LIVING SPACE CONSERVATORY

HAWAII 80

System description

Overview of the HAWAII 80

1

1 wall connection type p. 7

– 2-part

2

7 rafter types p. 8-10
(internal statics)

– Plane rafter 101, 143, 188
– Edge rafter 101
– Wall rafter 101, 143, 188
– Valley rafter 101
– Hip rafter 101

3

Eaves carrier variants p. 11-12

– Eaves carrier 102
– Eaves carrier 175

4

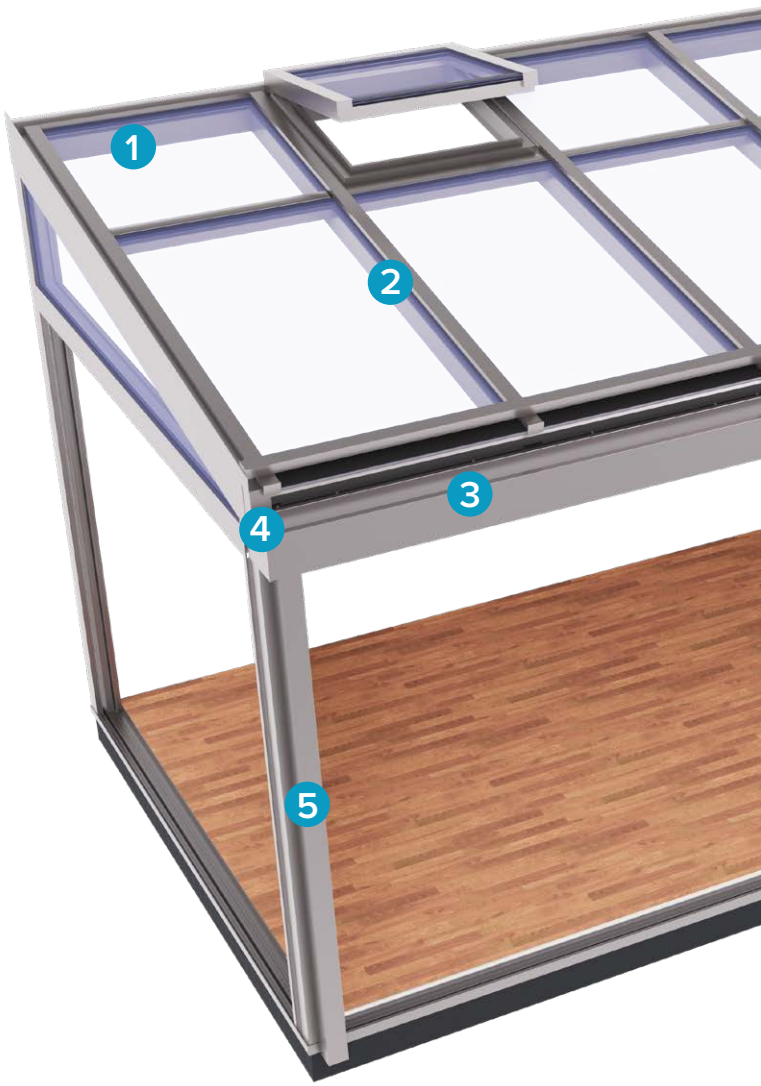
Individual designs p. 13-14

– Modern & angular
– Classical & round
– Panel 276 for shading
– Available in bi-coloured finish

5

5 post types p. 15

– Corner post
– Middle post
– Recessed middle post
– Protruding middle post
– Post adjustable by 90° to 180°



Surface load
Up to 3.5 kN/m²
Higher surface loads on request

EN 1090
Process certified as per standard
Proof of stability on request

EN 13947 / EN ISO 10077
Heat transfer coefficient calculation with proof and declarations of performance on request

6

Floor connection with basic profile p. 16

- Basic profile incl. EPDM foil
- Installation height with Stadur

7

Element combinations p. 17-18

- Direct glazing (skylight)
- Adapted to the Sunparadise systems:
  - Supertherm 80
  - Monoslide 80
  - Thermoslide 80

8

3 cross beam variants p. 19

- Cross beam 70
- Cross beam 135
- Cross beam 135 incl. panel 276 for shading

9

2 roof latticework variants p. 19

- Transom 42, glass-dividing
- Transom 109, glass-dividing

Individual options p. 20-21

- LED lighting in the rafter and cable duct
- Snow trap
- Skylight Komet 55
- Additional options

Roof pitch
from 5° up to 45° possible

Span
Up to 6.7 m without steel or middle post
Larger spans possible with middle post

Roof depth
Up to 6.7 m available
Larger roof depths on request

HAWAII 80 - the features

Perfect thermal insulation

The outstanding insulation values of the conservatory structure are achieved by:

- Precise thermal insulation of the inner and outer profiles with polyamide bars and additional XPS rigid foam insulants
- Stop profiles that ensure a smooth transition from the substructure elements to the support structure, supplied with the delivery
- Option to install triple glazing in the roof as with the substructure elements

Easy and safe installation

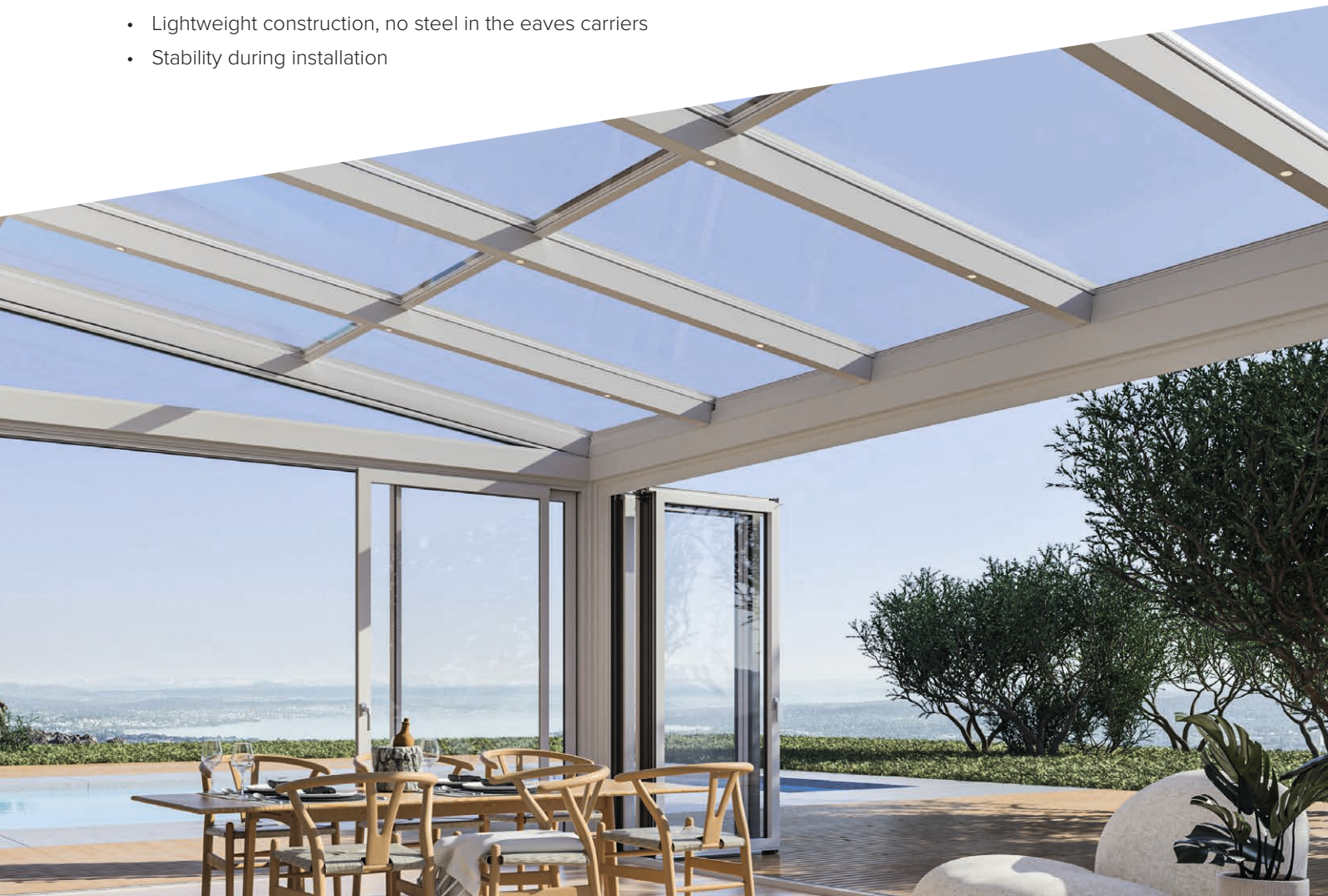
Easy and quick installation of the roof structure thanks to its sophisticated design:

- No steel inserts in the eaves carrier required
- Cleverly designed rafter connectors with only one screw connection to the front or wall carrier
- Specially developed connection of front support and post already stabilises the frame at the time of installation
- Reliable drainage of the structure thanks to basic profile incl. EPDM foil
- Ground installation with supplied, made-to-measure Stadur insulation

Guaranteed stability

The innovative joining solution guarantees stability even without glass:

- Specially designed joints between eaves carrier and post made of high-quality steel
- Lightweight construction, no steel in the eaves carriers
- Stability during installation

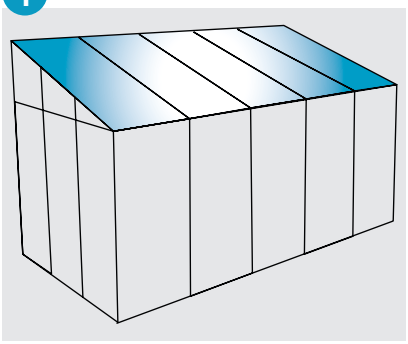


The roof types

Our 6 standard roof types

We offer 6 standard roof types that can be quickly and easily planned and calculated. The HAWAII 80 conservatory roof provides the ideal solution for any construction situation. Besides these standard roof types, individual roof types can also be adapted to the local surroundings and planned and implemented according to customer requirements.

1



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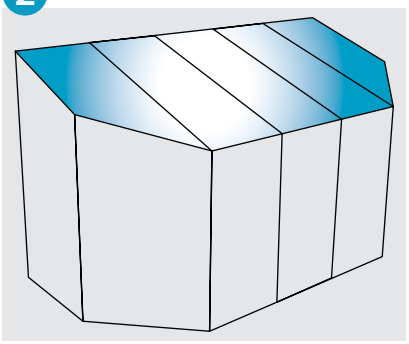

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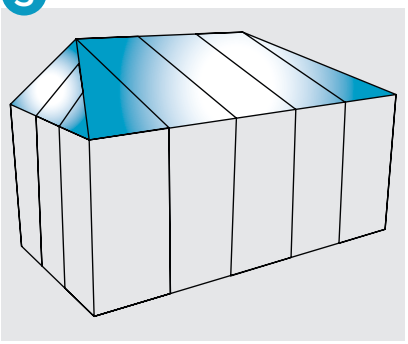

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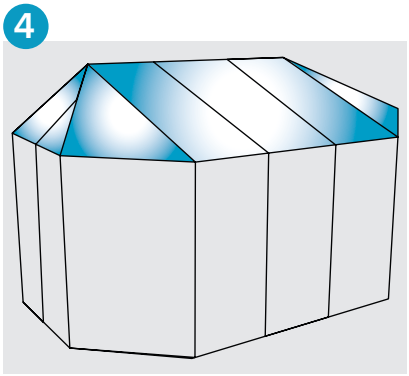

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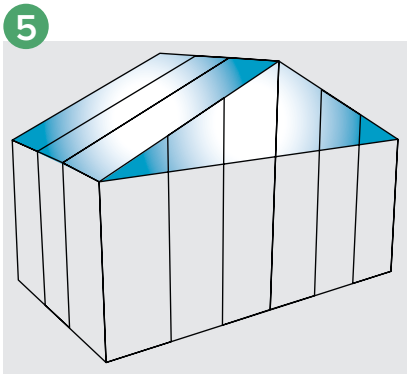

Roof structure 5 (saddle roof) is only available on request due to its individual design and the determination of the statics.

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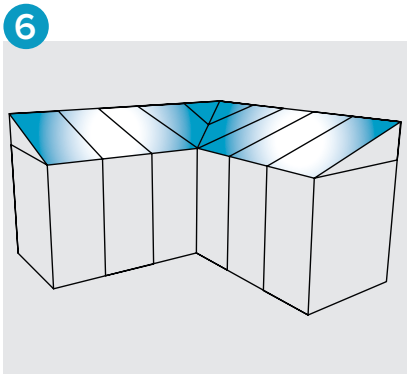

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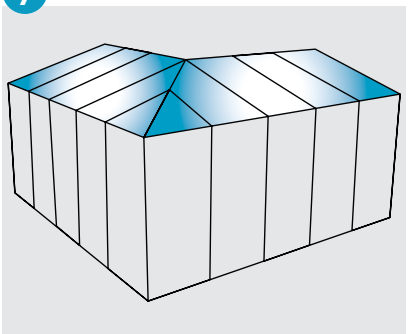


Information

Does your construction situation require a special roof shape, or do you need help with selecting the structural attachments?

Please contact our engineering team for assistance.

1 Wall connection

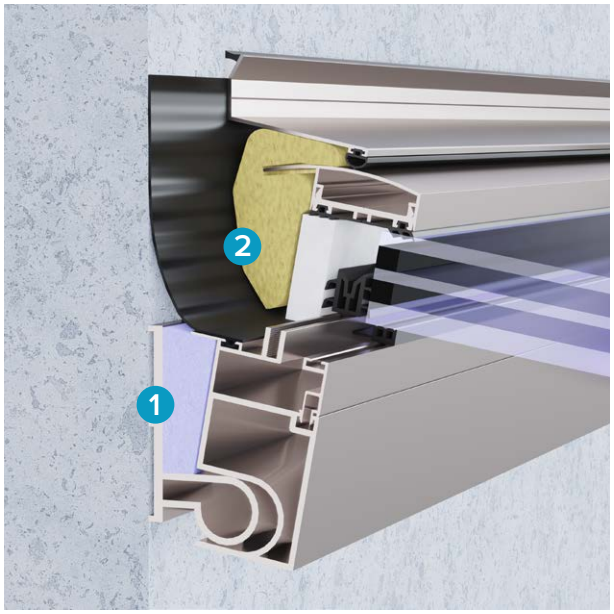
Features

– Two-piece wall connection profile allows realisation of all 6 standard roof types
– Roof pitches from 5° to 45° possible
– Optional cable duct available for routing the LED cables and integration of the control device for the illumination
  • Additional LEDs can be integrated in the cable duct

Advantages

– Wall connection for easy and quick installation
– High production level ex works
– Outstanding insulation

Two-part wall connection



– Integrated EDPM foil for a good connection to the masonry
– Cover profile with 45° edge for sealing joint
– Pre-drilled wall strip

1 XPS rigid foam insulant included in the delivery

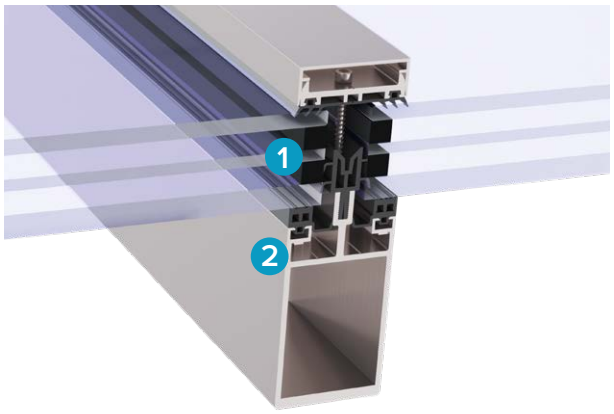
2 On-site insulation with appropriate insulation materials

2 Rafter

Features

– Three types of rafters are available with internal statics, depending on the statics specifications:
  - Plane rafter 101, 143, 188
  - Edge rafter 101
  - Hip or valley rafter 101
– Roof glazing up to 62 mm can be used (stepped glazing only), clamping strips facilitate installation
– All rafters optionally available with steel insert, can also be installed in the case of high surface loads as well as large roof depths
– Fast assembly thanks to special rafter joints (only one connecting screw from the rafter to the eaves or wall carrier)
– Thermally insulated screw connection of clamping strip and rafter

Plane rafter 101 / 143 / 188



– Clamping strip is bolted into a plastic profile integrated in the rafter and ensures outstanding thermal insulation
– Integrated LED lighting possible (see page 19)

1 Additional lip seals to the glass

2 Controlled drainage of the entire roof system via the drainage channel

Available roof depths

Rafter design	Roof depth without steel *	Roof depth with steel *
Plane rafter 101	3600 mm	4400 mm
Plane rafter 143	4700 mm	6000 mm
Plane rafter 188	6000 mm	6700 mm

* Initial values: surface load = 0.75 kN/m² / roof pitch = 5° / L200 / rafter spacing = 0.8 m

= 1 metre

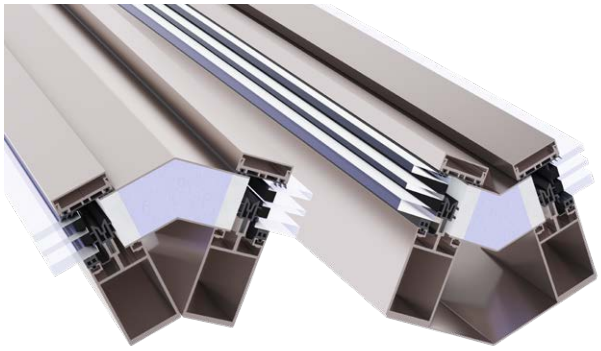
Edge rafter 101

- Thermal enclosure of the edge rafter with polyamide bar and additional XPS rigid foam insulant inlays
- Clean view of the roof thanks to flush cover plate from the eaves carrier to the rear edge of the wall connection

Wall rafter 101 / 143 / 188

- Integrated EDPM foil for a good connection to the masonry
- Cover profile with 45° edge for sealing joint

Hip-/ Valley rafter 101



Hip rafter Valley rafter

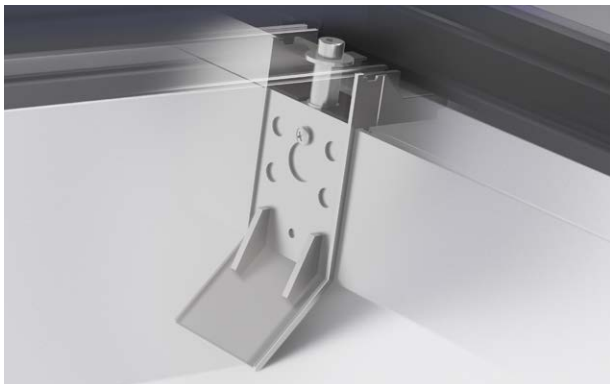
- Used with roof types 3/4/5/6 (see page 5)
- Pitch to the respective roof prepared in the factory
- Fast and easy installation thanks to extensive prefabrication

Special rafter joints/end cover

1 Plane rafter 101

2 Plane rafter 143

3 Plane rafter 188



- Special pre-assembled rafter joints allow fast installation
  - Only one connecting screw from the rafter to the eaves or wall profile
- Secure cascade drainage of the roof system to the gutter

- Adapted rafter cover plate to wall connection and to the front support
- Slanted cover plate only required with rafters 143 and 188

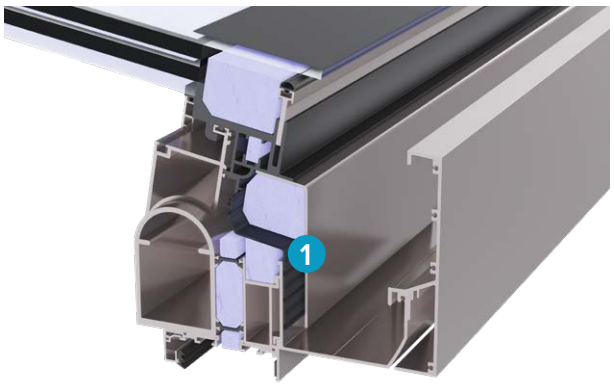
For detailed information and the exact measurements of the individual rafters, please refer to the document "Technical drawings".

3 Eaves carrier

Features

– The carriers are available in two designs, depending on the static requirements:
  • Eaves carrier 102
  • Eaves carrier 175
– Steel inserts in the front support are no longer required thanks to the specially developed joint to the post. The stability required in line with DIN 18008 is guaranteed, even without glazing.
– The rocker profile allows roof pitches from 5° to 45°.
– The eaves carriers are available with a matching panel in the desired design (round or square).

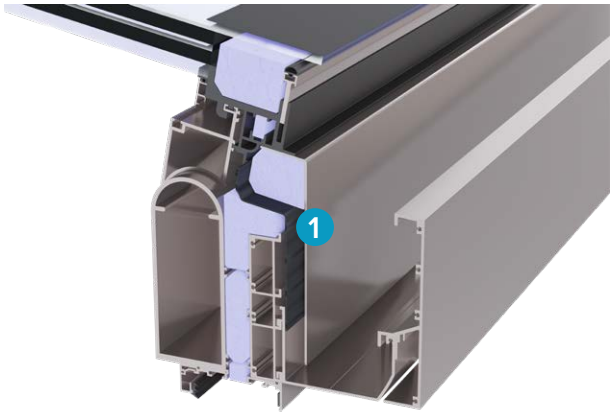
Eaves carrier 102



– Standard with panel 170
– Economic variant that still allows high surface loads
– Sophisticated appearance thanks to low view height

1 Secure drainage through the integrated EPDM seal between the gutter and the carrier

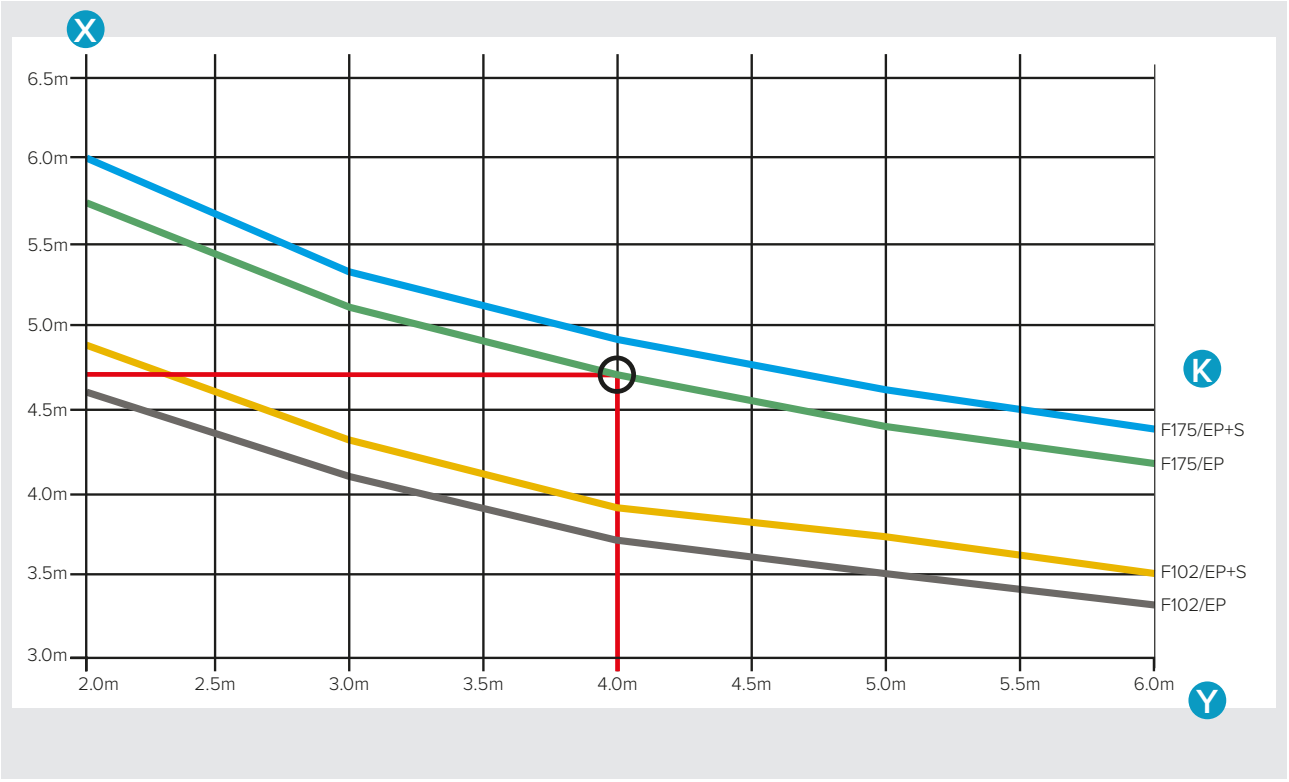
Eaves carrier 175



– Standard with panel 170
– Ideal for large roofs and spans without additional middle post
– Can be combined with the optional panel 276 for integrated shading

1 Secure drainage through the integrated EPDM seal between the gutter and the carrier

Surface loads of the eaves carrier and post combinations



Initial values: surface load = 0.75 snow / max. 10 mm / incl. elements / roof pitch 5°

X Span in metres

Y Roof depth in metres

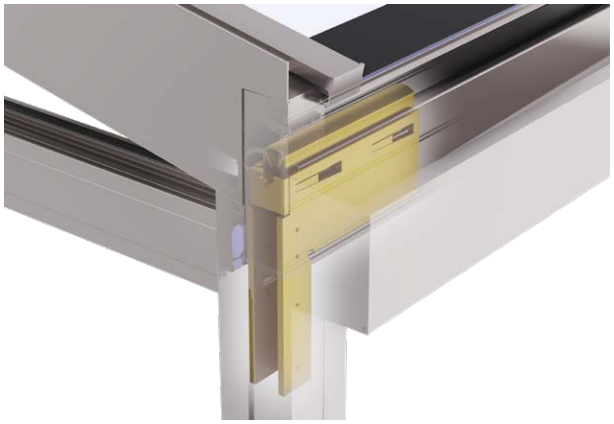
The combination F175/EP allows a span of 4.7 m and a roof depth of 4.0 m.

K Eaves carriers & corner post combination

F = eaves carrier EP = corner post

EP+S = corner post with steel

Rigid corner and centre joint



- Specially developed steel joint between front support and post
- Preassembled in the factory
- Fast and easy joining facilitates installation
- Optional steel extensions in the post for larger spans

4 Individual design variants

Features

– The conservatory can be constructed in two design variants:
  • Modern & angular
  • Classical & round
– Panel 170 on the eaves carrier and the drainage cover are adapted to the desired design.
– The optional panel 276 (can only be combined with eaves carrier 175) is ideally suited for integrating vertical shading.
– The side covers of the gutter are flush and individually adapted to the roof pitch.

Unicolour design

– The HAWAII 80 is available in trend colours at no extra charge.

Two-colour design

– The interior and exterior profile shells can be coated in different colours.
– Colour accents make it possible to create individual and exclusive designs.

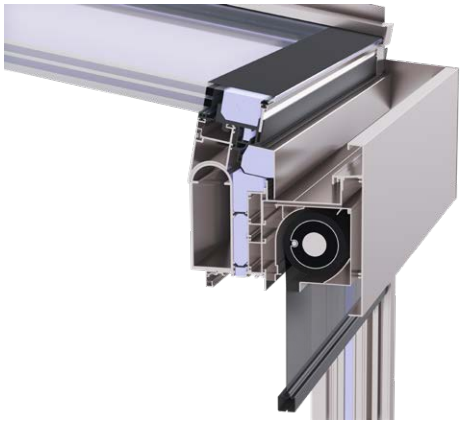
Modern & angular

- Standard variant
- Panel 170 and drainage cover with an angular look
- Suited for buildings with a cubic architectural style

Classical & round

- Optional variant at no extra charge
- Panel 170 and drainage cover with a round look

Panel for the integrated shading



- Optional panel 276 available at a surcharge, suited for integrating standard vertical shading
- Opening dimensions: W = 140 mm / H = 170 mm
- Only possible in combination with eaves carrier 175

5 Post types and downpipes

Features

– Five post types are available:
  - Corner post 124/124
  - Middle post 70/124
  - Middle post 80/80 protruding
  - Middle post 80/80 recessed
  - Post adjustable by 90° to 180°

– Both downpipe variants are available and can be applied with corner posts and middle post 70/124:
  - Standard: Ø50 mm plastic pipe with drainage cover in the selected design, incl. 90° pipe bend
  - Optional: Ø70 mm aluminium pipe, visible and coated in system colour, incl. 100° pipe bend

Corner post 124/124

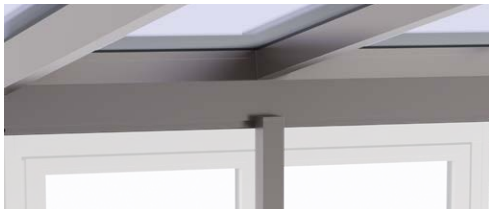
Corner post with drainage cover

Corner post with aluminium downpipe

– Corner post 124/124 with standard plastic pipe Ø50 mm and drainage cover.
– An aluminium downpipe with Ø70 mm is optionally available in the system colour.
– The post is bolted to the rigid steel connector integrated in the front support.
– An optional steel insert in the post allows larger spans.

Middle post 80/80 protruding or recessed

protruding



recessed

– Depending on the construction situation and the choice of substructure elements, the middle post can be protruding or recessed.
– Optionally, the post can also be made removable.
– The structure of both elements ensures that the thermal insulation is not impaired.

6 Floor connection with basic profile

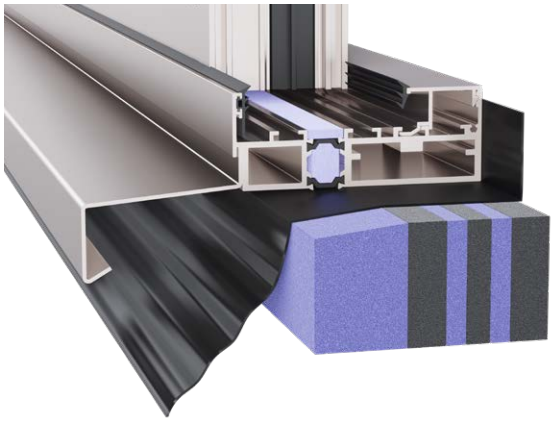
Features

- Easy and secure drainage of the entire conservatory structure is ensured by a basic profile incl. EPDM foil.
- Condensation in the roof is channelled to the basic profile and drained to the outside in a controlled manner via the foil.
- 90° corners as well as individual corner angles are prepared completely in the factory and must be connected on site with the supplied adhesive.

Advantage

- Drainage solution adapted to the system and tested by Sunparadise
- Floor connection adapted to the project
- High prefabrication level ex works

Basic profile incl. EPDM foil and Stadur floor structure



- Available for system combinations with Supertherm 80, Monoslide 80 and Thermoslide 80.
- The EPDM foil and the post joint are prepared in the factory.
- The height of the Stadur is cut to size based on the stated floor recess.
- Weatherboarding can also be ordered and connected to the basic profile.

The thermal insulation solution for frame extensions and substructures.

- Excellent thermal insulation; heat bridges are prevented
- Weather and rot resistant
- High compression and bending strength
- Excellent screw extraction values
- Ready-made with respect to length, width and profile depth

7 Element combinations

Features

– The conservatory system HAWAII 80 is designed for:
  - direct glazing in the triangular skylight
  - Supertherm 80 (windows, door, parallel tilt-slide door and folding wall)
  - Thermoslide 80 (sliding door)
  - Monoslide 80 (rolling wall)

– Element stops incl. interior glass strip are included in the standard design at no extra charge and do not require additional sealing or strips.

Direct glazing (skylight)

– Simple and fast glazing of the triangular skylight with a glass strip (only possible in combination with wall posts)
– Especially suited for small skylights (feasibility depends on roof depth and snow load)
– More incoming light thanks to low profile heights

Connection variants

Thermoslide 80

- Two connection variants:

1 flush interior

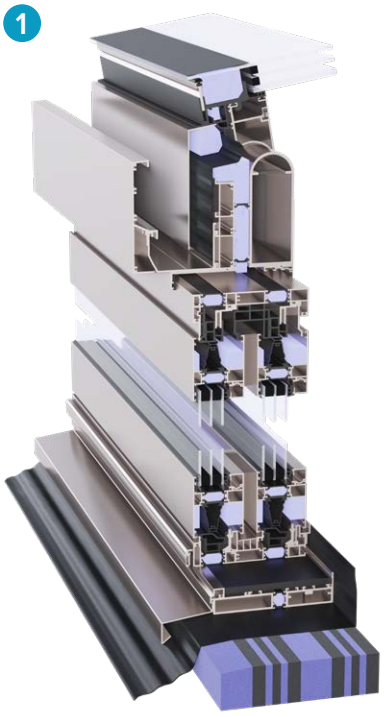
2 recessed

- Connecting profile to the eaves carrier available with both variants – no separate metal sheeting required
- Basic profile is adapted to the structural depth of the system

Supertherm 80 and Monoslide 80 3

- Element stops incl. interior glass strip for better insulation values and easier installation
- No additional sealing or strips required
- Basic profile is adapted to the structural depth of the system

1



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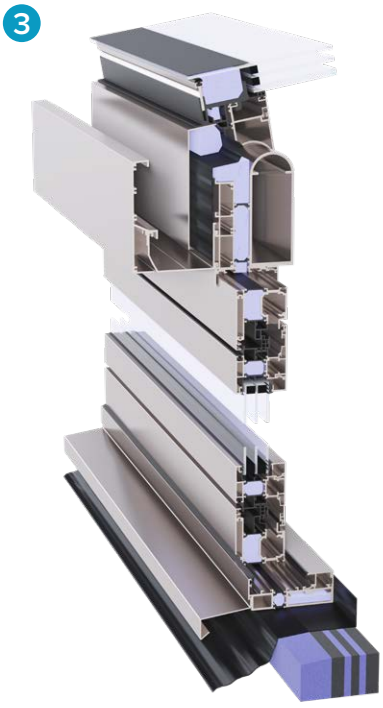


Detailed information about the systems are contained in the respective system descriptions and in the document "Technical drawings".

8 Option: cross beams

Features

– Three different designs are available:
  • Cross beam 70
  • Cross beam 135
  • Cross beam 135 incl. panel 276 for shading
– Each cross beam can be fitted with a steel insert to meet statics requirements.

Cross beam 70

Cross beam 135

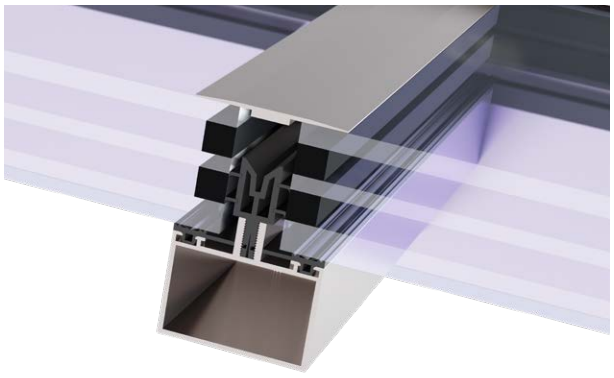
Cross beam 135 incl. panel 276 for shading

9 Option: transoms

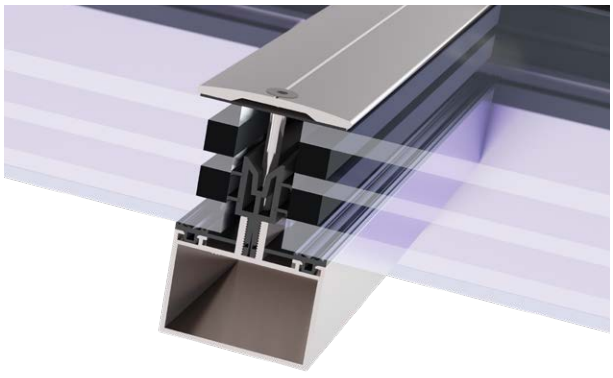
Features

– Two different designs are available:
  • Transom 42 (standard)
  • Transom 109 (optional)
– Both variants are available with a clamped or bolted cover strip.

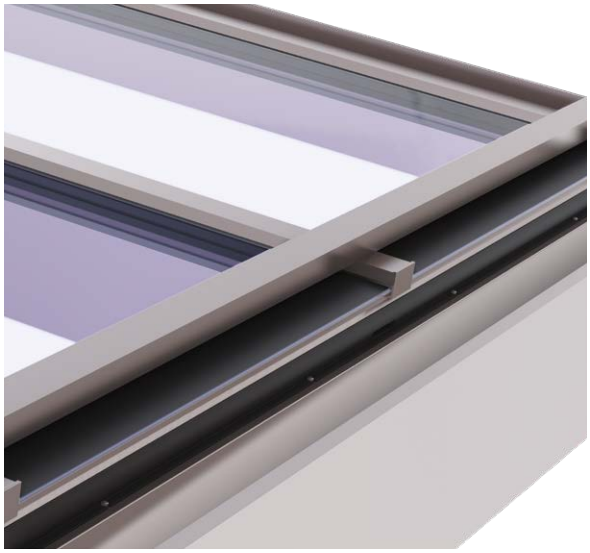
Transom 42, clamped



Transom 42, bolted

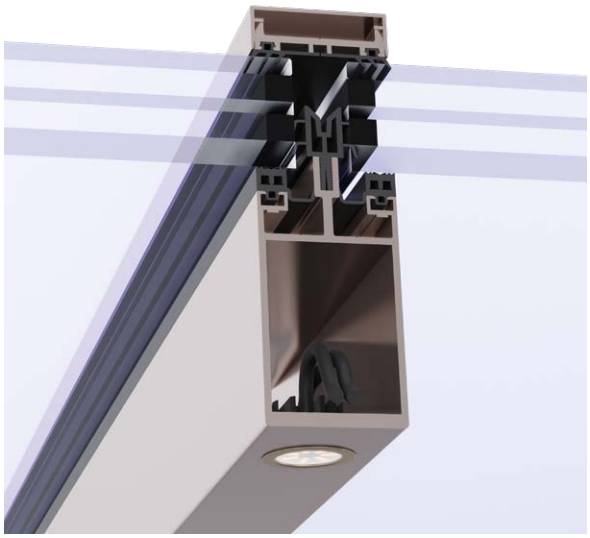


Additional options



Snow trap

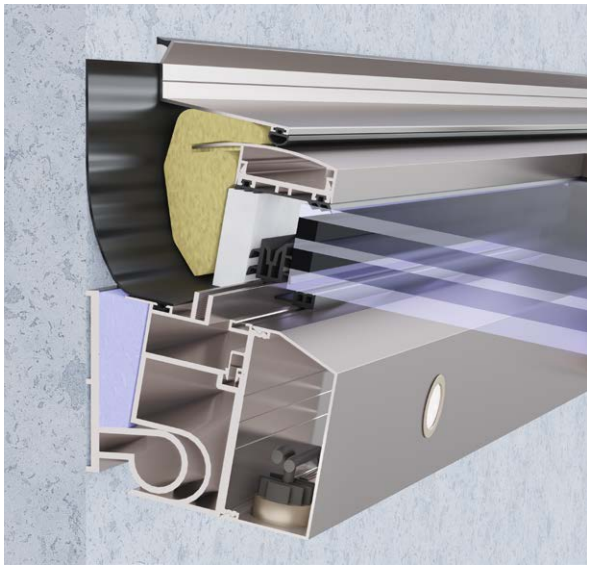
– A square pipe with the dimensions 60/40/4 mm is attached with a concealed mount on each rafter.
– The end covers are finished in the system colour.



LED lighting

– Plug&play principle for easy and quick installation.
– The LED lighting and the cables are already inserted in the rafters in the factory.
– LED lighting is not possible with edge rafters and rafter 101 with steel (see TechDraw).

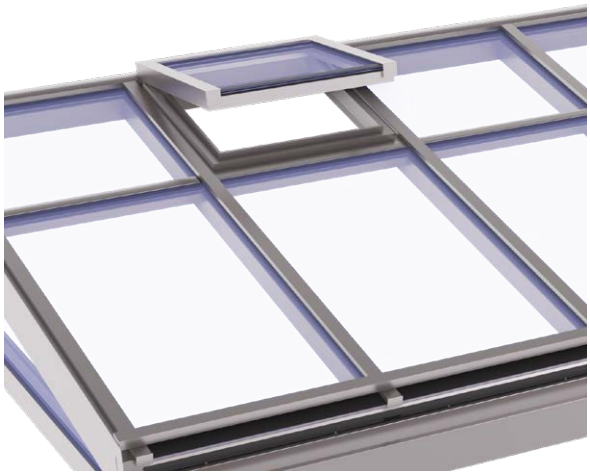
For more information, please refer to our LED brochure.



LED cable duct with wall connection

– All rafter cables are routed in the cable duct and therefore stowed away neatly and invisibly.
– A cable duct is required in each roof area in which cables are routed.
– The LED control can be installed in the profile hidden from view.
– The optional LED lighting can be designed to point downwards or frontwards.

Additional options



Skylight "Komet 55"

– The roof glazing of the HAWAII 80 can be expanded with the Komet 55 skylight.
– The position of the skylight can be planned and realised individually.
– The skylight can be operated electronically or manually.

Additional individual options

Every HAWAII 80 can be supplemented with additional options. This makes any conservatory unique and fulfils individual wishes and requirements:

– **Attachment set for outside shading**
  • Adapted to the HAWAII 80
  • Complete set for easy and fast assembly (2 bolts per set)
– **Additional downpipe covering**
  • Optional for middle and corner posts without downpipe
  • For a uniform appearance of the conservatory roof

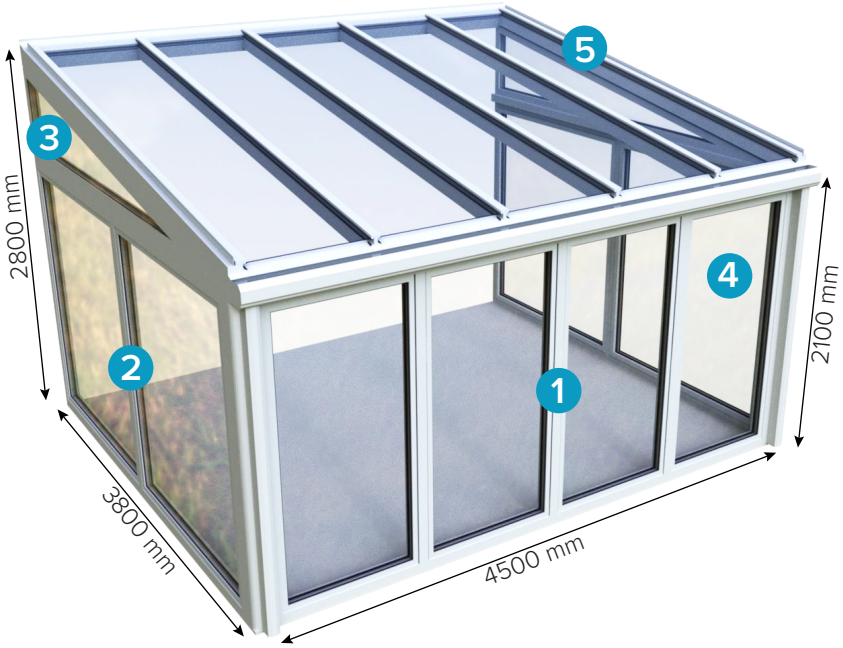
For more detailed information about the respective options as well as exact dimension specifications and sectional images, please refer to the document "Technical drawings".

HTC calculation

To calculate the heat transfer coefficient, the insulation values of profiles (Uf) and glass (Ug) are determined. Via linear allowance values (psi values) for profile combinations and glass edge seal, heat bridges are considered in the calculation.

The entire roof structure (glazing, elements, roof) are considered in an HTC calculation for the HAWAII 80. Very good HTC values can be achieved by adapting the roof and the element systems.

Example: HTC value: 0.86 W/(m²·K)



Roof

System:
HAWAII 80

Glass:
Triple glazing, 52 mm / 0.6 W/(m²·K)

Elements

1. PSK Supertherm 80, 2 sliding panels, central opening
2. PSK Supertherm 80, 1 sliding panel
3. Direct glazing
4. PSK Supertherm 80, 1 sliding panel
5. Direct glazing

Glass: triple glazing, 48 mm / 0.6 W/(m²·K)

Information

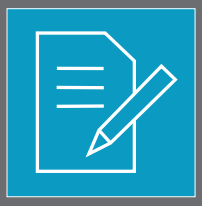
The HTC calculation depends on the structure and is available on request.

Thermal comfort/glass tip

The high glass ratio of a conservatory can impair thermal comfort in the case of an unfavorable design. It is recommended the residential conservatories be designed in accordance with EN ISO7730.

The installation of triple insulated glass is required to prevent the cold air down draughts close to windows and to comply with the standard.

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 by Sunparadise.

- Quality management in accordance with **ISO 9001**
- In-house production control in accordance with **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