ISOTOP

A SYSTEM FOR INDUSTRIAL FOIL ROOFS AND CUSTOM CONSTRUCTIONS

- Spans up to 10.0 m possible
- Reduced load on the roof substructure
- Direct load transfer to the building’s support structure
- Project planning using proprietary statics software
- Improved connection details
- Optimization and minimization of the quantity of roof penetrations
- 25-year warranty* 

APPLICATIONS

Industrial foil roofs generally consist of a substructure with large grid spacing (5 to 8 meters) and a relatively soft roof covering. The static design of the roofs and the allowable pressure load of the insulation are usually so low that weighting solutions for module fastening are rejected at the outset.

Schletter IsoTop is a modular system with details and solutions made for support structures on industrial foil roofs. IsoTop offers the right solution for any roof — from the standard modular system to a complete custom solution. At the bid stage, we offer individual consultation on planning the PV support structure to determine an economical solution for the specific roof construction. Generally, the constructions are optimized such that only a few penetration points must be placed, at wide distances. These can be reliably and economically welded in by the roofers, which clearly separates the works covered by warranty.

- For individual planning, we work with internal, product-specific statics programs to offer fast, cost-effective solutions.
- Complete series of special profiles offer the right options for a wide range of requirements.
- As an expert provider of standard solar fastening technology, with wide-ranging experience in metal construction and welding approvals according to DIN 18800, we are the right partner.

*in accordance with our warranty conditions
NOTES ON DESIGN

- Weighting solutions are usually ruled out, because generally neither the roof substructure nor the roof covering can take additional loads.
- With a solution based on the IsoTop principle, the roof covering generally takes on no additional load!
- It must always be clarified that the substructure has a load reserve for the mounting rack, plus the PV module, plus parts of the external load effects.
- For special environmental conditions (maritime, proximity to swimming pools, industrial exhausts), situation-specific materials must be calculated and used.

PENETRATIONS

COLD PENETRATIONS

- Screw joint on the building’s primary support system
- Used on structures like warehouses
- Stainless steel
- Dimensioning at system design

WARM PENETRATIONS

- Screw joint on the building’s primary support system
- Support is thermally separated
- Used on structures like cold stores
- Stainless steel
- Dimensioning at system design

SUPPORT DESIGNS

The various support designs are distinguished as follows:

**Warm roof support with standard base plate slot**

Thermal separation is built in at the insulation level (min. 50 mm) to prevent a cold bridge between the girder and the PV system.
Warm roof support with TR trapezoidal shoe

With the TR trapezoidal shoe, the existing trapezoidal sheet metal (supporting shell) is not cut open — this prevents dirt in the internal hall area.

Cold roof support with standard base plate

Here no thermal separation is integrated, for non-insulated roofs or roofs with low insulation height, min. insulation height 60 mm.

Cold roof support with TR trapezoidal shoe

With the TR trapezoidal shoe, the existing trapezoidal sheet metal (supporting shell) is not cut open — this prevents dirt in the internal hall area.

SUPPORT STRUCTURE

A large selection of load distribution supports usually eliminates the need for steel beams. For this reason, aluminum is preferred for the support structure. This reduces dead weight loads to the absolute minimum. Moreover, all components are mutually compatible. Feel free to look at our overview of special profiles on the Internet. The module-bearing rails can be individually clamped and have the proven click system. The system connections are made with special accessories.

PROFILE LOAD DISTRIBUTION

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Available in custom lengths, 6 m and 8 m
MODULE-BEARING RAILS

Available in custom lengths, 6 m, 8 m and 10 m

ATTACHMENT COMPONENTS
INSTALLATION

Connecting struts

Connecting plug-in connector – with thermal separation

Connecting plug-in connector – Firm push

Connecting purlins

Connecting plug-in connector – with thermal separation

Connecting plug-in connector – Firm push

SAMPLE DESIGN

To offer you the optimal system and the most economical variant, we always ask you for your desired roof structure. If your data is complete, this gives us the best basis for a prompt solution. The example on the following page should help you to focus your time on the most important points and to benefit from preplanning if you are awarded the contract.

You can also find the necessary basic data for your plan on the Internet. Here information such as the location, the height of the building and other details are requested.

Especially for larger span widths, specification of load transmission points and special designs, we ask for an illustration of your request. The image shows a possible representation. Using the representation and the IsoTop checklist, you optimize your use of time, have the important interfaces for further planning of the desired structure, and have the best possible basis for dialog with your customer.
For more information, see www.schletter-group.com