



Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Certificate No.	011-7 S1395 F
	Issued	31-05-2013

Annual collector output kWh														
Collector name	Location and collector temperature (T _m)													
	Athens			Davos			Stockholm			Würzburg				
	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C		
SRD 2.3	2 851	1 993	1 289	2 298	1 558	969	1 578	1 019	615	1 715	1 094	650		
SRDV 2.3	2 851	1 993	1 289	2 298	1 558	969	1 578	1 019	615	1 715	1 094	650		
SRD 2.3 H	2 851	1 993	1 289	2 298	1 558	969	1 578	1 019	615	1 715	1 094	650		
SRD 2.3 V	2 851	1 993	1 289	2 298	1 558	969	1 578	1 019	615	1 715	1 094	650		

Collector mounting: Fixed or tracking	Fixed; slope = latitude - 15° (rounded to nearest 5°)
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Overview of locations				
Location	Latitude °	G _{tot} kWh/m ²	T _a °C	Collector orientation or tracking mode
Athens	38	1 765	18.5	South, 25°
Davos	47	1 714	3.2	South, 30°
Stockholm	59	1 166	7.5	South, 45°
Würzburg	50	1 244	9.0	South, 35°

G _{tot}	Annual total irradiation on collector plane	kWh/m ²
T _a	Mean annual ambient air temperature	°C
T _m	Constant collector operating temperature (mean of in- and outlet temperatures)	°C

Calculation of the annual collector performance is done by the official Solar Keymark spreadsheet tool. Hour by hour the collector output is calculated according to the efficiency parameters from the Keymark test using constant collector operating temperature (T_m). Detailed description with all equations used is available from the Solar Keymark web site (direct link:<http://www.estif.org/solarkeymark/annexb1.php>)

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