

# PATIO ROOF IN A CUBO DESIGN

CUBO

System description



# CUBO at a glance

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## Wall connection

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- Wall-mounted
- Self-supporting on wall or free-standing

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## 4 rafter sizes

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- Plane rafter 95
- Plane rafter 130i
- Plane rafter 165i
- Plane rafter 205i

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## Support profile

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- Wide choice of colours



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- Height-adjustable foot bracket
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- Prepared for sleeve foundation

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- LED lighting
- Cable duct (with rafter 95)
- Glass-dividing transom
- Attachment set for shading
- Emergency drainage to outside

## CUBO as a saddle roof

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- Specially developed solution for large roof dimensions
  - Roof depths of up to 6 m
  - Roof widths of up to 12 m



### Surface load

Up to 3.5 kN/m<sup>2</sup>  
Higher surface loads available  
on request



### EN 1090

Process certified as per standard  
Proof of stability on request



### Span

Up to 6.7 m without steel or middle post  
Up to 12 m with special T-joint



### Roof depth

Pent roof possible up to 5 m  
without steel

# What makes CUBO unique

CUBO is an uninsulated roof system with a flat roof look. The circumferential support structure with an internal pent or saddle roof allows for many different types of roofing in a modern cubic design.

## Modern, cubic design

The cubic flat roof has a very sophisticated appearance:

- High-quality, harmonised profiles
- All-round plane view thanks to circumferential support profile and flush end covers
- The minimal 2° roof inclination also allows large roof depths in cubic form

## Many different types of roofing

Many applications can be realised with very large dimensions:

- Pent roofs of 6.7 x 5 m, or butted pent roofs up to 12 x 5 m, or saddle roofs of 12 x 6 m
- Wall-mounted, free-standing or self-supporting projects
- High-quality terrace roofs for everything from private gardens to restaurant roofing

## Guaranteed stability

The innovative joining solution guarantees stability even without glass:

- Specially designed joints between support profile and post made of high-quality steel
- Complies with the required standards and safety specifications

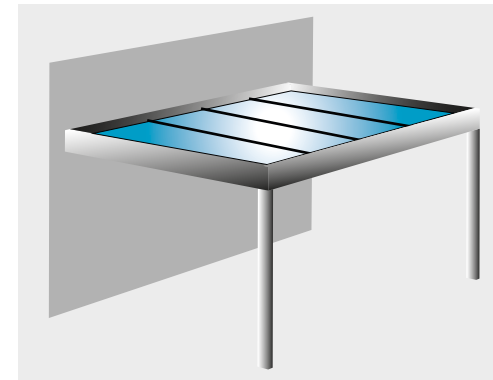


# The roof types

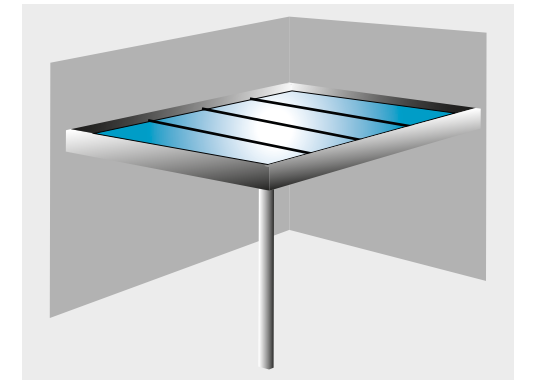
## Our five standard roof types

We offer five standard roof types that allow for many different types of roofing. Wall-mounted or free-standing, as terrace roofs, enclosed sun lounges, carports or awnings.

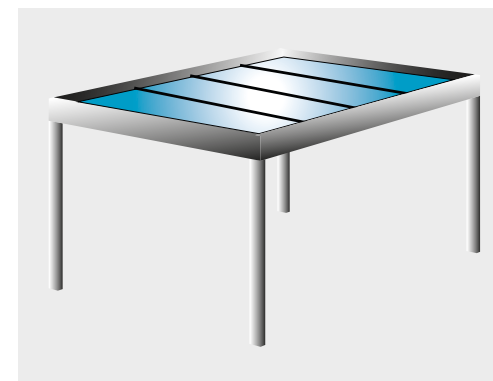
Large roof structures of up to 12 x 5 m can be realised as pent roofs, while saddle roofs of up to 12 x 6 m are possible.



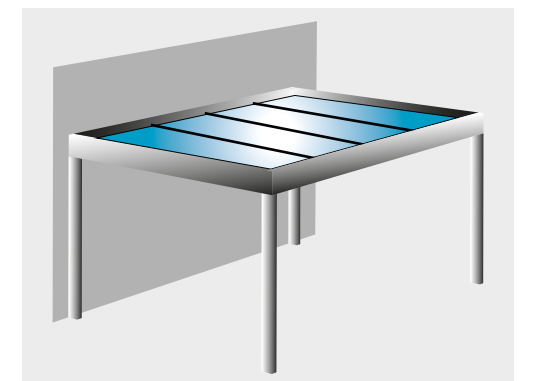
Pent roof — wall-mounted



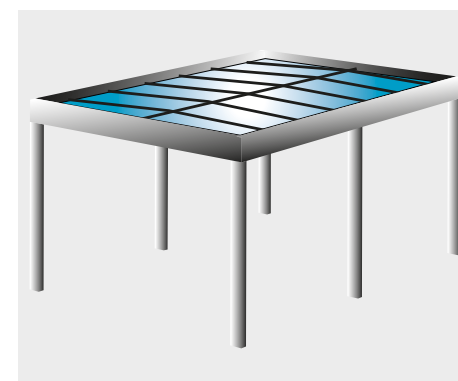
Pent roof — wall-mounted on two sides



Pent roof — free-standing



Pent roof — self-supporting on wall



Saddle roof — free-standing or self-supporting on wall



## Information

Does your construction situation require a special solution, or do you need help with project planning?

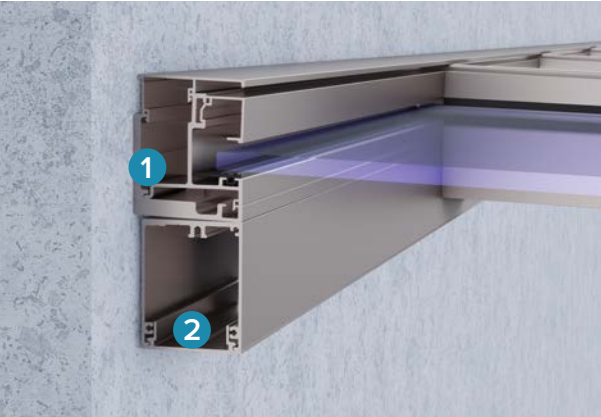
Please contact our engineering team for assistance.

# 1 Wall connection

## Features

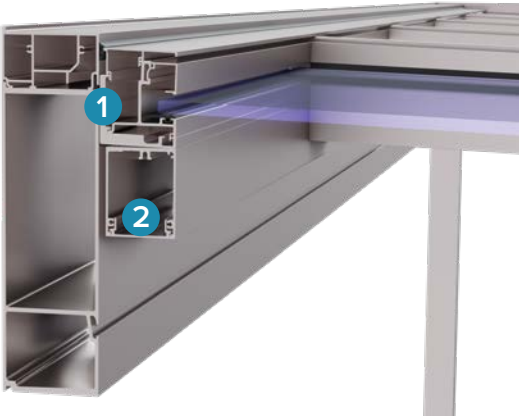
- A wall connection is installed in two variants, depending on the roof type:
  - Wall-mounted
  - Self-supporting on wall or free-standing
- The design of the wall connection variants offers you the following advantages:
  - The slight roof inclination of 2° ensures a small difference between UKT and UKW
  - Easier installation thanks to high degree of prefabrication in the factory

### Wall-mounted



- 1 The wall connection is designed for the slight roof inclination of only 2°.
  - Wall connection at the required connecting height, depending on the roof rafters
  - Developed for very simple and fast installation
- 2 The cable duct below the wall connection allows for flush rafter ends. (Optional with rafter 95)

### Self-supporting on wall or free-standing



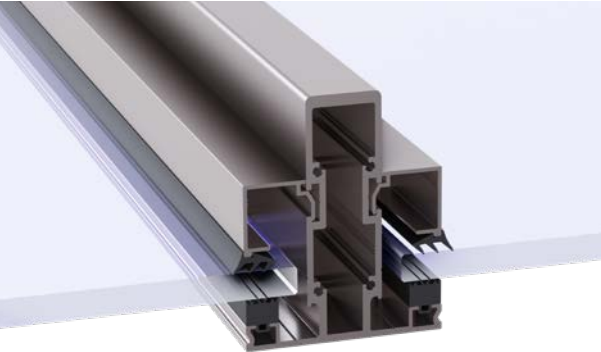
- 1 The wall connection profile is pre-assembled in the factory and mounted to the support profile.
  - The surface and side loads are supported by the wall connection itself
  - For free-standing roofs and ideally suited for installation on facades with external insulation
- 2 The cable duct below the wall connection allows for flush rafter ends. (Optional with rafter 95)

# 2 Rafter

## Features

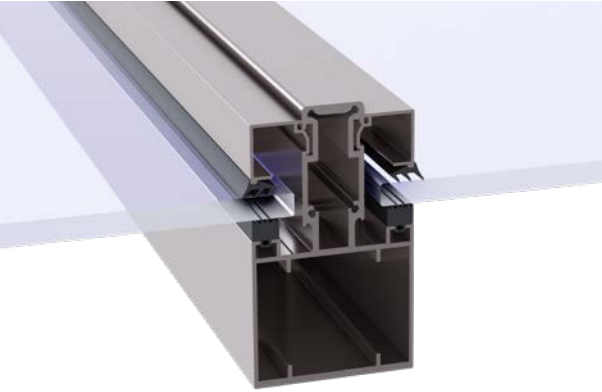
- Four rafter sizes are available, depending on the roof size and the surface load:
  - Rafter 95 (external statics)
  - Rafter 130i, 165i and 205i (internal & external statics)
- The rafter required for the statics is selected during planning.
- All rafters are optionally available with a steel insert.
- The optional LED lighting is integrated in the internal hollow chamber of rafters 135i, 165i and 205i. A matching clip-on profile is used with rafter 95.

### Plane rafter with external statics



The external statics of rafter 95 create a delicate look.

### Plane rafter with internal statics



The cubic design is preserved despite the internal and external statics of rafters 130i, 165i and 205i.

## Technical details

### Roof depths

| Rafter design     | Max. roof depth *                                                                             | Roof depth with steel *                                                                       |
|-------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Plane rafter 95   |  3400 mm |  4600 mm |
| Plane rafter 130i |  4500 mm |  4800 mm |
| Plane rafter 165i |  5000 mm |  5000 mm |
| Plane rafter 205i |  5000 mm |  5000 mm |

\* Initial values: surface load = 0.75 kN/m<sup>2</sup> / L200 / rafter spacing = 0.8 m

 = 1 m

### 3 Support profile

#### Circumferential support profile



- One-piece support profile with integrated gutter
- All-over flat design, sophisticated look
- Circumferentially always 280 mm high

- 1 A 50 mm high add on profile is supplied with large roof depths of 4 to 5 m.

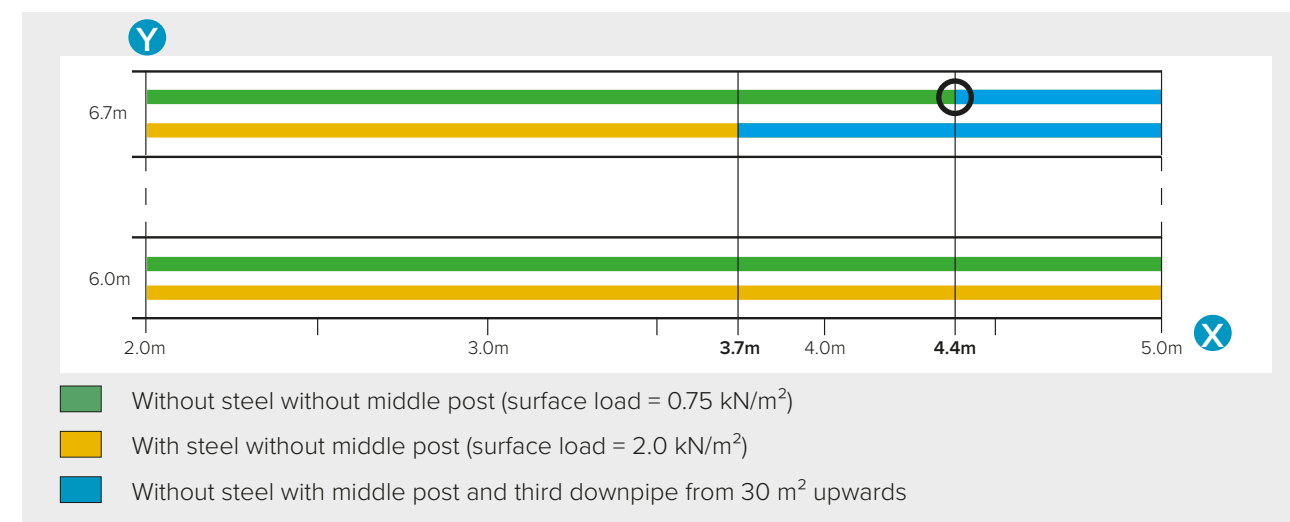


#### Drainage information

According to the CFD analysis, drainage of up to 15 m<sup>2</sup> per installed downpipe is guaranteed, even during heavy rainfall.

## Technical details

#### Support profile spans



Y Span in metres X roof depth in metres The support profile without steel at the maximum span of 6.7 m enables roof depths of up to 4.4 m (without middle post).

#### Initial values:

- Wind load = 0.50 kN/m<sup>2</sup>
- Glass thickness = 10.76
- Without solid glazing elements (L/200)
- Wall-mounted, self-supporting on wall or free-standing
- Standard or height adjustable foot bracket

### 4 Modern design

Carefully coordinated profile views and the statics integrated in the support profile give the CUBO its elegant look:

#### The design

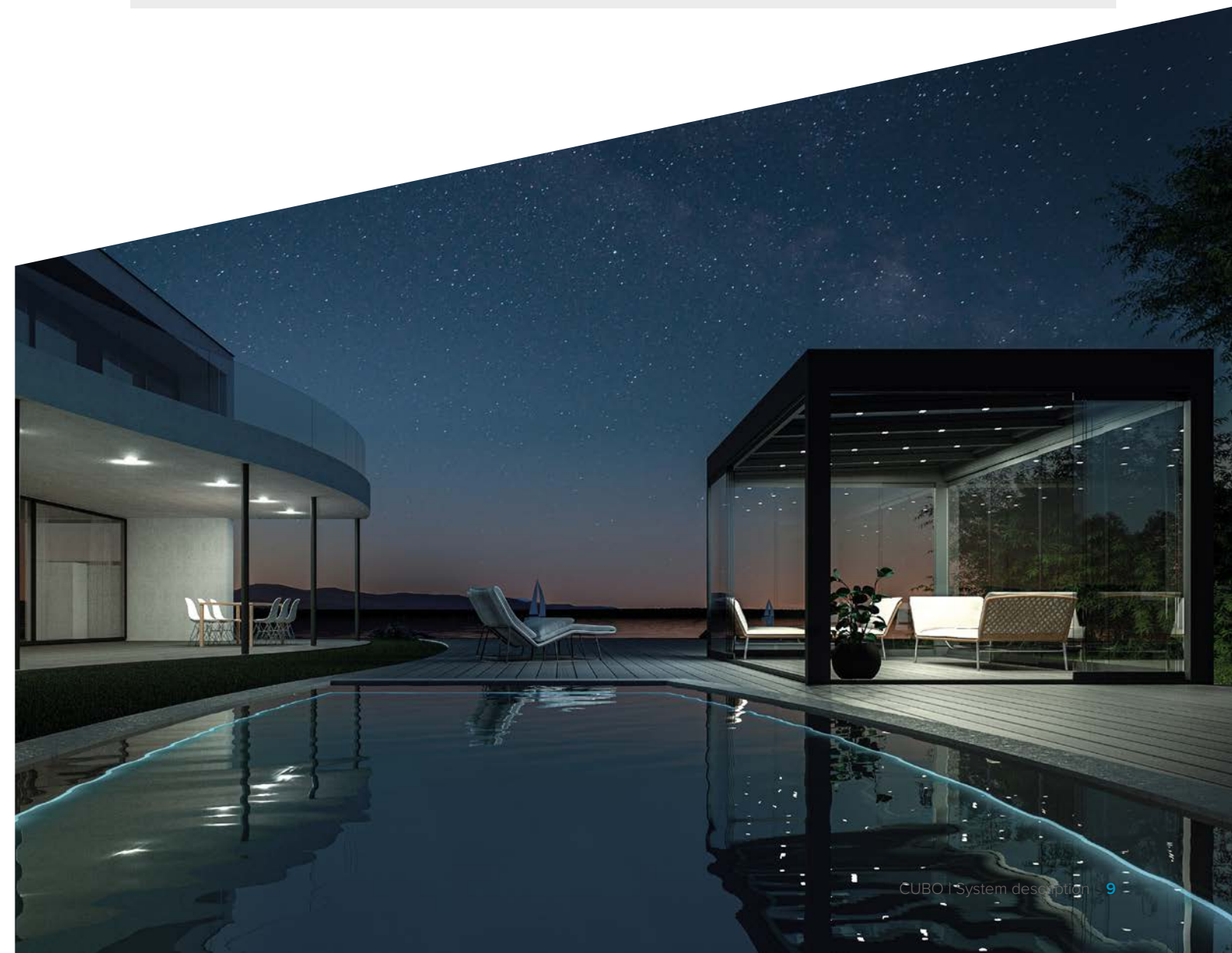
The modern and angular design is implemented consistently. The entire terrace roof has a uniform, cubic look and shape.

#### Elegant flush appearance

All-round flush profiles and covers ensure a very sophisticated overall appearance.

#### Wide choice of colours

The CUBO is available in TREND colours at no extra charge.

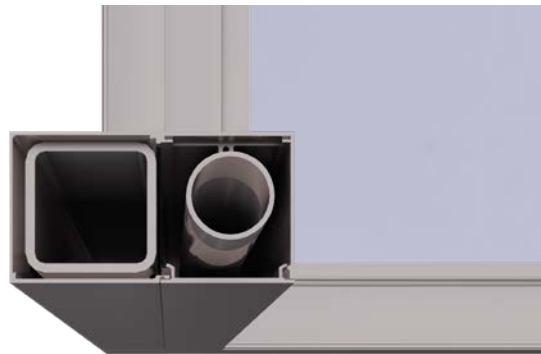


## 5 Posts

### Features

- Four types of posts are available, depending on the roof design and the static requirements:
  - Corner post 170/90 or 90/90
  - Offset corner post 170/90 or 90/90 with wall-mounted or free-standing design (210 to 1500 mm offset)
  - Optional middle post 90/90 or 170/90
  - Optional post below wall connection 90/40, 90/90, 170/90 or 90/90 coupled with 90/40 (wall-mounted design only)
- Two types of drainage are available:
  - Standard: 170/90 in the post
  - Optional: via spout gully incl. cover profile

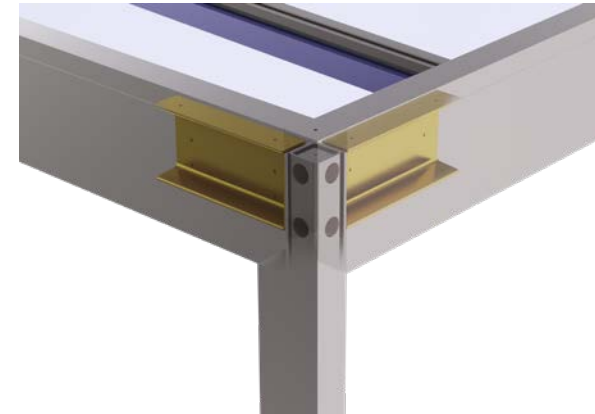
### Corner post incl. downpipe



- The standard corner post 170/90 has two separate chambers.
- An end-to-end 80 x 80 x 6 mm steel post is located in the outer chamber.
- The Ø50 mm plastic pipe incl. supplied 90° elbow is located in the inner chamber.
- The downpipe remains accessible via the drainage cover. (Standard: cover to the outside / optional: cover to the inside)

## Special joints

### Rigid corner connector



- Specially developed steel joints between front support and post
- The corner connectors are preassembled in the factory
- Therefore, every CUBO is stable even without a glass insert
- Complies with stability standard DIN 18008

### T-joint



- Specially developed T-joint made of solid aluminium as ideal solution for support profile butts (roof widths >6700 mm)
- Can be realised with standard 170/90 post and/or the 90/90 corner post
- Gutter joint solution realised with punched seals and special bolting



## 6 Foot brackets

### Features

- Four types of foot brackets are available, depending on the roof design and the static requirements:
  - Standard: fixed foot bracket
  - Height-adjustable foot bracket
  - Specially developed rigid foot plate
  - Prepared for sleeve foundation for free-standing roofs
- The selection of foot brackets available ex works takes the hard work out of planning and installation of the project.

### Standard foot bracket



- Standard foot bracket with hidden screw plate
- Suitable for installation on finished floors

### Height-adjustable foot bracket



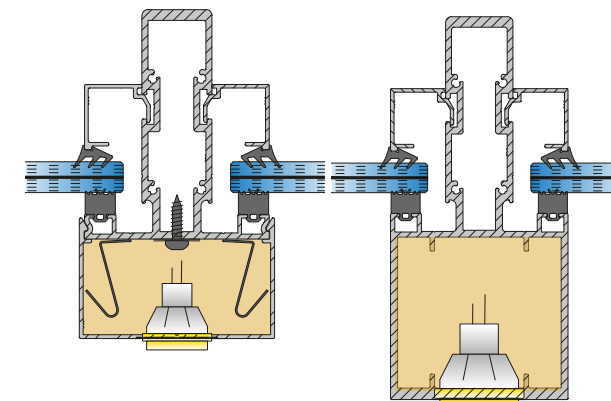
- Optional foot bracket, suitable for compensating for height differences of -15 to +50 mm on site.

### Rigid foot plate



- Optional foot plate, suitable for wall-mounted and free-standing roof structures
- Can withstand snow loads of up to 1.5 kN and wind loads of up to 0.7 kN
- Serves as a substitute for sleeve foundations

## 7 Options



LED duct with clip-on profile

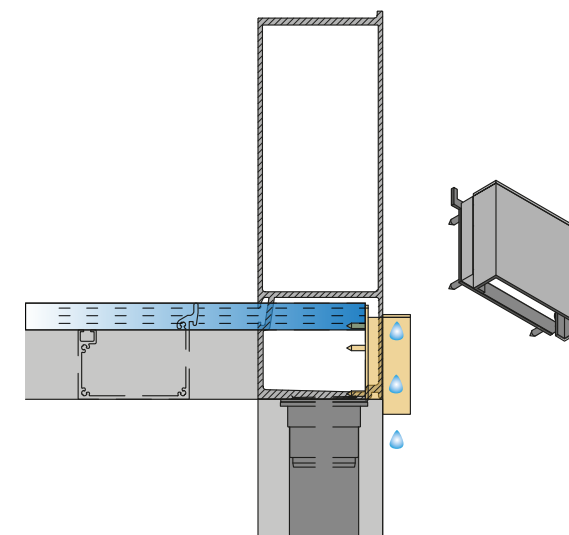
Integrated LED duct

### LED lighting

- LED duct on rafter 95 attached and secured with a clip-on profile
- Integrated LED duct with rafters 130i, 165i and 205i
- Easy plug&play principle for simple and quick installation



For more information, please refer to our LED brochure.



### Emergency drainage

- With standard emergency drainage, the water is drained via the posts.
- The optional "emergency drainage to the outside" drains the water via a small spout gully outside of the structure.

### Additional options

Each CUBO can be adapted to individual requirements with additional options:

- Attachment set for shading
  - Inside installation
  - Outside installation
- Glass-dividing transom
  - Single glazing = sealed or optionally bolted
  - Double glazing = bolted
- Additional drainage via a spout gully to the outside
- Optional cable duct for rafter 95. (With rafters 130i, 165i and 205i, the cable duct is integrated.)
- Gutter optionally circumferential including cover profile

# The CUBO saddle roof



The CUBO saddle roof solution allows for very large roof dimensions while maintaining its cubic flat roof look. The exclusive application of rafter 165i preserves the roof shape. Specially designed ridge joints and T-joints allow roof depths of up to 6 m and roof widths of up to 12 m.

## Unique roof, unique application options

The saddle roof is the ideal solution for very large roofs, such as:

- Seating space, e.g. in multi-family homes
- Carports
- Outside seats in cafes or restaurants

# Technical details

## Pull rope



- The saddle roof rafter is reinforced with a lower belt consisting of two pull ropes.
- The supplied saddle roof rafter matches the structure.
- Easy fine tuning and securing after installation.
- All materials made of stainless steel.
- The horizontal forces of the snow load are intercepted by the pull rope.

## Ridge joiner and ridge support



- The ridge joiner allows for roof depths of up to 6 m.
- The use of the ridge support is dependent on the load.
- A screwed-on steel bracket in the top chamber of the rafter and a steel insert in the bottom chamber guarantee a solid structure.
- The easy-to-insert ridge transom compensates for the 2° roof inclination.
- Covers for covering the ridge connection provide the finishing touch.



**Span**  
Up to 12 m possible



**Roof depth**  
Up to 6 m possible

## Advice and assistance right from the start



### Help with project implementation

We offer you assistance ranging from project planning to installation.



### Complete delivery

All our systems are prefabricated for easy on-site installation.



### Our service does not stop there

Our competent after-sales team will gladly assist you in the case of questions or problems.

## Certified quality

Accredited certificates prove the quality and expertise behind the systems and services.

- Quality management in accordance with **ISO 9001**
- In-house production control in accordance with **DIN EN 1090**
- Environmental management in accordance with **ISO 14001**

- Certified sound insulation and wind resistance categories
- Burglar resistance in line with **RC3**
- **CE label** in line with EU requirements

**EN 1090**

