

IsoTop

Registered at the German Patent Office, No. 20 2006 014 048 U1

A system for membrane roofs of industrial buildings and special constructions

- Supporting widths up to 10.0 m are possible
- Reduced loading of the roof substructure
- Direct load application into the supporting structure of the building
- Object planning by using individual structural analysis software
- Improved connection details
- Optimization and reduction of the number of roof perforations



Areas of application

Membrane roofs of industrial buildings usually consist of a substructure with big grid spaces (5 to 8 meters) and a relatively soft roof covering. The structural dimensioning of the roofs and also the maximum allowed load pressure on the insulation are mostly so low that solutions with loading elements for the fastening of the modules are out of the question in the first place.

Schletter IsoTop is a modular construction kit with technical details and solutions for supporting constructions on membrane roofs of industrial buildings. IsoTop offers suitable solutions for any roof – depending on the object either consisting of components from the standard system construction kit up to complete special solutions. In the offer creation stage, we offer you individual consulting for the planning of the supporting structure of your solar plant in order to determine an economic solution for the respective roof construction. Usually, the constructions are optimized so that only a few penetration points in big distances are necessary. These can be reliably welded by a roofer (at a low price). Thus, the areas of competence respectively warranty are clearly separated.

- For the individual planning, we work with product-specific structural analysis programs, in order to offer solutions quickly and cost-efficiently.
- Complete series of special profiles offer suitable options for the most different requirements
- Being a component supplier of standard solar fastening technology with a wide range of experience and welding certifications according to DIN 18800, we are also the right partner for customized constructions.



Information on dimensioning

- Solutions with loading elements are usually out of the question because usually neither the roof substructure nor the roof covering can carry substantial additional loads.
- If you choose an IsoTop solution, the roof covering normally is not additionally loaded!
- In any case, it has to be checked if the substructure has a bearing capacity reserve to bear the weight of the mounting rack plus the photovoltaic modules plus portions of external load impacts (for example snow loads).
- In case of extraordinary environmental conditions (maritime, proximity to swimming pools, factory fumes), appropriate materials have to be used.

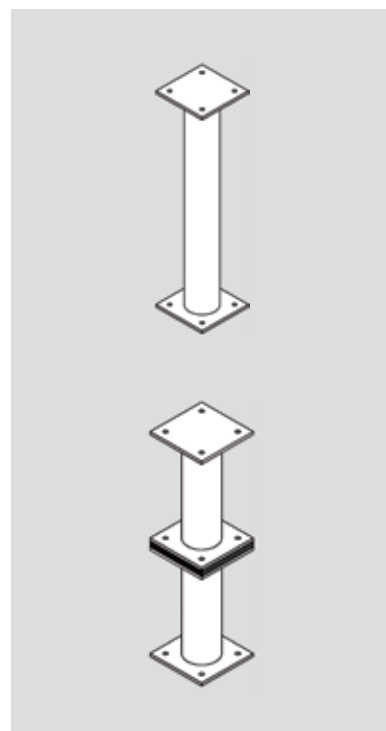
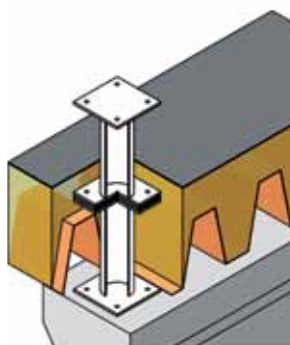
Perforations

Cold perforation

- ☑ Screwing to the primary load-bearing system of the building
- ☑ Application on warehouses, for example
- ☑ Material: High-grade steel
- ☑ Also available as a rectangular tube
- ☑ Individual connecting plates for the given roof - optional
- ☑ Dimensioning in the course of project planning

Warm perforation

- ☑ Screwing to the primary load-bearing system of the building
- ☑ Material: High-grade steel
- ☑ Also available as a rectangular tube
- ☑ Individual connecting plates for the given roof - optional
- ☑ Dimensioning in the course of project planning



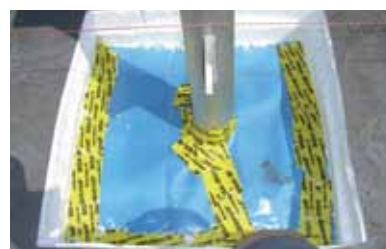
Mounting



❶ Opening of the roof cladding



❷ Placing and fastening of the support



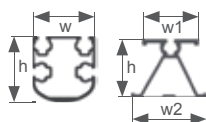
❸ Sealing of the support

Examples of penetrations:



The load-bearing structure

In most cases, steel girders are not necessary because of our big range of load distribution girders. For this reason, aluminium is preferably used for the supporting structure. Thus, the self-weight of the structure is reduced to an absolute minimum. Furthermore all components are compatible to each other. Please also take a look at our overview of special profiles on the internet. The girders carrying the modules can be clamped individually and have our well-proven **Klick system**. The system parts are connected with corresponding accessories.



Load distribution profiles



BF0	w	h
mm	80	85
inches	3.15	3.35
Item number	124500 -	



BF1	w	h
mm	80	133
inches	3.15	5.24
Item number	124501 -	



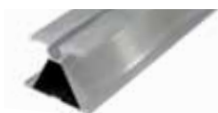
BF2	w	h
mm	80	161
inches	3.15	6.34
Item number	124502 -	



BF3	b	h
mm	80	200
inches	3.15	7.87
Item number	124503 -	

Module bearing profiles

S0	w1	w2	h
mm	62	83	65
inches	2.44	3.27	2.56
Item number	124300 -		



S1 In	w1	w2	h
mm	69	80	60
inches	2.72	3.15	2.36
Item number	124302 -		



S1 Out	w1	w2	h
mm	49	54	60
inches	1.93	2.13	2.36
Item number	124301 -		



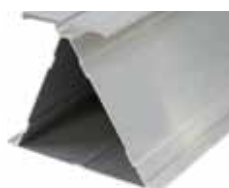
S2	w1	w2	h
mm	87	146	105
inches	3.42	5.75	4.13
Item number	124304 -		



S3	w1	w2	h
mm	87	160	125
inches	3.42	6.30	4.92
Item number	124305 -		



S4	w1	w2	h
mm	103	200	187
inches	4.06	7.87	7.36
Item number	124306 -		



Connection components



Joint	
Item number	181990-001



Mounting claw	
Item number	146001-000

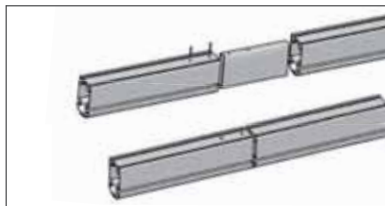


Connection angle Bracing	
Item number	181990-002

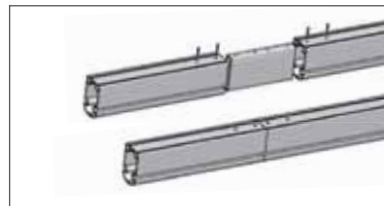
Mounting:



Connection of struts



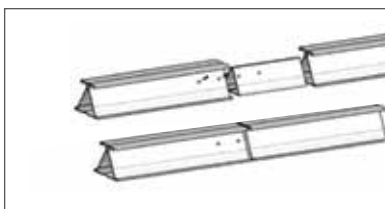
Connection of insertion connectors
with thermal separation



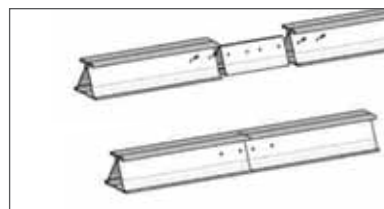
Connection of insertion connectors - Fixed joint



Connection of purlins



Connection of insertion connectors
with thermal separation

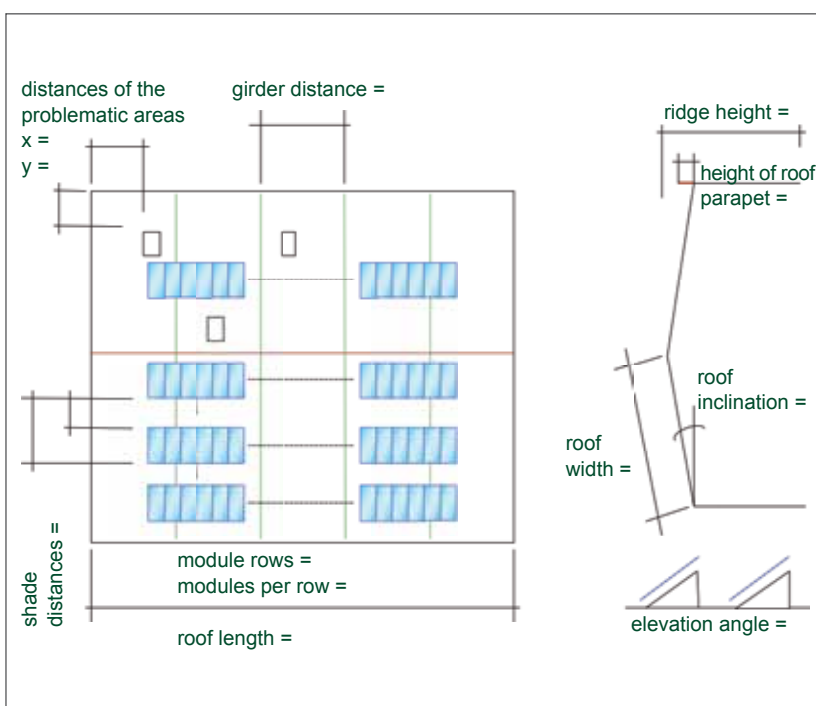


Connection of insertion connectors - Fixed joint

Project planning example

In order to be able to offer you the optimum system and thereby the most economic alternative, we always ask you to communicate us your desired module arrangement plan. If all required information is provided, we will obtain the best basis to create quick solutions in your interest. The example on the following page is supposed to help you to focus your expenditure of time on the focal points and to make use of your advantage of planning in advance in case of an order.

The basic information needed for your planning is also to be found on the internet. Here data like location, height of the building and further details are asked for.



Especially in case of bigger span widths, the requirement of specific points of load application or customized constructions, we ask you for an illustration of your inquiry. The picture above shows one possibility of illustration. With an **illustration plus the IsoTop check list**, you will reduce your time expenditure, you will have important interfaces for the further planning of the desired construction and you will have an optimum basis for the dialogue with your customer.

We are looking forward to your inquiry.