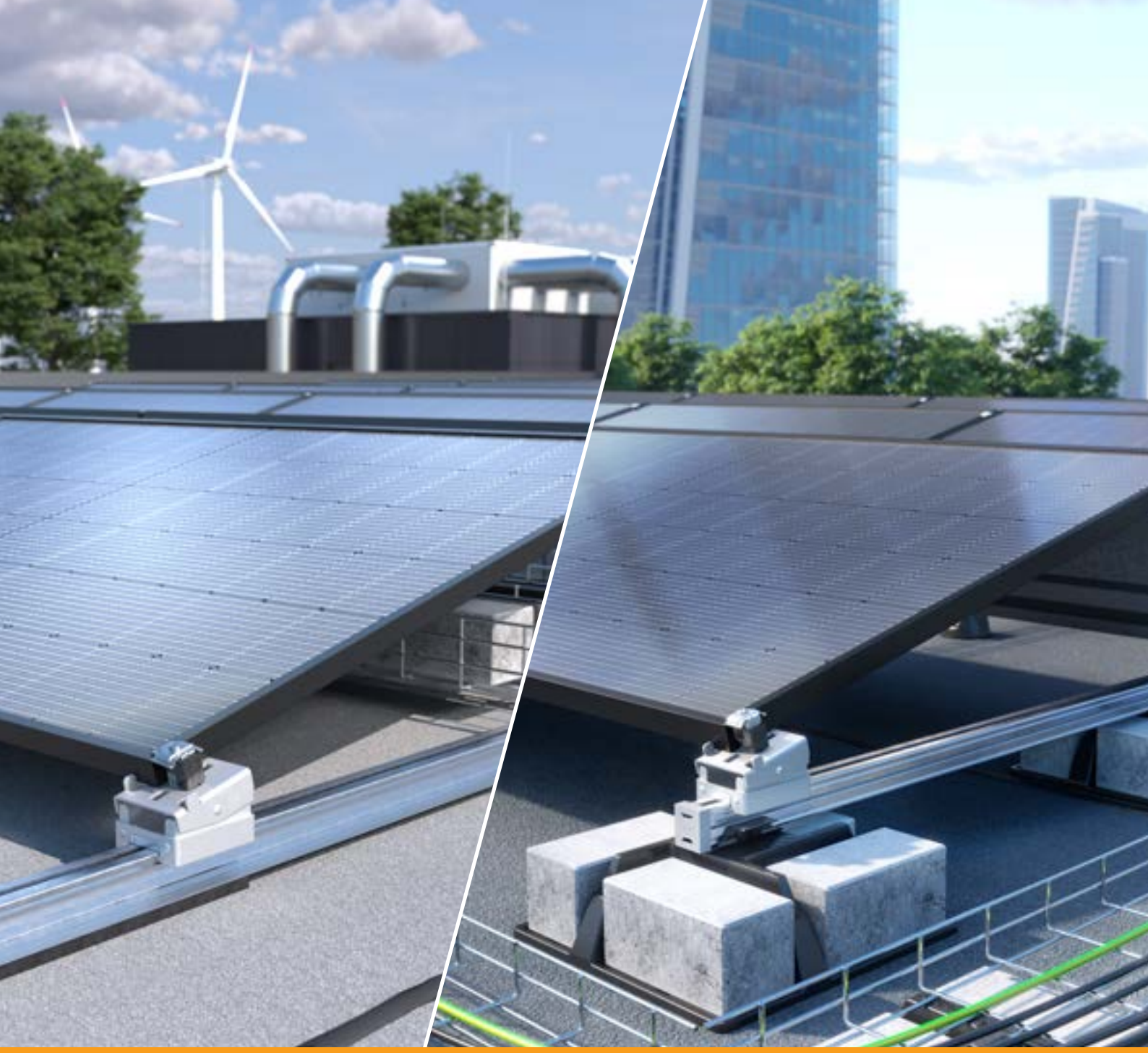

Coefficient of friction log

Magic PV Solution

Building Connections

OBO BETTERMANN

Coefficient of friction log

Coefficient of friction

Instructions for ensuring stability for non-penetrative mounting systems

To ensure the stability of a non-penetrative mounting system, various factors must be taken into account. Follow these instructions to ensure that your mounting system is installed correctly:

1. **Check the load-bearing reserves:**
   Make sure that the building has sufficient load-bearing reserves to support the deadweight of the mounting system, the weight of the modules and the additional ballast.

2. **Suitability of the roof structure**:
   Check whether the roof structure is suitable for mounting the system. This includes checking the material properties, stability and structure of the roof.

3. **Interaction between roof skin and test object:**
   One critical factor for stability is the interaction between the roof skin and the test object of the mounting system. This interaction is determined by the coefficient of friction.

4. **Determine the coefficient of friction:**
   The coefficient of friction has a direct influence on the static stability calculation. It is therefore essential to determine or verify the coefficient of friction on-site. This can be done with specific tests or by consulting with experts.

By following these steps, you can ensure that your mounting system is installed correctly and safely to guarantee optimal stability. If you are uncertain about anything or need any more information, please contact an expert or our Customer Service.

Determining the coefficient of friction

The coefficient of friction, also referred to as friction number (symbol μ), is a dimensionless number for the frictional force relative to the contact force between two objects.

Coefficient of friction (μ = F : G / F = [kg] / G = [kg])

Example

The test weight weighs 1.0 kg.
The spring scale reads 0.6 kg before the weight begins to move.

F : G = μ
0.6 kg : 1.0 kg = 0.6
μ = 0.6

You need:

- Friction coefficient test block
- Test weight test weight/test object to be used, either blank or including building protection mat (permanently installed)
- Spring scale

Testing:

- Prepare roof surface, i.e. prepare to the condition required for subsequent mounting: Clean/apply water if necessary
- Place the test weight on the roof surface and leave for 10 seconds
- Pull perpendicular to the roof slope with a spring scale
- Read the weight as soon as the test weight begins to slip
- Measure at multiple positions of the surface to be tested with dry and wet roof surface
- Measure high and low points, corner, edge and centre of the surface.

Note: Before every measurement, make sure to zero the unloaded scale. During the test, use the test weight either without or, alternatively, with pre-bonded building protection mat, depending on the application.

Good to know:

With the OBO coefficient of friction device, you can easily and reliably determine the coefficient of friction on flat roofs with plastic or bitumen seals.

Roof sketch

Please mark at least five measuring points!

Coefficient of friction log

Manufacturer roof covering	Roofing type	Age of roofing	Weight [G] test object [kg]

Measurements*	Tensile force F in kg
Measuring point 1 – dry	
Measuring point 1 – wet	
Measuring point 2 – dry	
Measuring point 2 – wet	
Measuring point 3 – dry	
Measuring point 3 – wet	
Measuring point 4 – dry	
Measuring point 4 – wet	
Measuring point 5 – dry	
Measuring point 5 – wet	

* *Sketch the measuring points in your roof layout/roof sketch! For larger roof surfaces, we recommend increasing the number of measuring points! Then, use the lowest value of all measuring points and divide it by the weight of the test object:*

Result µ

We recommend a test object with a weight of between 1 kg and 10 kg.

Customer	Commission
Date	**Name of tester**

© OBO Bettermann 01/2025 EN