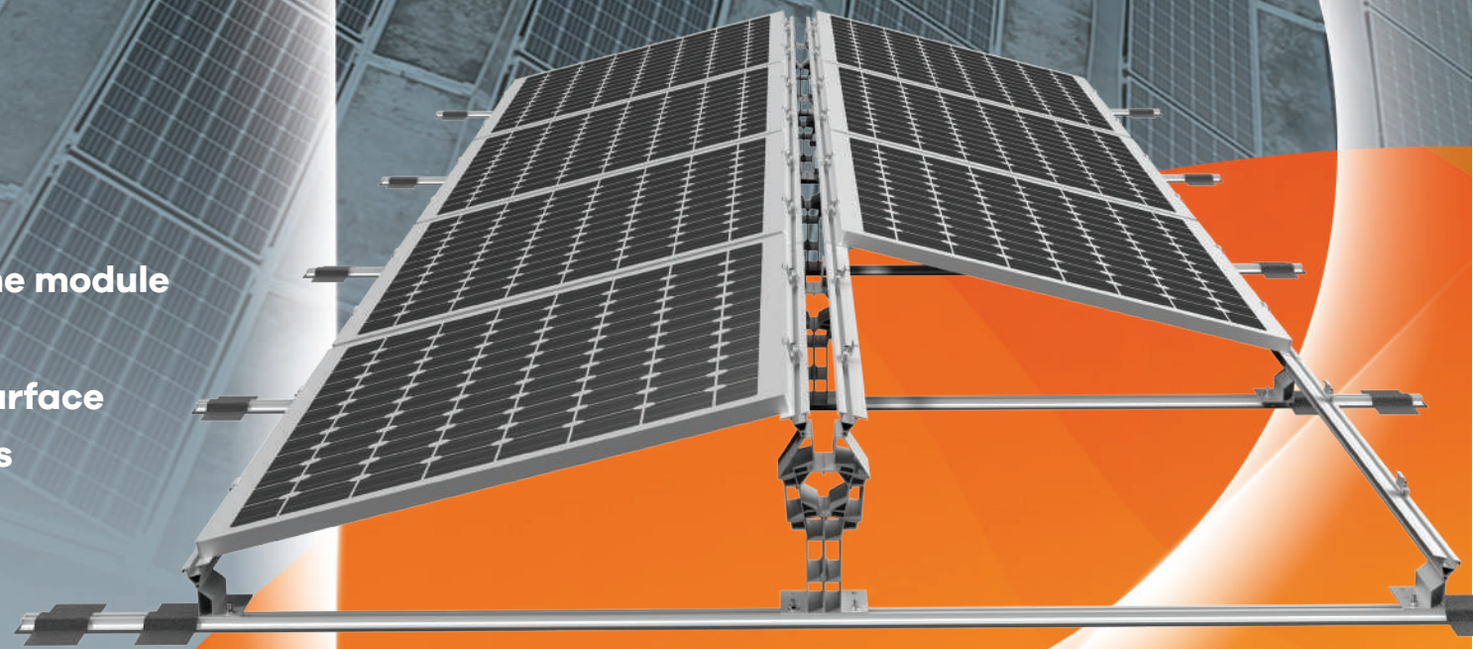
Energy5

AERO S / EW -
increased height
for a flat roof

- an increased distance between the module and the roof surface
- precise adhering to the module surface
- an option for many configurations of the system



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AERO S / EW

Aerodynamic systems on a support of the increased height allow to maintain a **10- centimetre distance between the module frame and the roof surface.** . The systems include individually designed **AERO profiles.** Special connections in profile joints enable **adjusting rotation to ensure precise adhering to the module surface.**

New profiles enable development of systems in many configurations, which are suitable for all modules currently available in the Polish market.

The systems of the increased height for a flat roof ensure better air circulation and protection of cables, thus guaranteeing that **fire-prevention conditions of module manufactures are met.** The systems provide for a safe installation of large modules, along their long or short side alike. However, it should be noted that horizontal installation of large modules along their short side is only possible when the module manufacturer allows that.

The aerodynamic systems from Energy5 guarantee **no interference with the roof decking and very low surface load.** Their specific design, providing for an insular layout and permanent connection of the rows, allows creating a stable construction and prevents occurrence of local overload points.

Specification of the AERO S / AERO EW system - increased height	
Material	aluminium, black steel with Magnelis® coating, stainless steel
Roof type	flat roof
Angle of inclination	AERO S: ~10°,15° AERO EW: ~10°
Module orientation	horizontal
Suitable for bifacial modules	yes
Maximum module dimensions	2400 mm

Available variants

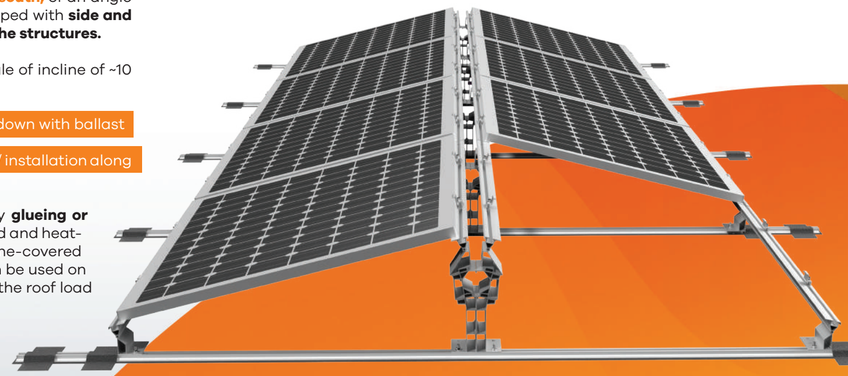
AERO S – – increased height is a system **oriented south,** of an angle of incline of ~10 or ~15 degrees. The system is equipped with **side and back guards, minimising the influence of wind on the structures.**

AERO EW – increased height is a system of an angle of incline of ~10 degree, enabling modules exposure **east and west.**

Fixing method: glueing or heat sealing / weighing down with ballast

Installation system: installation along a short side / installation along a long side

Both systems can be **fixed using two methods,** by **glueing or heat sealing / weighing down with ballast.** The glued and heat-sealed systems are intended solely for membrane-covered roofs, while systems weighed down with ballast can be used on roofs covered by tar paper and membrane - when the roof load bearing capacity is suitable.

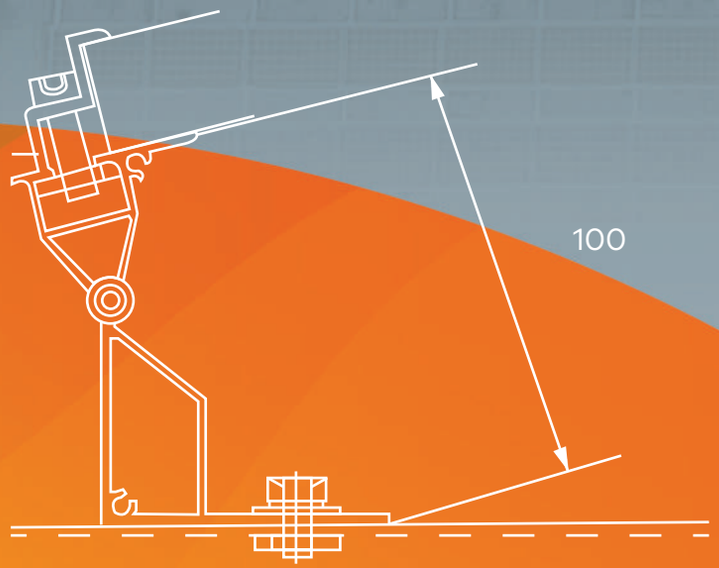


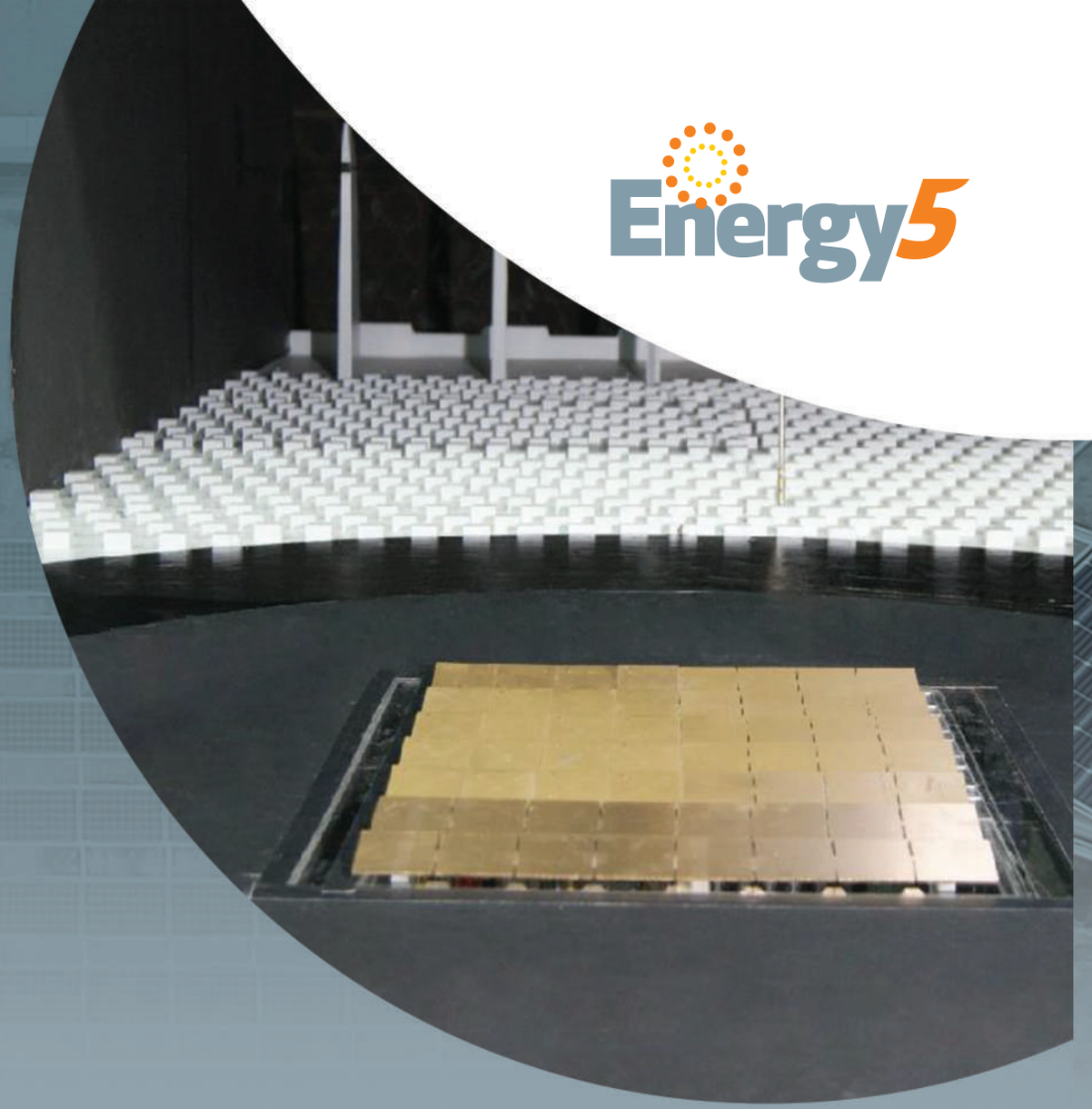
Tests in a wind tunnel

The aerodynamic systems, both in the south and east-west orientation, underwent tests in an independent test laboratory. During the tests in the tunnel, **the actual ratios of aerodynamic resistance were determined** for relevant zones of the roof systems location. All these parameters refer to a given angle of inclination and spacing of the system, and size of modules. The tested system guarantees the safety of use and a long-term smooth operation of the system.

The obtained results **enable selection of the structure in accordance with Eurocodes** for test-supported designs.

Additionally, the system underwent internal tests on a tensile strength machine. The obtained data shows that the load bearing capacity of AERO profiles (without any shift or play related to elastic strains loosening module fixing), is at least 4 kN, i.e., about 400 kg. This means that **load bearing capacity of AERO profiles is twice as high as required standard capacity for loads** caused by snow, wind and module own weight.





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