



# Barrial<sup>®</sup> fixed

Aluminium safety railings for flat roofs without public access



# Barrial® – the safe solution!

## Collective protection has utmost priority!

Collective, permanent protection at sources of hazard on flat roofs is paramount according to occupational health and safety legislation. Barrial safety railings are a system that perfectly and efficiently fulfills the statutory requirements for protection against falls from height.

## Always on the safe side!

Choosing collective protective solutions dispenses with elaborate, recurrent obligations in terms of documentation, testing, training, rescue conception/drills etc., which are absolutely necessary in conjunction with individual protective solutions on roofs.

## Tested and certified

Barrial safety rails have been certified in static and dynamic tests by independent, accredited testing institutes according to standard NF E 85-015 and in static tests according to **standard EN ISO 14122-3** and **EN 13374 – class A**.

The test reports are available on request.



| European Requirements | EN ISO 14122-3 | EN 13374 class A |
|-----------------------|----------------|------------------|
| Handrail              | ø 45 mm        | ø 35 mm          |
| Knee rail             | ø 35 mm        | ø 35 mm          |
| Rail distance         | 500 mm         | 470 mm           |
| Toe board*            | 100 mm         | 150 mm           |

\* in case of parapet <100 mm or 150 mm.

DE standard - please observe country-specific standards.

## Manufacturer's certification according to EN 1090-1

Our in-house production control guarantees consistent quality and compliance of our products with applicable standards. dani alu GmbH is certified according to EN 1090-3 for building products: aluminium supporting structures and construction kits up to EXC2.



## Unlimited best practice solutions!

dani alu has been manufacturing aluminium safety railings for the most diverse applications since 1999. Wherever social housing, hotels, airports, shopping centres, industrial plants, gymnasiums, hospitals, schools and administrative buildings etc. are involved - Barrial®-safety railing systems have been tried and trusted in practice for more than 18 years with renowned references all over Europe.



# A system that is right every time!

Particular technical and visual requirements result depending on the property, chosen installation area and specific requirements arising from the different and often complex roof build-ups.

Tailored solutions are devised based on our many years of experience in the field of connection and closure technology for roof membranes in addition to safety-related collective protection measures for flat roofs.

The simple installation of the modular and mutually compatible system components, in addition to the versatile adjustment make Barrial a truly unique system for level and height make Barrial.

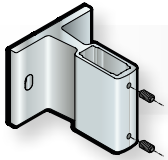


## Wide variety of colours

The Barrial range is very slender in appearance and blends particularly well into the building architecture in powder coated finish (a choice of 250 RAL colours).

| Installation area         | Post     |        |          |         | Optional<br>Coping | Optional<br>Toe board | Insulated<br>Parapet |
|---------------------------|----------|--------|----------|---------|--------------------|-----------------------|----------------------|
|                           | Straight | Curved | Inclined | Folding |                    |                       |                      |
| <b>Parapet inside</b>     |          |        |          |         |                    |                       |                      |
| Shoe A                    | ●        | ●      | ●        | ●       | ●                  |                       |                      |
| Shoe Ac                   | ●        | ●      | ●        | ●       | ●                  |                       | ●                    |
| Shoe Ae                   | ●        | ●      | ●        | ●       | ●                  |                       |                      |
| Shoe A5                   | ●        | ●      | ●        | ●       |                    |                       |                      |
| <b>Façade</b>             |          |        |          |         |                    |                       |                      |
| Shoe A                    |          | ●      | ●        |         | ●                  | ●                     |                      |
| Shoe Ae                   |          | ●      | ●        |         | ●                  | ●                     |                      |
| Shoe A5                   |          | ●      | ●        |         |                    | ●                     |                      |
| <b>Parapet upper side</b> |          |        |          |         |                    |                       |                      |
| Shoe Z                    | ●        | ●      | ●        | ●       | ●                  | ●                     |                      |
| Shoe Zc                   | ●        | ●      | ●        | ●       | ●                  | ●                     | ●                    |
| Shoe Zd                   | ●        | ●      | ●        | ●       | ●                  | ●                     | ●                    |
| Shoe M                    | ●        | ●      | ●        | ●       |                    | ●                     |                      |
| <b>Roof surface</b>       |          |        |          |         |                    |                       |                      |
| Shoe D                    | ●        | ●      | ●        | ●       | ●                  | ●                     | ●                    |
| <b>Fixed solution</b>     |          |        |          |         |                    |                       |                      |
| Composite roof            | ●        | ●      | ●        | ●       |                    | ●                     |                      |
| Profile deck              | ●        | ●      | ●        | ●       |                    | ●                     |                      |
| Clamping seam             | ●        | ●      | ●        | ●       |                    | ●                     |                      |
| Sandwich roof             | ●        | ●      | ●        | ●       |                    | ●                     |                      |
| Standing seam             | ●        | ●      | ●        | ●       |                    | ●                     |                      |

# Installation area on parapet inside and façade



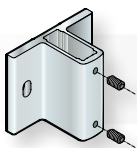
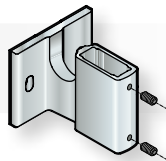
## Shoe A

Foot A can be fixed both to the parapet inside and to the façade.

It is the simplest and most economical means of fixing when the technical pre-requisites for installation (adequate parapet height) are fulfilled. The system offers a particularly attractive solution in combination with our Couvertet-parapet coping.

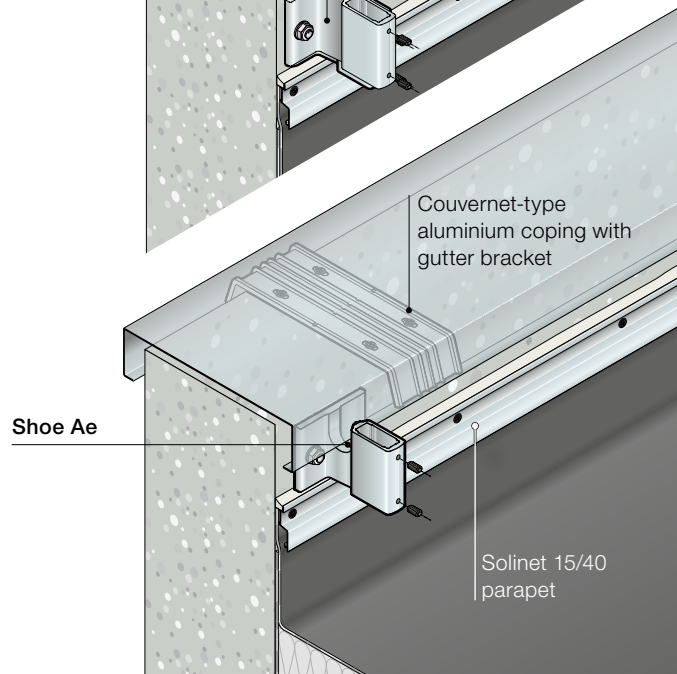
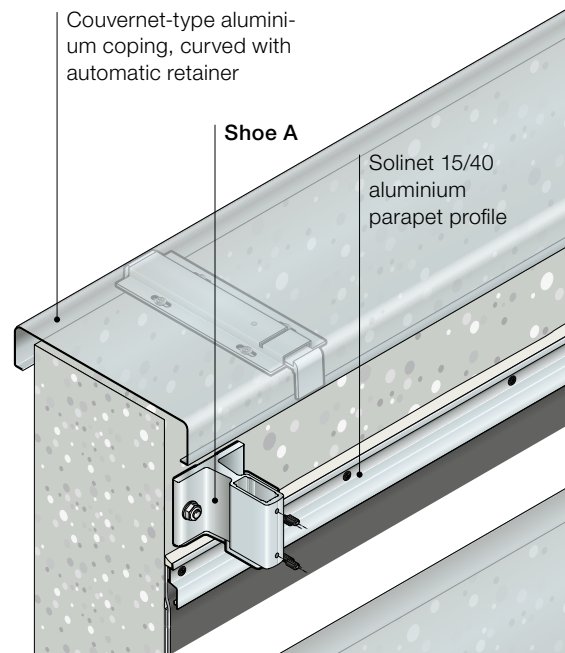
## Shoe Ae

Owing to its recess, this foot is ideal for low parapets in combination with Couvertet-parapet coping.



## Shoe A5

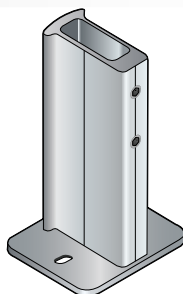
Slender foot shape for installation situations without coping.



# Installation area on parapet upper side and roof surface

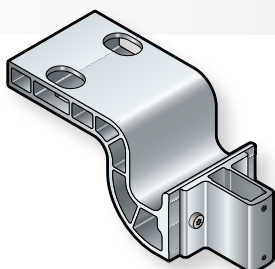
## Shoe M

With its two fixing points in the longitudinal direction, this foot is suitable for narrow parapets.  
Minimum parapet width: 120 mm  
Minimum parapet height: 150 mm



Shoe M

## Shoe Z



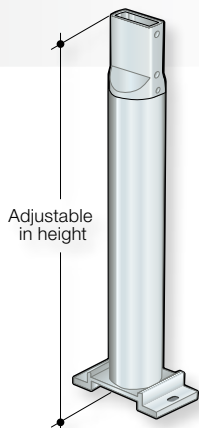
The technically perfect system solution in conjunction with Couvernet aluminium coping.  
Ideal for low parapets.  
Minimum parapet width: 120 mm  
Minimum parapet height: 120 mm  
Maximum inclination: 5°

Couvernet-type aluminium coping, curved with standard spacer

Shoe Z

## Shoe D

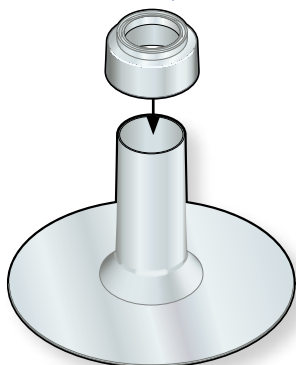
This foot with its various accessories offers a reliable solution for installing the Barrial railings in the roof build up with different structural thicknesses.  
The support flange of the aluminium sleeve gaskets is primed on both sides and is integrated in the roof membranes.



Adjustable in height

## Sleeve gasket

Cover cap



### Sleeve gasket 150

It is installed on top of the thermal insulation and is integrated in the roof membrane complex.

### Sleeve gasket 200 and 250

For roof superstructures with gravel or paving.



# Installation area on fixed solution



Regardless of whether sandwich, standing seam, border seam or flat roofs with metal roof supporting shells are involved, we offer solutions for the widest array of roof variants. The metal roof systems developed by us offer the ideal technical connection for collective protection against falls.

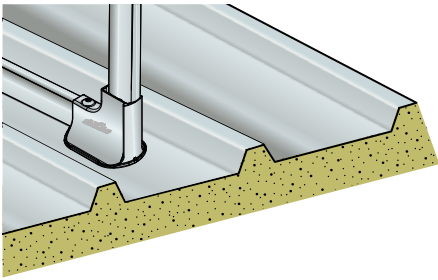
## Fixation

Rails are fixed thanks to a unique clamp fixing system.

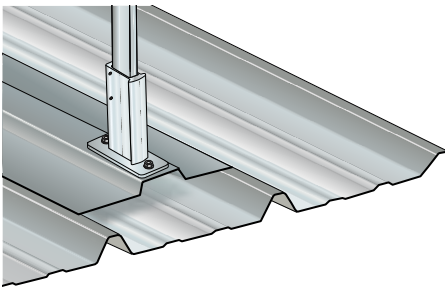


Standing seam fixing example

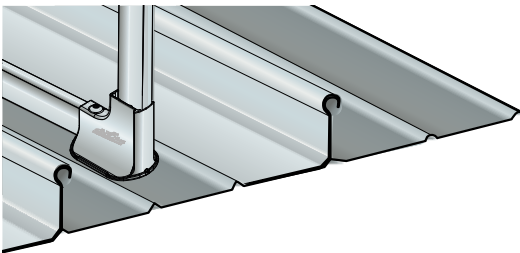
# Installation area on fixed solution



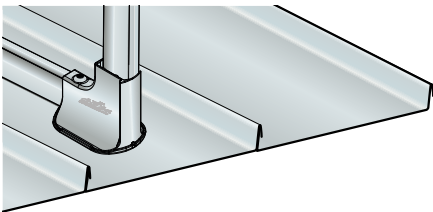
**Sandwich roof**



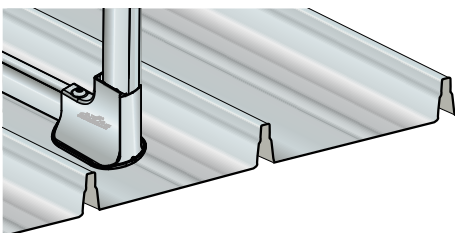
**Profiled deck**



**Standing seam**

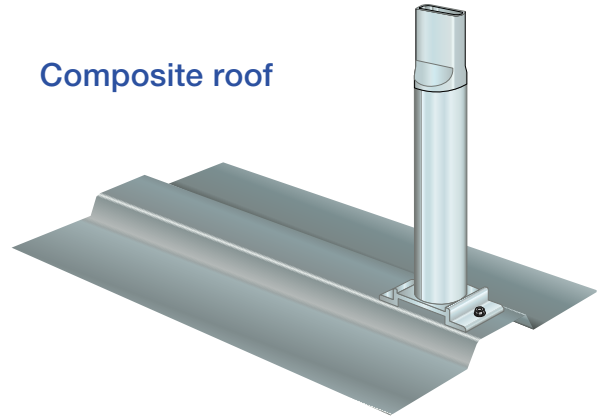


**Standing seam**



**Clamping seam**

**Composite roof**



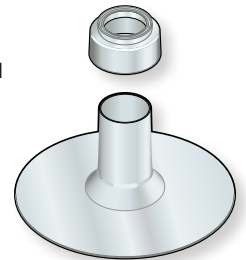
## Accessories

### Cover cap

As the top closure of the sleeve gasket, an exact fitting cover cap is applied to the shaft of the sleeve gasket. A sealant (UV-resistant) is applied to the bearing ring of the cover cap.

### Sleeve gasket 150

The sleeve gasket 150 is installed on top of the thermal insulation and is integrated into the roof membrane complex. It is suitable for bituminous roof membrane sheets.

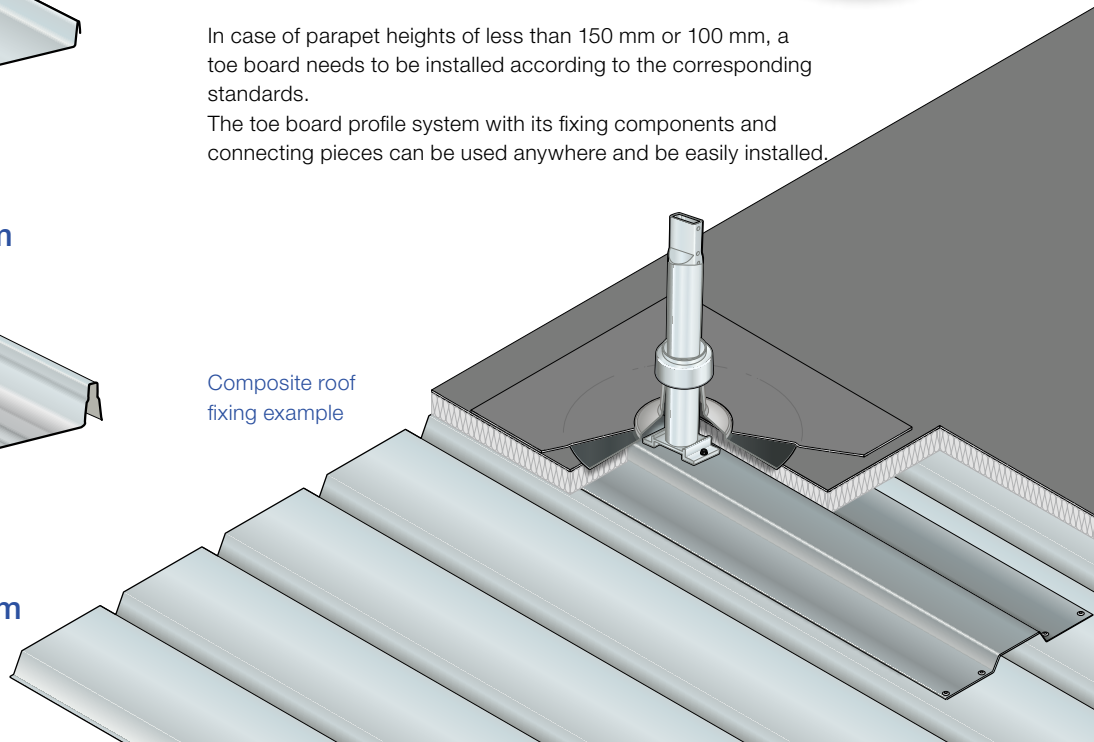


### Toe board

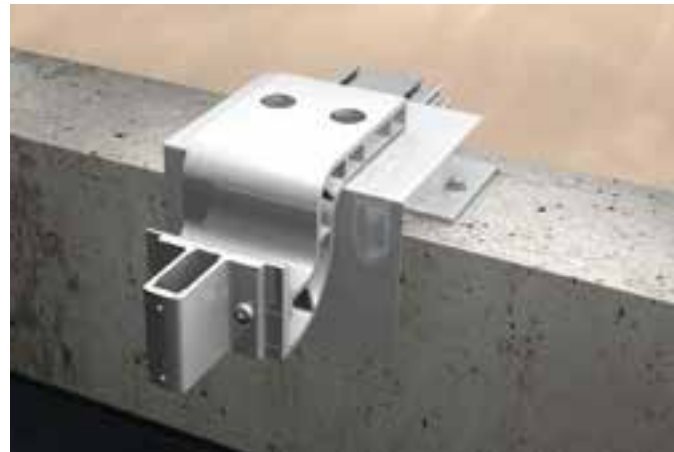
In case of parapet heights of less than 150 mm or 100 mm, a toe board needs to be installed according to the corresponding standards.

The toe board profile system with its fixing components and connecting pieces can be used anywhere and be easily installed.

Composite roof  
fixing example

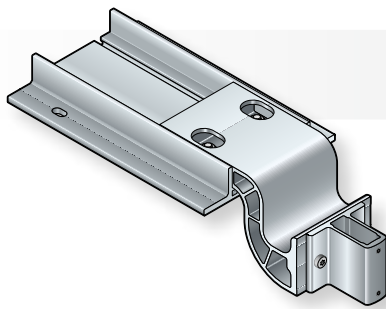


# Spacer brackets for insulated parapets



Shoes Zd; Zc and Ac are suitable for fixing railing systems to thermally insulated parapet upstands. Differences in insulating material thickness are bridged using the height- and depth-adjustable spacer brackets.

Couvernet-type coping provides a perfect top finish.



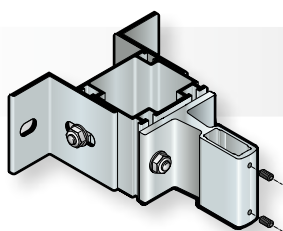
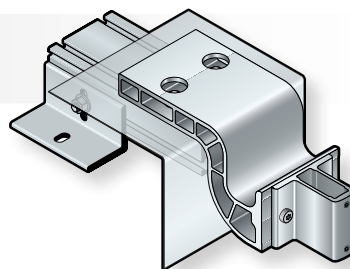
## Shoe Zd

Shoe Zd with its solid, sturdy extension profile is suitable for use on parapets with inside insulation (inverted roof). Insulation thickness can be accommodated up to 200 mm. The extension profile is pre-fabricated at the factory according to the construction site conditions.

## Shoe Zc

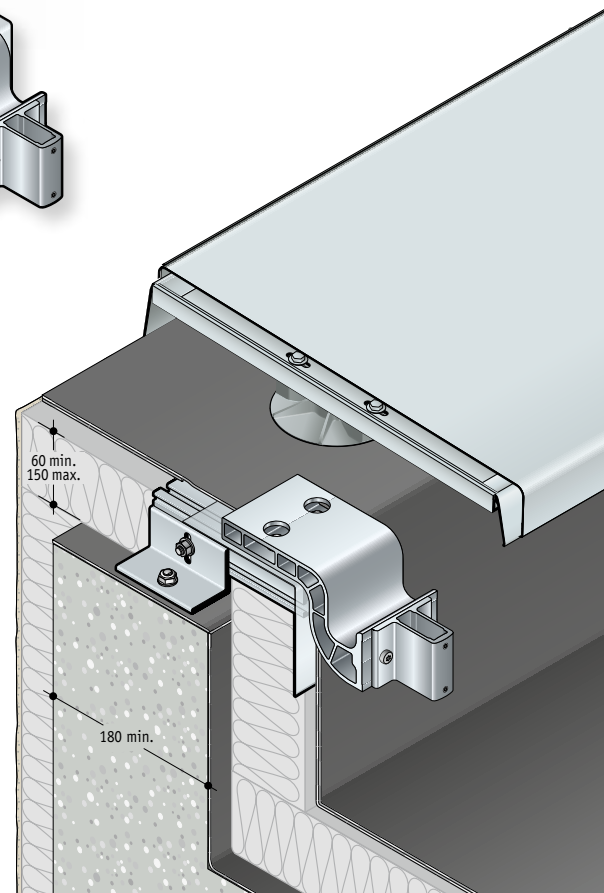
Shoe Zc is perfectly suitable for inclusion in the bed of roof membrane layers. The spacer brackets are adjustable in height between 60 and 150 mm and in depth up to 200 mm. The system consists of a spacer bracket, a metal sleeve (pre-primed) for bituminous roof membrane sheets and shoe Shoe Zc

Couvernet coping provides a perfect top finish.



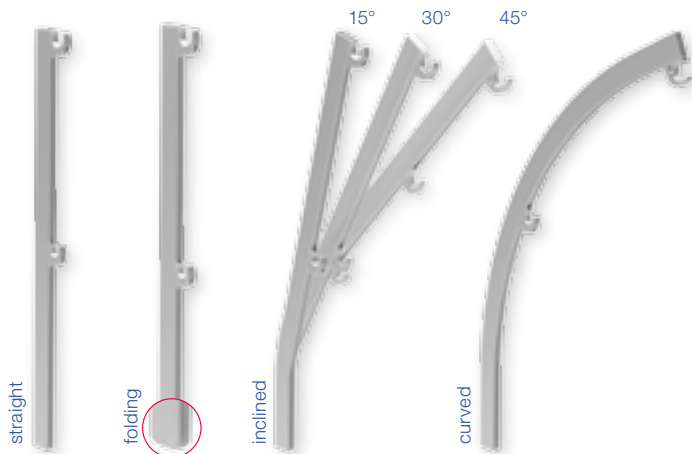
## Shoe Ac

Shoe AC is suitable for installing railing systems on parapets with inside insulation. The system consists of a spacer bracket for insulating material thickness of between 60 and 150 mm, a metal sleeve (pre-primed) for connecting bituminous roof membrane sheets and Shoe Ac.





# Post variations



## Straight post

Compatible with all shoe designs of the Barrial fixed and Barrial free-standing railing systems.

## Folding post

The folding post option is used when a permanently visible guardrail cannot be used on technical grounds or for reasons of appearance.

## Curved or inclined posts

Owing to the curved (radius 1000 mm) or inclination (15°, 30°, 45° or other on request), the system blends discreetly into the building architecture and appearance of the façade.

The inward inclination ensures an additional safety distance from the edge of the roof.



## Practical handrail clamp

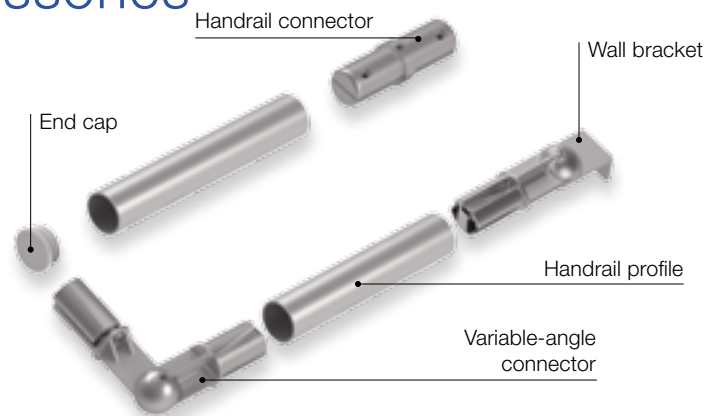
- + Rapid installation by means of a factory mounted handrail clamp
- + No scratching of the profiles during assembly
- + Easy alignment without disassembly
- + Single allen key installation and adjustment
- + Various different handrail sizes possible (35 or 45 mm diameter)

# Handrail profiles and accessories

Hand, knee and toe board are discreet and identical in dimensions. They always face towards the inside of the roof deck regardless of the installation situation.

All accessories can be installed quickly and easily using a single allen key included in delivery.

Handrail connectors, angle connectors and wall brackets with expansion mechanism ensure a secure hold. Standard length of the handrail profiles 3000 mm; Standard diameter 35 mm (optionally 45 mm).



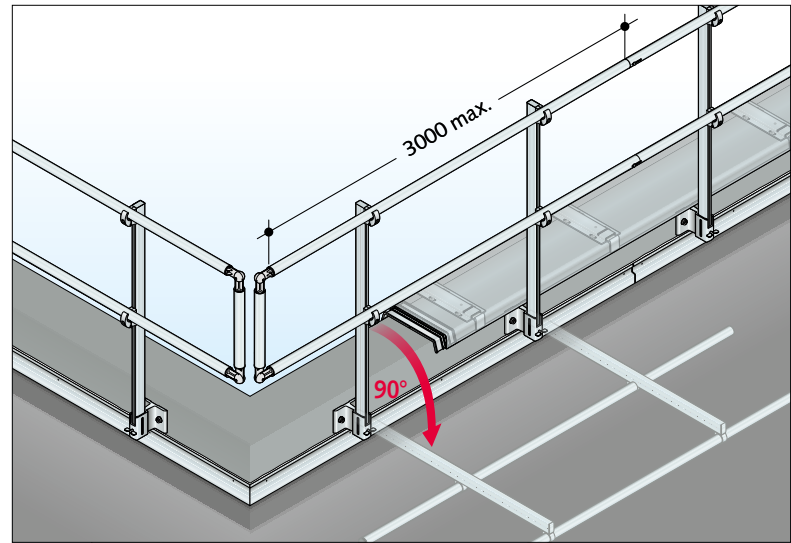
# Gate

Barrial Gate is available as an accessory for access to the roof surfaces. The component is suitable for the handrail models with straight, curved or inclined posts. Passage width is 800 mm in the standard version. Widths of between 500 and 1000 mm are available on request.

The self closing gate opening direction is always towards the inside of the roof.



## Other applications



## Barrial® fixed, folding

Wherever visible railings cannot be used owing to technical or architectural restrictions (e.g. protection of historic buildings), these systems offer a compromise between architecture and requirements under occupational health and safety law.

The folding option is available for most Barrial model series. The shoes, posts and handrail profiles are pre-fabricated at the factory such that the handrails can be easily folded down in individual segments towards the roof surface.

Each individual module consists of at least two posts. The length of the individual modules (max. 3000 mm) can be gathered from the layout plan. Interconnection of the folding modules is performed by means of internally sliding handrail connectors pre-mounted within the handrail profiles.

## Barrial® fixed, indoor



Whether machinery or equipment, ramps, platforms, manholes, shafts, etc. are involved - safety is a highly important issue everywhere in industry.

Absence of, or inadequate barriers are a frequent cause of often extremely serious injuries. The economic damage caused by occupational accidents and their consequential costs is tremendous.

Barrial allows optimum compliance with the statutory provisions and obligations of the professional association, of the safety officers within companies and fulfilment of the applicable Health and Safety regulations.

Barrial complies with standard EN ISO 14122-3 of August 2001. The entire system is tested according to standards by the test institute (Dekra, Germany).

Barrial is a modular handrail kit consisting of high quality, powder coated aluminium extruded aluminium profiles. The widest array of handrails can be quickly built to suit individual requirements.

# Barrial® railing systems – totally versatile!

## Barrial® free-standing premium

Aluminium edge protection for flat roofs without public access

- + Height adjustment up to 300 mm
- + Folding options
- + Use also without a parapet
- + Penetration-free
- + Eliminates thermal bridging
- + No sound transmission
- + No issues related to warranty
- + Functional design
- + Rapidly assembled due to off-site fabrication



## Barrial® Korridor

Systematic escape, rescue and maintenance access routes

- + Height adjustment up to 300 mm
- + Ballasted, without penetration of the roof membranes
- + Modular system for variable walkway widths
- + Patented profile clamp, no pre-drilling
- + Assembly with minimum tools, quick connection of the components
- + Compliant with regulations, tested and certified
- + Customised productions for schools and kindergartens



## Delimit® chain holder

Visual demarcation of working premises and sources of hazard

- + Penetration-free
- + Rapid assembly and disassembly
- + Several rows of chains possible
- + Pre-installed chain snap hook (Accrofill)

**(does not serve as a protection against falls in areas where there is a risk of falls)**



## Barrial® Solar roof

Edge protection for collective protection against falls, also in case of frequent walk-arounds and maintenance of the technical equipment on the roof.

- + Safe setup of the photovoltaic system
- + Saving in scaffolding costs
- + Permanent safety for operators and users



## Barrial® rooflight protection

Ready-to-install complete system, ballasted and penetration-free

- + Retrofit at any time
- + Ballasted without penetration of the roof membranes
- + Rapidly assembled owing to high level of pre-fabrication and modular construction
- + Height adjustment of the posts in the socket sleeve for level compensation
- + Variable widths and lengths



## Barrial® Industry

Edge protection for use in the industrial sector

- + Module, versatile handrail kit
- + Securing of sources of hazard at ramps, shafts or manholes
- + Delimitation at walkways or multiple level technical installations



# An impressive service

Comprehensive, competent support from planning to the installation stage - dani alu accompanies you in all phases of your project:

- + Safety analysis
- + Clarification of technical details
- + Proposal of appropriate solutions
- + Site survey
- + Made-to-measure delivery with assembly layout plan
- + Technical support during assembly
- + Supportive project management



## Barrial® – tried and trusted for more than 18 years with renowned references all over Europe



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### dani alu France

Phone: 0033 478 878 973  
E-mail: [export@danielu.com](mailto:export@danielu.com)  
[www.danielu.com](http://www.danielu.com)

### dani alu Germany

Phone: 0049 6021 453 020  
E-mail: [post@danielu.de](mailto:post@danielu.de)  
[www.danielu.de](http://www.danielu.de)

### dani alu Austria

Phone: 0043 650 6500 000  
E-mail: [post@danielu.at](mailto:post@danielu.at)  
[www.danielu.info](http://www.danielu.info)

### dani alu United Kingdom

Phone: +44(0) 1865 59160  
E-mail: [contact@danielu.co.uk](mailto:contact@danielu.co.uk)  
[www.danielu.uk](http://www.danielu.uk)