



Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Licence Number	011-7S2323 R
	Issued	6/15/2015

Annual collector output kWh/module												
Collector name	Location and collector temperature (Tm)											
	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
ETC-30	3 623	3 071	2 499	3 069	2 539	2 028	2 143	1 710	1 311	2 363	1 898	1 457
ETC-22	2 653	2 249	1 830	2 247	1 860	1 485	1 570	1 253	960	1 731	1 390	1 067
ETC-20	2 411	2 044	1 663	2 042	1 690	1 350	1 426	1 138	873	1 573	1 263	970
ETC-18	2 168	1 839	1 496	1 837	1 520	1 214	1 283	1 024	785	1 415	1 136	872
ETC-10	1 199	1 017	827	1 016	840	671	709	566	434	782	628	482

Collector mounting: Fixed or tracking Fixed; slope = latitude - 15° (rounded to nearest 5°)

Overview of locations				
Location	Latitude °	Gtot kWh/m ²	Ta °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°

Gtot	Annual total irradiation on collector plane	kWh/m ²
Ta	Mean annual ambient air temperature	°C
Tm	Constant collector operating temperature (mean of in- and outlet temperatures)	°C

The calculation of the annual collector performance is performed with the official Solar Keymark spreadsheet tool ScenoCalc. The collector output is calculated hour by hour according to the efficiency parameters from the Keymark test using constant collector operating temperature (Tm). A detailed description of the calculations is available at <http://www.sp.se/en/index/services/solar/ScenoCalc/Sidor/default.aspx>.

DIN CERTCO • Alboinstraße 56 • 12103 Berlin Tel: +49 30 7562-1131 • Fax: +49 30 7562-1141 • E-Mail: info@dincertco.de • www.dincertco.de	Datasheet version:
	4.04, 2013-04-22
	ScenoCalc version:
	Ver. 4.04 (Jun, 2013)