

IsoTop – Checklist EN

Dear customer,

We appreciate your interest in our IsoTop system. IsoTop is the optimum fastening technology for light construction roofs of industrial buildings that are not suitable for the mounting of photovoltaic plants with usual unit assembly systems due to their low excess load-bearing capacity and the usually big distances between the girders. Individual systems of the IsoTop design require a slightly higher effort concerning planning and material, but for this kind of roof they often are the only solution!

Why data collection in a check list?

- IsoTop systems are planned individually on the basis of the given roof structure. Thus, exact information about the roof structure are an absolute precondition.
- Your ideas about the module arrangement are a precondition for the planning; in the course of the planning process, we might alternatively suggest you more economic module arrangements.
- Non-usable areas on the roof have a considerable effect on the planning! Rooflight domes mostly have to remain accessible, so-called "SHE (smoke and heat exhaustion) - flaps" serve the purpose of smoke outlet in case of fire and definitely must not be overbuilt!

Why is the first step a design contract / planning order?

As a matter of course, Schletter offers calculations and structural dimensioning as a customer service for standard plants! Any IsoTop planning must be carried out individually on the basis of the given roof structure. Thus, a design contract is required. Within this framework, we provide:

- Detail drawings including piece lists
- Complete structural calculation and testable structural analysis and verification
- Mounting plans
- Complete information on the load transmission into the building

On request, we can provide you with the exact load application data for a check of the given constructional conditions, but for this purpose we would like to ask you to send us a non-disclosure agreement.

Why do considerably longer terms of delivery have to be taken into account?

In case of long span widths, the structural optimization of the profiles in most cases requires customized lengths, which have to be extruded individually for you according to your order! Thus, the delivery time here is about 9 to 12 weeks, in contrast to the standard constructions that can be delivered any time at short notice. We highly recommend that you consider that in your planning!

Further important information

- We will be pleased to advise you concerning the optimization of the module arrangement. single-row arrangement in landscape format is not economic in most cases, for example.
- With aluminium beams, span widths of about 6 to 7 meters are possible, depending on the regional loads.
- With steel beams, span widths of up to 12 m are possible in certain circumstances, but please consider the inferior flexibility of these galvanized steel constructions in case of deviations in dimension on-site!
- Due to lower power density, unfortunately IsoTop constructions with thin-film modules often are not economic.
- For reasons of structural optimization, it is reasonable to change the module inclination, if necessary.
- Purlins and girders at the edge of the roof should not be burdened with modules due to the higher loads at the roof edges.
- The dimensioning of the beams is carried out according to the maximum allowable tension in the material. Thus, a visible sagging can possibly be tolerated.
- The connection of the supports to the roof structure and especially the structural dimensioning of supports provided by the customer are completely within the customer's responsibility!
- When arranging modules on inclined roof areas, it makes sense to interrupt the module fields at the roof ridge respectively at the valley (saddle roofs in a row).
- Distances of the module arrangement to the edges of the roof (we recommend a distance $x_1 = 1.2$ m in direction of inflow and a lateral distance $x_2 = 1.5$ m).
- If there are special environmental conditions (proximity to the coast and/or to swimming pools, factory fumes) appropriate materials are to be deployed.

Please give us a short confirmation of your taking notice of this important information:





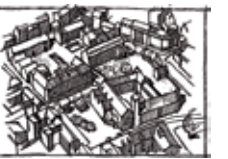
I have taken notice

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We thank you for your interest in our systems. Please enter all information requested in the form below to allow us to generate an offer tailored to your specific requirements. Please note: the fields marked with → are mandatory fields!

<p>Company data</p> <p>→ _____ Customer number</p> <p>→ _____ Company name</p> <p>If you are a new customer, please enter your company and contact data</p> <p>_____ Company</p> <p>_____ Street</p> <p>_____ _____ Postal code Town/city</p> <p>_____ Country</p> <p>_____ VAT ID</p>	<p>Contact person</p> <p>_____ First name</p> <p>_____ Last name</p> <p>_____ Telephone</p> <p>_____ Mobile</p> <p>_____ Fax</p> <p>_____ E-mail</p>
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Terrain category

				
<input type="radio"/> Terrain category 0 Sea, coastal area exposed to the open sea	<input type="radio"/> Terrain category I Lakes or area with negligible vegetation and without obstacles	<input type="radio"/> Terrain category II Area with low vegetation such as grass and isolated obstacles (trees, buildings) with separations of at least 20 obstacle heights	<input type="radio"/> Terrain category III Area with regular cover of vegetation or buildings or with isolated obstacles with separations of max. 20 obstacle heights (such as villages, suburban terrain, permanent forest)	<input type="radio"/> Terrain category IV Area in which at least 15% of the surface is covered with buildings and their average height exceeds 15m

Geographic data

→ _____
Postal code Town/city

Country

_____ → _____
Height above sea level (m) Ridge height above top ground surface (m)

Exposed location
(for example isolated buildings on hills)

yes
 no

Solar plants outside of Germany

Basic snow load in kN/m²

Wind load in kN/m²

Environmental conditions

Close to the sea

Close to a swimming pool

Factory fumes

There are no extraordinary environmental conditions

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Project information

Project name _____

Street _____

→ Postal code _____ Town _____

→ Country _____

Modules

Manufacturer _____

→ Description _____

→ Module power Wp _____

→ Length (mm) _____ → Width (mm) _____ → Thickness (mm) _____

Framed
 Unframed

Vertical arrangement
 Horizontal arrangement

Modules per row (max. rack length: 35 m) _____ Rows above each other _____

Modules per string _____ Number of racks _____

Please note: If there are problematic unusable areas, please add a module arrangement plan.

Roof structure (If none of the designs listed applies, please draw a sketch on the last page and also specify the accordant dimensions.)

Membrane _____

Insulation _____ (mm)

Trapezoidal sheet metal _____ (mm)

Girder _____ (mm)

with horizontal girder (Z-purlin)


Insulation _____ (mm)

Trapezoidal sheet metal _____ (mm)


Z-purlin _____ (mm)

Girder _____ (mm)


Substructure



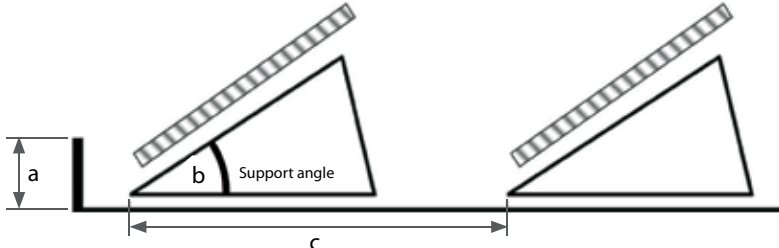
Steel



Timber girder



Concrete



Height (mm) _____

Width (mm) _____

(a) Height (mm) _____ °

(b) Support angle _____

(c) Row distance (mm) _____

Desired row distance from module front edge to module front edge.

Please note: Only for inclined support structures (use shade calculator, if required)!

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East-west roof

Module configuration

Roof inclination °

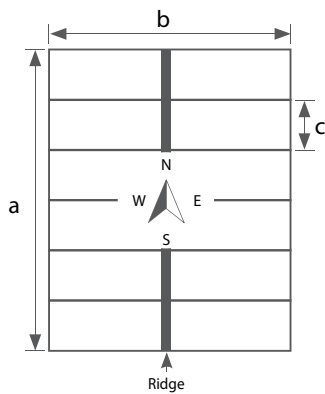
Course

- Ridge to the eaves

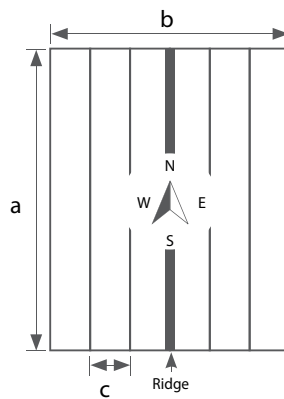
 Eaves to the ridge

Connection

Connection to the girders



Connection to the purlins



(a) dimension (mm)

(b) dimension (mm)

(c) dimension (mm)

If your roof has a special shape, please draw a sketch here



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North-south roof

Module configuration

Roof inclination _____ °

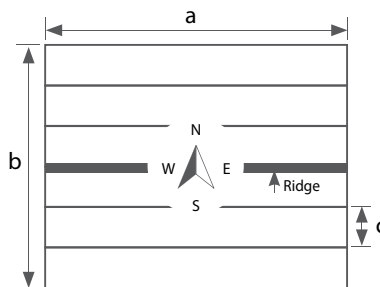
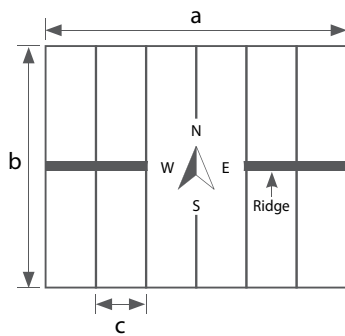
Course

- Ridge to the eaves 
 Eaves to the ridge 

Connection

Connection to the girders

Connection to the purlins



_____ (a) dimension (mm)

_____ (b) dimension (mm)

_____ (c) dimension (mm)

If your roof has a special shape, please draw a sketch here

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Roof structure (special design)

Thank you for taking the time to provide us with all required information.

Please fill in the check list completely and send it to us so that we can create your calculation as quick as possible.

Please send the check list by fax to +49 8072 9191-9200 or by e-mail to anfrage@schletter.de!

Do you need further information? www.schletter.eu