

Technical declaration – Solar panel brackets

1. Product's Unique Identification Codes

Piristeel item no.	Description of tested product combination
28130 + 28109	Universal solar bracket + Mounting plate, waterproofing membrane roof
28000 + 28140/28150	SG mounting bracket for tile roofs + Solar-bracket for concrete/clay tile
28160	Pisko solar bracket, UniSeam

2. Declared performance

Piristeel item no.	Maximum load bearing capacity perpendicularly away from the roof	Maximum load bearing capacity in the direction of the roof
28130 + 28109	7 kN (single bracket with washer)	10 kN (single bracket with washer)
28000 + 28140/28150	5.8 kN (single bracket without washer)	2 kN without washer / 9 kN with washer (single bracket)
28160	3.7 kN (single bracket)	2.3 kN (single bracket)

3. Notes regarding installation setup in test environment

Piristeel item no.	Structure	Notes
28130 + 28109	According to instructions for installation and maintenance "Mounting plate, waterproofing membrane roof v. 1.2 or newer"	27 mm washer used with the rail fixing bolt
28000 + 28140/ 28150	According to instructions for installation and maintenance "Bracket for concrete/clay tiled roofs"	If mentioned, 27 mm washer used with the rail fixing bolt
28160	0.60 mm standing seam roof, UniSeam bracket installed to the roof according to the installation instruction for Pisko solar fasteners	

The given values are average results from laboratory pull-out tests, and the durability of the solar panel installation shall be defined by the dedicated designer.

Susanne Marttila, Managing Director
Kauhava, 09.09.2020

piriSteel



Technical declaration – Solar panel brackets

1. Product's Unique Identification Codes

Piristeel item no.	Description of tested product combination
28132	Straight solar bracket 425
28130	Universal solar bracket

2. Declared performance

Load bearing capacity perpendicularly away from the roof	Universal solar bracket	Straight solar bracket 425
Trapezoidal sheet, steel 0.50 mm	2 kN	1,9 kN
Trapezoidal sheet, steel 0.60 mm	2,5 kN	2,3 kN
Trapezoidal sheet, steel 0.70 mm	2,8 kN	4,5 kN

Load bearing capacity in the direction of the roof	Universal solar bracket	Straight solar bracket 425
Trapezoidal sheet, steel 0.50 mm	0,8 kN	2,3 kN
Trapezoidal sheet, steel 0.60 mm	1,2 kN	2,5 kN
Trapezoidal sheet, steel 0.70 mm	2 kN	3,5 kN

3. Notes regarding installation setup in test environment

Piristeel item no.	Structure	Notes
28132	Solar bracket installed to the roof according to the installation instruction for Pisko solar fasteners. Steel profile installed on top of the wooden battens according to manufacturer's instructions.	Bracket only fixed to the top of the steel profile. Standard washer used with the rail fixing bolt.
28130	Solar bracket installed to the roof according to the installation instruction for Pisko solar fasteners. Steel profile installed on top of the wooden battens according to manufacturer's instructions.	Bracket only fixed to the top of the steel profile. Standard washer used with the rail fixing bolt.
Single brackets directly on the steel *) with standard washer under the rail fixing bolt, minimum values based on laboratory pull-out tests. \varnothing 7mm HVAC screws used in the test installation setup, two screws per bracket.		
*) If any of the screws will be on a place of a load bearing batten / purlin, the capacity will increase significantly. Also, by increasing the amount of screws, the durability increases accordingly.		

The given values are average results from laboratory pull-out tests, and the durability of the solar panel installation shall be defined by the dedicated designer.

Susanne Marttila, Managing Director
Kauhava, 09.09.2020

piriSteel



Technical declaration – Solar panel brackets

1. Product's Unique Identification Codes

Piristeel item no.	Description of tested product combination
28135 + 25360	Solar bracket for tile roofs (682) + Bracket locking piece for tile brackets (568)

2. Declared performance

Load bearing capacity perpendicularly away from the roof	50 mm * 50 mm wooden batten	40 * 70 wooden batten
28135 + 25360	2.3 kN	2.2 kN

Load bearing capacity in the direction of the roof	50 mm * 50 mm wooden batten	40 * 70 wooden batten
28135 + 25360	3.0 kN	1.9 kN

3. Notes regarding installation setup in test environment

Piristeel item no.	Structure	Notes
28135 + 25360	Solar bracket installed to the roof according to the installation instruction for Pisko solar fasteners. Two different batten options tested (see above table).	<p>Tested brackets had the bottom locking piece in use in order to create strength against wind load.</p> <p>Rail fixing bolt was fixed with flange nut in order to increase the pull-through strength.</p> <p>The given values tell the breaking point of an individual bracket (incremental deformation starts earlier).</p>

The given values are average results from laboratory pull-out tests, and the durability of the solar panel installation shall be defined by the dedicated designer.

Susanne Marttila, Managing Director
Kauhava, 09.09.2020

piriSteel

