



Annex to Solar Keymark Certificate	Licence Number	SKM 9999.1.24
Supplementary Information	Issued	2025-06-10

Gross Thermal Yield in kWh/collector at mean fluid temperature ϑ_m

Collector name	Standard Locations		Athens			Davos			Stockholm			Würzburg		
	ufficioacq	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
SUNCOLL 1.50			1.848	1.320	859	1.405	970	605	1.034	675	405	1.125	731	431
SUNCOLL 1.50H			1.848	1.320	859	1.405	970	605	1.034	675	405	1.125	731	431
SUNCOLL 1.82			2.243	1.601	1.042	1.705	1.177	734	1.254	819	491	1.365	886	523
SUNCOLL 1.82H			2.243	1.601	1.042	1.705	1.177	734	1.254	819	491	1.365	886	523
SUNCOLL 2.00			2.464	1.759	1.145	1.874	1.293	806	1.379	900	540	1.500	974	575
SUNCOLL 2.00H			2.464	1.759	1.145	1.874	1.293	806	1.379	900	540	1.500	974	575
SUNCOLL 2.37			2.920	2.085	1.357	2.221	1.532	955	1.634	1.066	639	1.778	1.154	682
SUNCOLL 2.37H			2.920	2.085	1.357	2.221	1.532	955	1.634	1.066	639	1.778	1.154	682
SUNCOLL 2.72			3.352	2.393	1.558	2.549	1.759	1.097	1.875	1.223	734	2.040	1.325	782
SUNCOLL 2.72H			3.352	2.393	1.558	2.549	1.759	1.097	1.875	1.223	734	2.040	1.325	782

Gross Thermal Yield per m ² gross area	1.232	880	573	937	647	403	689	450	270	750	487	288
Annual efficiency, η_a	70%	50%	32%	57%	40%	25%	59%	39%	23%	60%	39%	23%

Fixed or tracking collector	Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane	1765 kWh/m ²			1630 kWh/m ²			1166 kWh/m ²			1244 kWh/m ²		
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

Energy Labelling Information		Additional Informative Technical Data	
	Reference Area, A_{sol} (m ²)	Hydraulic Designation Code	Aperture Area, A_a (m ²)
SUNCOLL 1.50	1,50	9-V-1234S-A:7.2,1380-C:20.6,1080-D	1,38
SUNCOLL 1.50H	1,50	14-V-1234S-A:7.2,908-C:20.6,1560-D	1,38
SUNCOLL 1.82	1,82	11-V-1234S-A:7.2,1378-C:20.6,1300-D	1,72
SUNCOLL 1.82H	1,82	14-V-1234S-A:7.2,1128-C:20.6,1560-D	1,72
SUNCOLL 2.00	2,00	9-V-1234S-A:7.2,1878-C:20.6,1080-D	1,86
SUNCOLL 2.00H	2,00	18-V-1234S-A:7.2,908-C:20.6,2060-D	1,86
SUNCOLL 2.37	2,37	11-V-1234S-A:7.2,1828-C:20.6,1300-D	2,23
SUNCOLL 2.37H	2,37	18-V-1234S-A:7.2,1128-C:20.6,2010-D	2,23
SUNCOLL 2.72	2,72	11-V-1234S-A:7.2,2060-C:20.6,1320-D	2,57
SUNCOLL 2.72H	2,72	18-V-1234S-A:7.2,1158-C:20.6,2240-D	2,57

Data required for CDR (EU) No 811/2013 - Reference Area A_{sol}

Collector efficiency (η_{col})	60%	Zero-loss efficiency (η_0)	0,76	--
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)	3,59	W/(m²K)
		Second-order coefficient (a_2)	0,014	W/(m²K²)
		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.