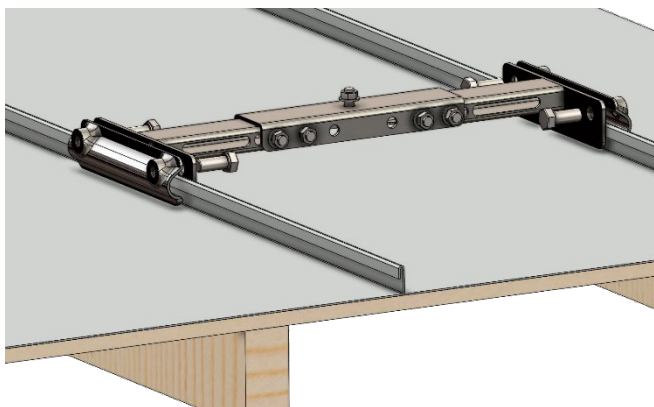
Torque all M12 bolts for this interface to 35 Nm, and M16 bolts to 60 Nm.

There are 2 interfaces for standing seam roofing with the following adjustable dimensions:

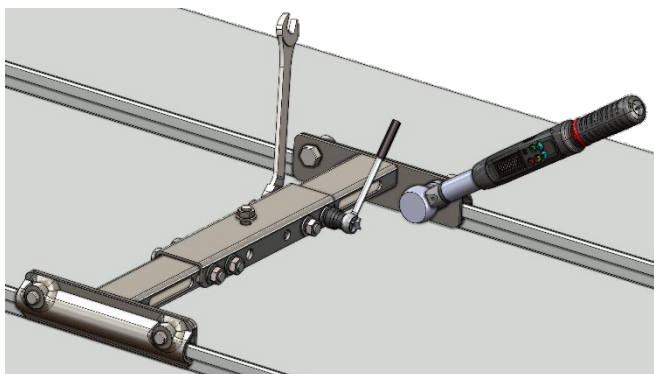
ROOF INTERFACES



Position the base plate on the wave crests:

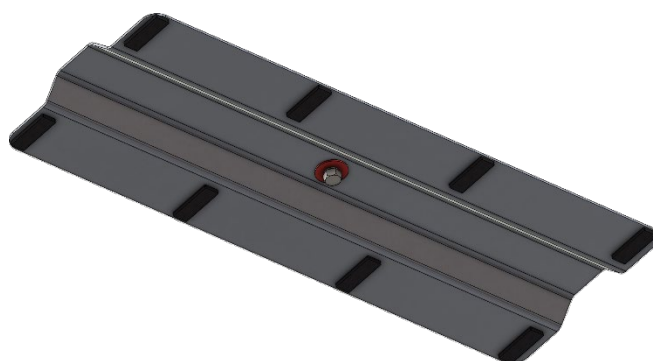


Once the plate is in place, gradually tighten all bolts to the correct torque:



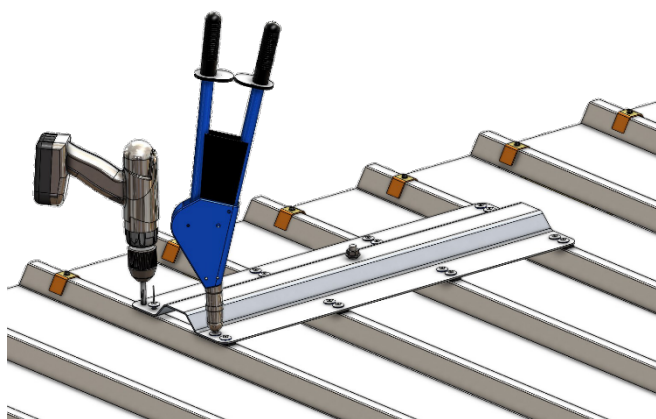
b. MOUNTING ALUMINUM INTERFACE BASE PLATES (ICA)

Install waterproofing sealant strips:



Once positioned on the aluminum cladding, the sheet is drilled with an 8 mm diameter drill bit, and the 16 Bulb-Tite 7.7 rivets are installed using a suitable manual or electric riveter.

ROOF INTERFACES



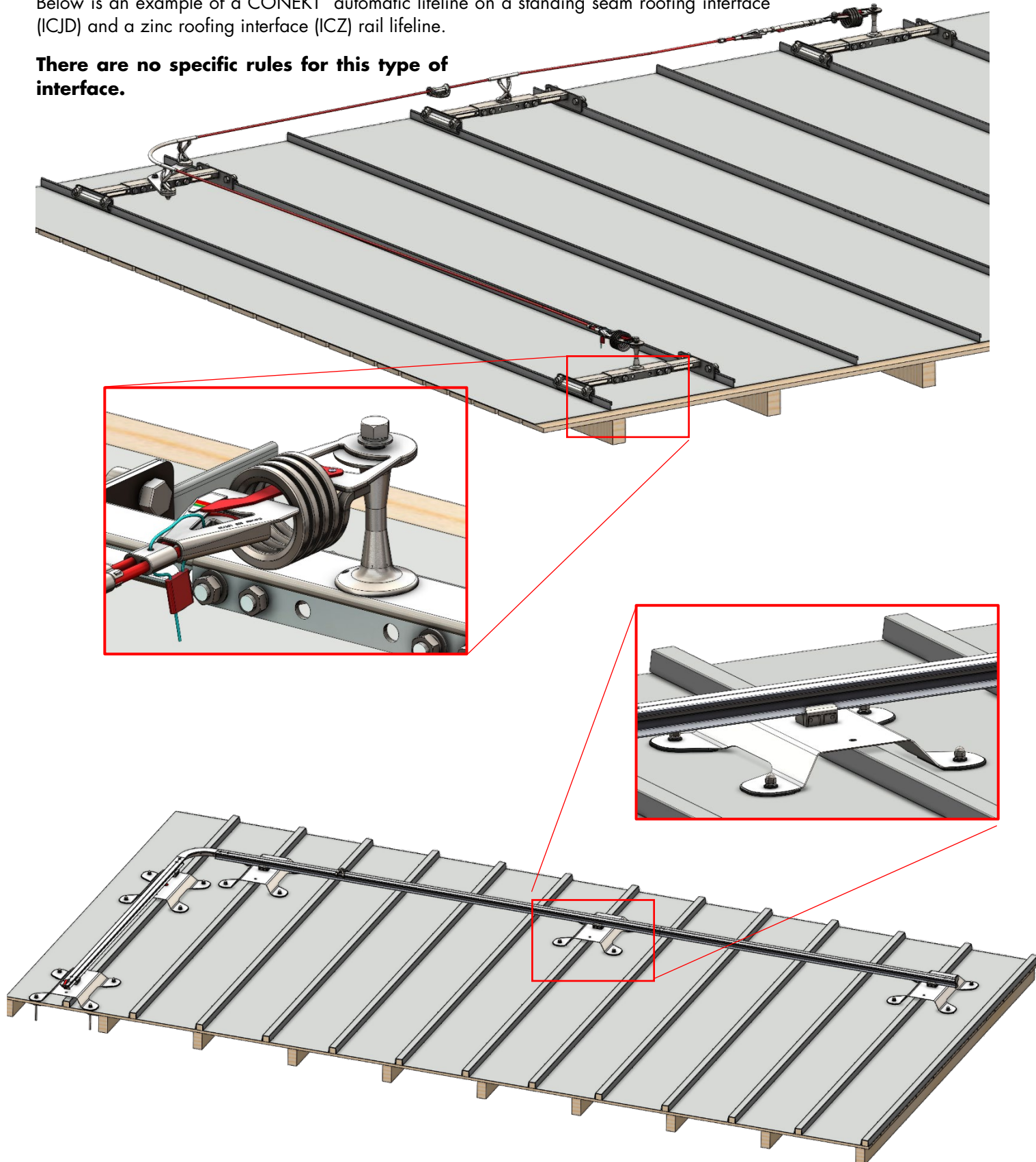
The aluminum roof plate can be used as an interface for CONEKT cable or rail lifelines, or for any type of CONEKT anchor point.

ROOF INTERFACES

9. INSTALLATION RULES FOR LIFELINES

CONEKT automatic and manual cable lifelines, as well as CONEKT rail lifelines, can be installed on these interfaces. Below is an example of a CONEKT automatic lifeline on a standing seam roofing interface (ICJD) and a zinc roofing interface (ICZ) rail lifeline.

There are no specific rules for this type of interface.



ROOF INTERFACES

10. -Documentation to be provided after installation

For the user, the installation documentation provides evidence that the installation has been carried out properly. Moreover, it is the essential basis for future examination of the anchoring device, given that in many cases the fixing of the anchor devices is not visible or accessible.

After installation, copies of the installation documentation should be handed over to the user. This documentation should be kept in the building for the purpose of subsequent examinations of the anchoring device.

The installation documentation should contain at least the following information:

- address and location of the installation;
- name and address of the installation company;
- name of the person in charge of the installation;
- product identification (manufacturer of the anchor device, type, model/article);
- fixing device (manufacturer, product, permissible tensile and transverse forces);
- the schematic installation plan, for example of the roof, and relevant user information, such as where the anchor points are located (e.g. relevant in case of snow).

This schematic plan should be affixed to the building in order to be visible or available to everyone (e.g. at the roof access point). (See Figure A.1).

Declarations given by the installer in charge should be signed by the installer and should certify at least that the anchorage device:

- was installed in accordance with the manufacturer's installation instructions;
- was carried out according to the plan;
- was fixed to the specified support base;
- was fixed as specified (e.g. number of bolts, correct materials, correct position/location);
- was commissioned in accordance with the manufacturer's information;
- was supplied with photographic information/documentation, especially where fasteners (e.g. bolts) and the underlying support base are no longer visible after completing the installation. The following figure shows an example of an installation plan.

It is recommended that, where more than one anchor point is to be photographed for identification purposes, the anchor devices are marked with numbers and that this numbering is incorporated into the anchor device inspection records and the schematic ground plan of the installation area.

ROOF INTERFACES

Plan schématique de l'installation

Bâtiment/Structure

Adresse :

Remarques :

N° de commande :

Type de commande :

Forme du toit :

Dispositif d'ancrage

Client

Nom :

Adresse :

Contact :

N° de téléphone :

Installateur

Nom :

Adresse :

Chef installateur :

N° de téléphone :

Dispositif d'ancrage

Fabricant :

Identification du modèle/type

Composant du bâtiment

Composant 1 : par exemple plafond en béton

Composant 2 : par exemple poteau en béton

Matériau de construction : par exemple béton armé

Épaisseur minimale : par exemple : 250 mm

Épaisseur minimale : par exemple : 500 mm

Qualité : par exemple : C25/30

Fixations/Goujons

Données relatives aux

☐ fixations

Données non requises
si fixation traversante

Situation réelle :

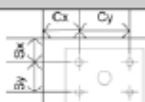
Diamètre du trou foré : mm

Profondeur du trou foré : mm

Couple : Nm

Distance de bord Cx : mm

Espacement axial Sx : mm



Type :

Matériel :

Distance min. du bord (c) :

Espacement axial min. (s) :

Épaisseur min. du composant :

Résistance à la traction admissible

Force de rupture admissible :

Remarques :

Méthode de forage :

Dispositif d'essai :

☐ Marteau☐ Rotatif☐ Clé dynamométrique☐ Nettoyage du trou foré☐ Dispositif d'essai des

fixations

Choc

Système

☐ oui

Humide

☐ oui☐ non

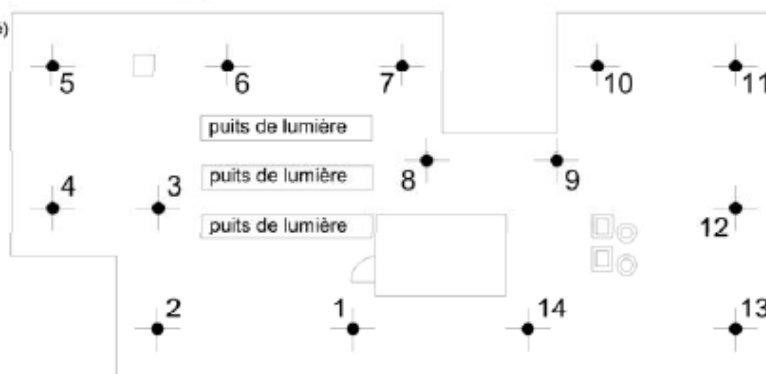
Sec

☐ non

LISTE DE CONTRÔLE :

☐ Substrat sauf exception (aucun doute sur la capacité)☐ Installation conforme aux instructions du fabricant☐ Fixations recommandées utilisées☐ Toutes les fixations photographiées avec
numéro d'identification☐ Fixations visibles☐ Plan d'installation apposé sur le site☐ Immobilisation des vis par technique de fixation
traversante☐ Informations complémentaires

Plan au sol du toit



Force d'arrachement (kN), couple requis (Nm) ?

Point d'ancrage 1

Point d'ancrage 2

Point d'ancrage 3

Point d'ancrage 4

Point d'ancrage 5

Point d'ancrage 6

Point d'ancrage 7

Point d'ancrage 8

Point d'ancrage 9

Point d'ancrage 10

Point d'ancrage 11

Point d'ancrage 12

Point d'ancrage 13

Fixations supplémentaires :

Remarques du chef installateur :

Date :

Signature :

ROOF INTERFACES

11. PRODUCT DATA SHEETS

Interface on Standing Seam Roofing.

Reference no.: A0014104 (ICZ)

Description: ICZ interfaces are specifically developed for installing CONEKT fall arrest systems on zinc roofs. This product is ideal for fall protection on Paris' Haussmann zinc roofs.

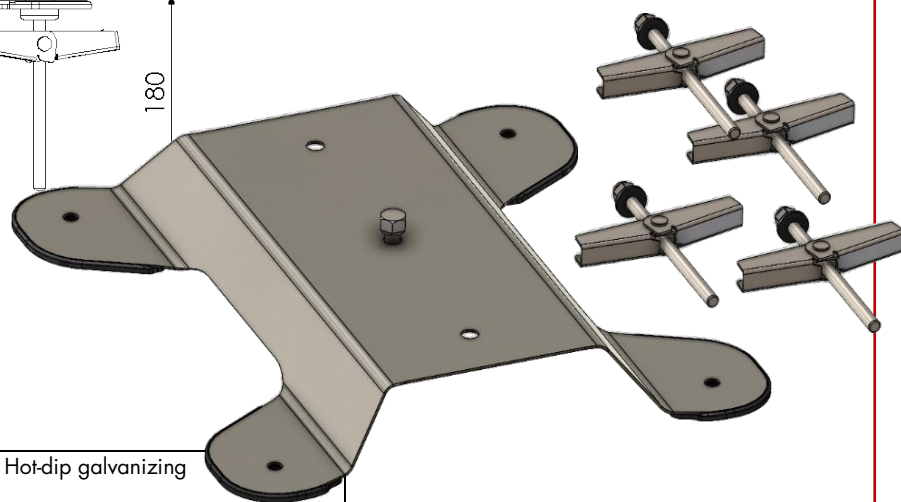
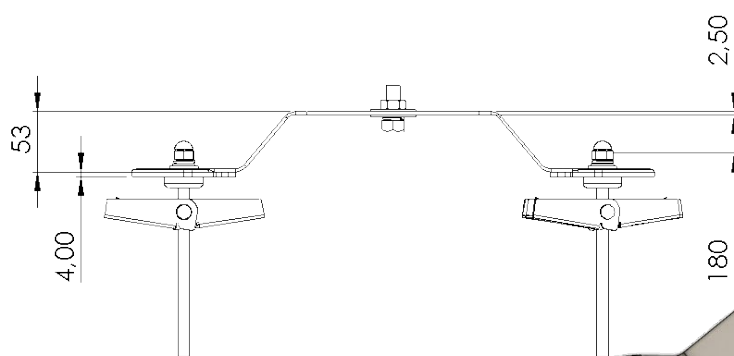
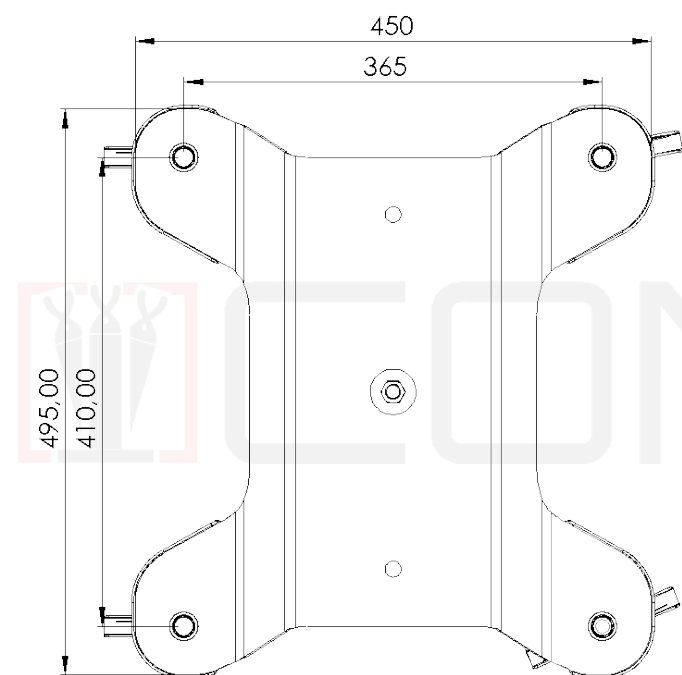
These plates are installed using the 4 M10 toggle bolts in 304 grade stainless steel supplied with the interface. Stainless steel cap nuts and waterproofing sealing washers are supplied with the toggle bolts.

The interface is supplied with 4 EPDM moulded gaskets 4 mm thick with a 34 mm diameter spacer.

These fall-protection systems are installed directly on top of the waterproofing complex. Installation is carried out without any intervention from underneath.

Multidirectional diabolo adapters or the PB250 tilting post can be installed on the interface to enhance the lifeline. They are indispensable at the beginning of the lifeline for positioning the S03 absorber or S04 tensioner.

No specific rules need to be applied to this type of interface, as the dynamic and static tests carried out have shown it to be highly resistant.



ICZ (interface on zinc roofing) plate, 2.5 mm thick :	S235 STEEL + Hot-dip galvanizing
M10 butterfly toggles 180 mm long:	304 grade stainless steel + passivation
Gasket:	EPDM 60A
Resistance on batten with a thickness ≥ 12 mm:	With 4 M10 toggle bolts: >1800 daN
Approved standards:	Dynamic and static testing
Weight:	4.6 kg

ROOF INTERFACES

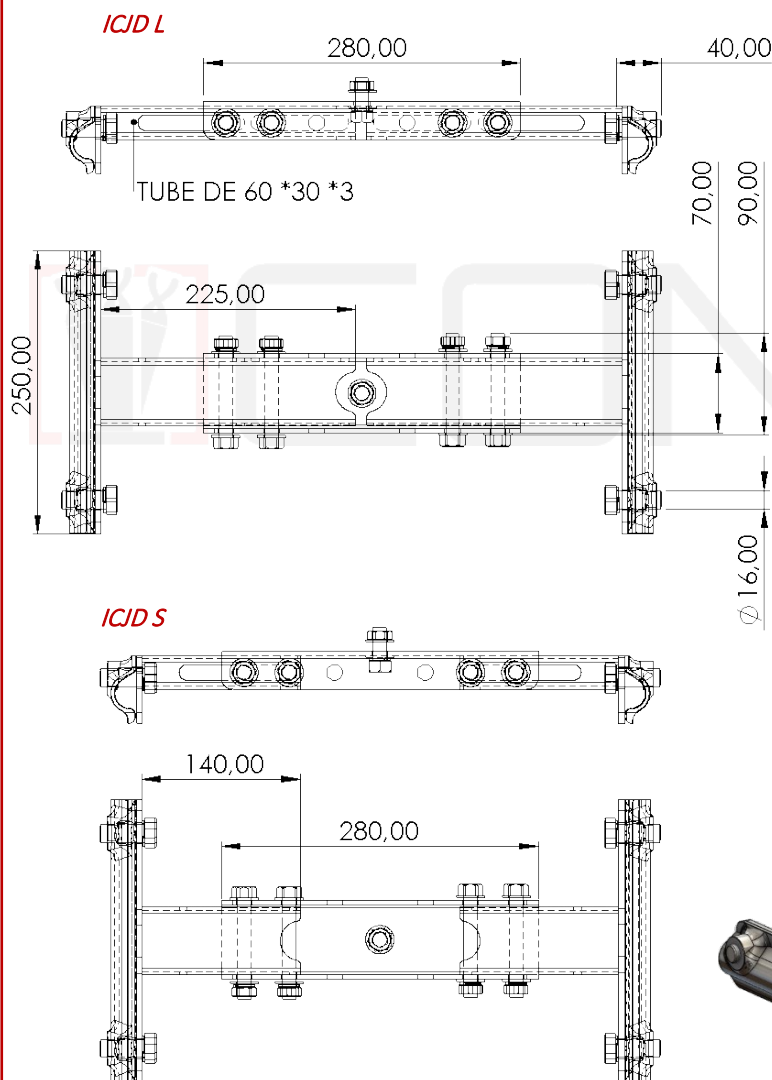
Interface on Standing Seam Roofing.

Short interface on rounded standing seam roofing

Ref. no. A0014294 (ICJD S)

Wide interface on rounded standing seam roofing

Ref. no. A0014105 (ICJD L)



Description:

The standing seam lifeline interface (ICJD) is suitable for most zinc, aluminum and standing seam aluminum roofs.

The interface is available in 2 versions:

- ICJD S (short) for mounting on spaced segments between 290 mm and 430 mm.
- ICJD L (wide) for mounting on spaced segments between 460 mm and 600 mm.

This interface has been specially designed and tested to be compatible with CONEKT anchors, as well as CONEKT cable and rail lifelines.

Multidirectional diabolo adapters or the PB250 tilting post can be installed on the interface to enhance the lifeline. They are indispensable at the beginning of the lifeline for positioning the S03 absorber or S04 tensioner.

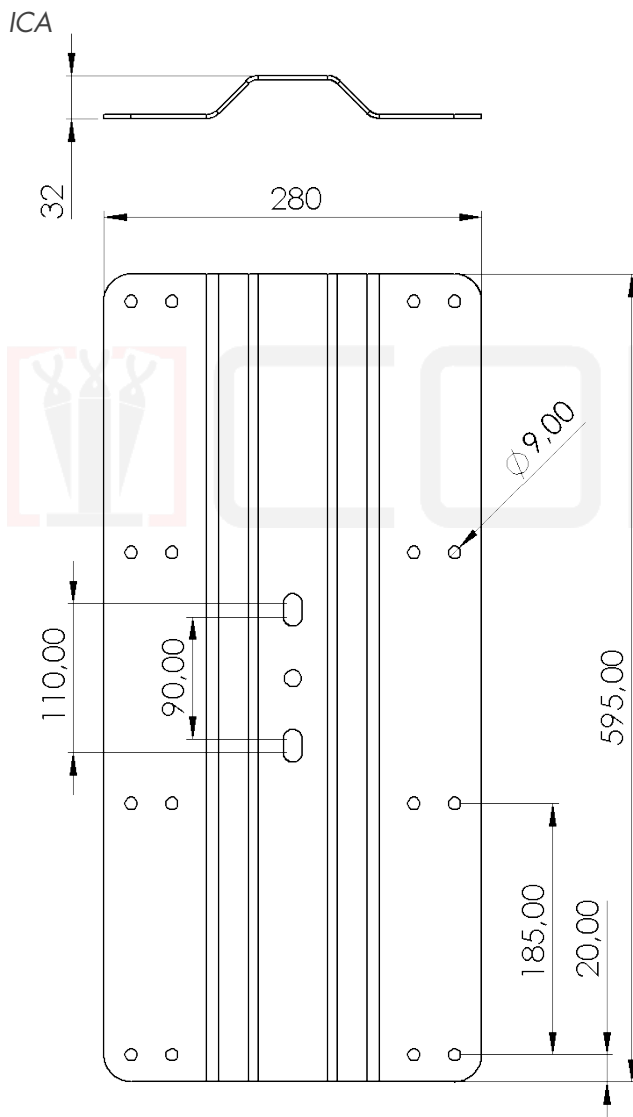
No specific rules need to be applied to this type of interface, as the dynamic and static tests carried out have shown it to be highly resistant.



Composition:	S235 STEEL + Hot-dip galvanizing. M12 and M16 stainless steel bolts.
Standing seam strength :	>1800 daN sliding and transverse longitudinal force.
Approved standards:	Dynamic and static testing.
Weight:	6.2 kg

ROOF INTERFACES

Interface on Aluminum deck roof.



Description:

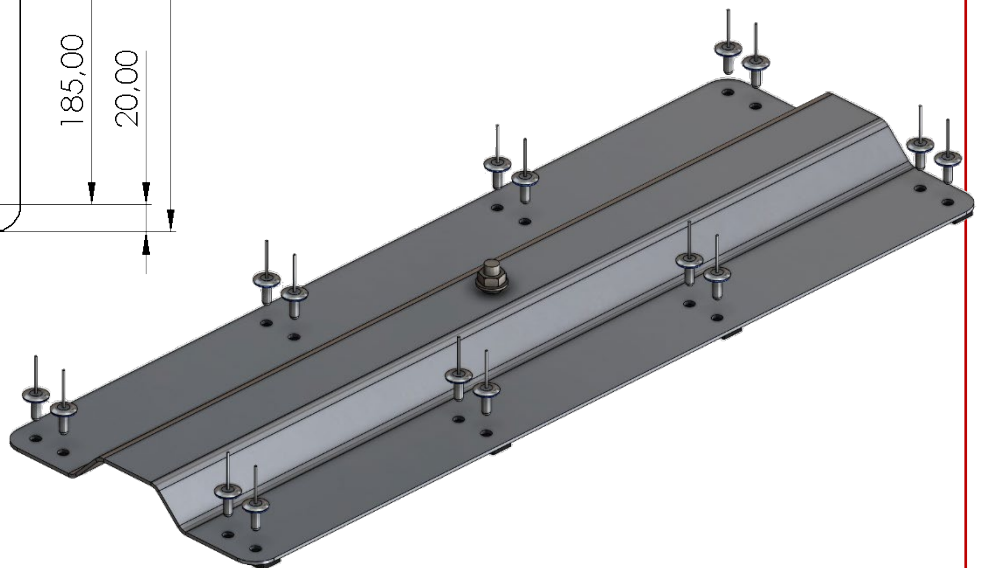
The ICA lifeline interface is a custom-built interface and therefore available by special order. It is mainly designed for trapezoidal aluminum roofs with a thickness of ≥ 1 mm. It can also be used on other types of support bases.

The interface is fixed on 3 or 4 wave crests with a minimum of 16 Bulb-Tite 7.7 rivets.

This interface has been specially designed and tested to be compatible with CONEKT anchors, as well as CONEKT cable and rail lifelines.

Multidirectional diabolo adapters or the PB250 tilting post can be installed on the interface to enhance the lifeline. They are indispensable at the beginning of the lifeline for positioning the S03 absorber or S04 tensioner.

No specific rules need to be applied to this type of interface, as the dynamic and static tests carried out have shown it to be highly resistant.



Composition:	Aluminum 6016, 3 mm thick M12 and M16 stainless steel bolts.
Resistance on aluminum panel ≥ 1 mm thick :	$>1800\text{daN}$
Approved standards:	Dynamic and static testing.
Weight:	2.2 kg