



CERTIFIKAT

Solar Keymark Certificate No. SP SC0501-14

Holder/Issued to

Company: solardirekt24 gmbh
Address: Spiesheimerweg 22, D - 55286 Woerrstadt, Germany

Product name and description

Flat plate thermal solar collector for water heating. For technical information see Appendix.

Models:	EUROTHERM SOLAR PRO CPC 8R	EUROTHERM SOLAR PRO CPC 12R
	EUROTHERM SOLAR PRO CPC 16R	EUROTHERM SOLAR PRO CPC 20R
	EUROTHERM SOLAR PRO CPC 24R	

Certificate

The product mentioned above is found to comply with requirements in EN 12975-1:2006+A1:2010 and the Specific CEN Keymark Scheme Rules for Solar Thermal Products, and are based on test results according to EN 12975-2:2006.

Marking

Products conforming to this certificate shall be marked in accordance with the requirements in the Specific CEN Keymark Scheme Rules for Solar Thermal Products. The marking shall, together with the Keymark logo, show the identification code of the empowered certification body (SP Technical Research Institute of Sweden, No. 012), also see CEN-CENELEC Internal Regulations Part 4 Certification, Annex A.

Validity

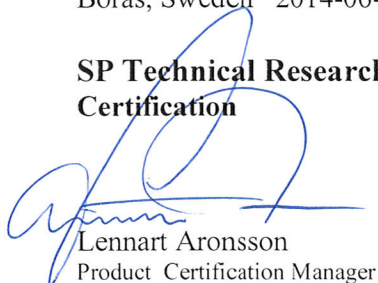
This certificate is valid until 2019-01-20 provided that the conditions in the Solar Keymark Rules are fulfilled and the standard or rules are not modified significantly. The validity of the certificate can be checked in the database, see Solar Keymark website <http://www.solarkeymark.org>

Miscellaneous

The manufacturer's factory production control procedures are under surveillance by the responsibility of SP. This is the first version of this certificate.

Borås, Sweden 2014-06-16

SP Technical Research Institute of Sweden Certification


Lennart Aronsson
Product Certification Manager


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Certification Officer



SP Technical Research Institute of Sweden

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Empowered Certification Body No. 012: SP Certification, Sweden
For more information of Solar Keymark visit: www.solarkeymar.org
This certificate may not be reproduced other than in full, except with the prior written approval by SP.

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Annex to Solar Keymark Certificate

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Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Licence Number	SP SC0501-14
	Issued	2014-06-16

Annual collector output kWh/module													
Collector name: EUROTHERM SOLAR PRO:	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	
CPC 8R	1 598	1 372	1 147	1 345	1 134	937	969	793	637	1 043	855	683	
CPC 12R	2 450	2 103	1 759	2 062	1 739	1 436	1 486	1 217	976	1 599	1 311	1 047	
CPC 16R	3 303	2 835	2 371	2 780	2 344	1 936	2 002	1 640	1 316	2 155	1 767	1 411	
CPC 20R	4 155	3 567	2 983	3 497	2 949	2 436	2 519	2 063	1 655	2 712	2 223	1 775	
CPC 24R	5 007	4 298	3 595	4 215	3 554	2 935	3 036	2 486	1 995	3 268	2 679	2 139	

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

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 (T_m). A detailed description of the calculations is available at <http://www.sp.se/en/index/services/solar/ScenoCalc/Sidor/default.aspx>.

SP Technical Research Institute of Sweden Box 857, 501 15 Borås, Sweden	Datasheet version:
	4.06, 2014-01-15
	ScenoCalc version:
	Ver. 4.06 (Jan, 2014)