

## TRI-STAND Aero Aerodynamically optimised mounting system

### The mounting system for large flat roofs

TRI-STAND Aero is the logically consistent development of the proven PV mounting system TRI-STAND. The new mounting system is based on TRI-STAND components, but is designed especially for efficient use on large flat roofs.

### Smaller loads, less costs

Due to its aerodynamically optimised shape, the mounting system TRI-STAND Aero offers significant advantages in terms of load and costs. The new PV mounting system puts considerably less weight on roofs than conventional module supports. Compared to the conventional flat roof supports, TRI-STAND Aero needs at least 50 % less ballast for the installation.

### The centrepiece – the TS-F bracket

The back of the elevation is clad with a metal sheet that both reduces the dynamic pressure and prevents wind

pressure loads on the underside of the modules. The centrepiece is the newly developed TS-F bracket. It is used to attach the module to the bottom profiles and the vertical profiles providing support on the back. The bracket makes the diagonal profile superfluous – and thus saves material costs. Instead, the module is screwed directly onto the mounting holes.

### Less shading, more output

Since the PV modules are supported at an angle of 20 degrees, the shading distances reduce and the output per square metre increases. Installing the TRI-STAND Aero system keeps the roof covering intact. The system is designed for modules with a width of 790 – 810 mm and 990 – 1010 mm. Modules with these dimensions are state-of-the-art. The required back sheets are tailored to these dimensions. As a result, customers are spared expensive customised components and benefit from an efficient product.



The TRI-STAND Aero mounting system – load and cost-optimised.







The TS-F bracket is the centrepiece of the TRI-STAND Aero mounting system.

## MOUNTING SYSTEMS – COMPONENTS On-the-Roof System

Art. No.	1502730	1502731	1502732	1502733	1502735
					
Model	TRI-STAND Aero TS-F bracket (6 per module)	TRI-STAND Aero hexagon set screw M6 x 16 A2	TRI-STAND Aero threaded plate A2 (4 per module)	TRI-STAND Aero drilling screw 6.3 x 25 A2	TRI-STAND Aero wind deflector, 790 - 810 mm
Application	Flat roof	Flat roof	Flat roof	Flat roof	Flat roof
Frame thickness	Any	Any	Any	Any	Any
Module brand	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm
Dimensions (L / W / H)	89 mm / 40 mm / 39 mm	22 mm / 8 mm / 8 mm	40 mm / 14 mm / 5 mm	31 mm / 8 mm / 8 mm	2500 mm / 345 mm / 83 mm
Weight	0.024 kg	0.005 kg	0.010 kg	0.004 kg	2.800 kg
Norms	Wind channel test	Wind channel test	Wind channel test	Wind channel test	Wind channel test
Art. No.	1502736	1502744	1502254	1502737	1502738
					
Model	TRI-STAND Aero wind deflector, 990 - 1010 mm	TRI-STAND hammer-head screw M10 x 20 A2	TRI-STAND self-locking nut with serrated bearing surface M10 A2	TRI-STAND Aero universal profile UP-L, 0.272 m	TRI-STAND Aero universal profile UP-L, 0.341 m
Application	Flat roof	Flat roof	Flat roof	Flat roof	Flat roof
Frame thickness	Any	Any	Any	Any	Any
Module brand	Module width 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm	Module width 990 - 1010 mm
Dimensions (L / W / H)	2500 mm / 412 mm / 83 mm	20 mm / 10 mm / 10 mm	20 mm / 20 mm / 10 mm	272 mm / 40 mm / 41 mm	341 mm / 40 mm / 41 mm
Weight	3.260 kg	0.021 kg	0.011 kg	0.265 kg	0.333 kg
Norms	Wind channel test	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	Wind channel test	Wind channel test
Art. No.	1502742	1502743	1502708	1502653	
					
Model	TRI-STAND Aero universal profile UP-L, 1.140 m	TRI-STAND Aero universal profile UP-L, 1.340 m	TRI-STAND universal profile UP-L, 3.000 m, blank aluminium	TRI-STAND universal profile UP-L, 6.000 m, blank aluminium	
Application	Flat roof	Flat roof	Flat roof	Flat roof	
Frame thickness	Any	Any	Any	Any	
Module brand	Module width 790 - 810 mm	Module width 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	
Dimensions (L / W / H)	1140 mm / 40 mm / 41 mm	1340 mm / 40 mm / 41 mm	3000 mm / 40 mm / 41 mm	6000 mm / 40 mm / 41 mm	
Weight	1.110 kg	1.308 kg	3.000 kg	6.000 kg	
Norms	Wind channel test	Wind channel test	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	
Art. No.	1502824	1502707	1502212	1502711	
					
Model	TRI-STAND universal profile UP-L, 6.200 m, blank aluminium	TRI-STAND universal profile UP, 3.000 m, blank aluminium	TRI-STAND universal profile UP, 6.000 m, blank aluminium	TRI-STAND universal profile UP-S, 3.000 m, blank aluminium	
Application	Flat roof	Flat roof	Flat roof	Flat roof	
Frame thickness	Any	Any	Any	Any	
Module brand	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	
Dimensions (L / W / H)	6200 mm / 40 mm / 41 mm	3000 mm / 40 mm / 41 mm	6000 mm / 40 mm / 41 mm	3000 mm / 70 mm / 41 mm	
Weight	6.200 kg	3.900 kg	7.800 kg	4.800 kg	
Norms	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	

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On-the-Roof System MOUNTING SYSTEMS – COMPONENTS

Art. No.	1502213	1502217	1502245	1502246
				
Model	TRI-STAND universal profile UP-S, 6.000 m, blank aluminium	TRI-STAND universal profile connector UP-C	TRI-STAND cross cable clip block UP-K	TRI-STAND edge clip TS-EC
Application	Flat roof	Flat roof	Flat roof	Flat roof
Frame thickness	Any	Any	Any	Any
Module brand	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm	Module width 790 - 810 mm and 990 - 1010 mm
Dimensions (L / W / H)	6000 mm / 70 mm / 41 mm	120 mm / 51 mm / 41 mm	22 mm / 22 mm / 16 mm	18 mm / 15 mm / 11 mm
Weight	9.600 kg	0.130 kg	0.002 kg	0.001 kg
Norms	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV	IEC 61215 ed. 2 (10.16), TÜV

