



Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Certificate No.	011-7S 978 R
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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	
JNSC15-58/1800	1 630	1 386	1 128	1 436	1 195	946	989	794	610	1 080	870	670	
JNSC18-58/1800	1 952	1 659	1 351	1 719	1 431	1 132	1 184	950	730	1 293	1 042	802	
JNSC20-58/1800	2 170	1 844	1 502	1 911	1 591	1 258	1 316	1 056	811	1 437	1 158	891	
JNSC24-58/1800	2 721	2 312	1 883	2 397	1 995	1 578	1 651	1 324	1 017	1 802	1 452	1 118	
JNSC30-58/1800	3 260	2 771	2 256	2 872	2 391	1 891	1 978	1 587	1 219	2 160	1 740	1 339	

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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