

Annex to Solar Keymark Certificate	Licence Number	SKM 9999.2.4
Supplementary Information	Issued	2025-05-30

Collector name	Standard Locations						Athens			Davos			Stockholm			Würzburg		
						ϑ_m	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C
AELIOS PLUS							3.422	2.564	1.786	2.673	1.943	1.310	1.954	1.349	874	2.121	1.461	932
AELIOS PLUS HORIZONTAL							3.422	2.564	1.786	2.673	1.943	1.310	1.954	1.349	874	2.121	1.461	932
Gross Thermal Yield per m² gross area							1.258	942	657	983	714	482	718	496	321	780	537	343
Annual efficiency, η_a							71%	53%	37%	60%	44%	30%	62%	43%	28%	63%	43%	28%
Fixed or tracking collector							Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane							1765 kWh/m²			1630 kWh/m²			1166 kWh/m²			1244 kWh/m²		
Mean annual ambient air temperature							18,5°C			3,2°C			7,5°C			9,0°C		
Collector orientation or tracking mode							South, 25°			South, 30°			South, 45°			South, 35°		

The collector is operated at constant temperature ϑ_m (mean of in- and outlet temperatures). The calculation of the annual collector performance is performed with the official Solar Keymark spreadsheet tool Scenocalc Ver. 6.2 (13.01.2022). A detailed description of the calculations is available at <http://www.estif.org/solarkeymarknew/>

Additional Information

Collector heat transfer medium	Water-Glycole
The collector is deemed to be suitable for roof integration	No

The collector was tested successfully under the following conditions:

Climate class (A+, A, B or C)					A	--
G (W/m ²) >	1000	θ _a (°C) >	20	H _x (MJ/m ²) >	600	
Maximum tested positive load					3000	Pa
Maximum tested negative load					3000	Pa
Hail resistance using steel ball (maximum drop height)					2	m

Additional collector attribute(s)

Using external power source(s) for normal operation	No	Active or passive measure(s) for self-protection	No
Co-generating thermal and electrical power	No	Façade collector(s)	No

[illegible]

Data required for CDR (EU) No 811/2013 - Reference Area A_{sol}		Data required for CDR (EU) No 812/2013 - Reference Area A_{sol}		
Collector efficiency (η_{col})	63%	Zero-loss efficiency (η_0)	0,77	--
Remark: Collector efficiency (η_{col}) is defined in CDR (EU) No 811/2013 as collector efficiency of the solar collector at a temperature difference		First-order coefficient (a_1)	3,15	W/(m ² K)
		Second-order coefficient (a_2)	0,012	W/(m ² K ²)
		Incidence angle modifier IAM (50°)	0,96	--

Remark: Collector efficiency (η_{col}) is defined in CDR (EU) No 811/2013 as collector efficiency of the solar collector at a temperature difference between the solar collector and the surrounding air of 40 K and a global solar irradiance of 1000 W/m², expressed in % and rounded to the nearest integer. Deviating from the regulation η_{col} is based on reference area (A_{sol}) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806:2017.

Remark: The data given in this section are related to collector reference area (A_{sol}) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806. Consistent data sets for either aperture or gross area can be used in calculations like in the regulation 811 and 812 and simulation programs.