

Annex to Solar Keymark Certificate							Licence Number		011-7S3210 F						
Supplementary Information							Issued		2023-10-04						
Gross Thermal Yield in kWh/collector at mean fluid temperature ϑ_m															
Standard Locations		Athens			Davos			Stockholm			Würzburg				
Collector name	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		
RK2001 Mediterano		2'381	1'645	1'023	1'775	1'179	695	1'310	823	468	1'436	895	502		
RK2300 Mediterano		2'758	1'905	1'185	2'056	1'366	805	1'518	953	543	1'663	1'037	581		
Gross Thermal Yield per m ² gross area		1'179	814	506	879	584	344	649	407	232	711	443	248		
Annual efficiency, η_a		67%	46%	29%	54%	36%	21%	56%	35%	20%	57%	36%	20%		
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											Yes				
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											2500		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															
	Reference Area, A_{sol} (m ²)														
RK2001 Mediterano	2.02														
RK2300 Mediterano	2.34														
Data required for CDR (EU) No 811/2013 - Reference Area															
Collector efficiency (η_{col})															
55%															
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/m ² , 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.															
Data required for CDR (EU) No 812/2013 - Reference Area A_{sol}															
Zero-loss efficiency (η_0)															
0.72															
First-order coefficient (a_1)															
3.81															
Second-order coefficient (a_2)															
0.013															
Incidence angle modifier IAM (50°)															
0.98															
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.															
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