Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate				Licence Number	011-7S533F
				Issued	2015-04-15

Company holding the	SE-System GmbH		Country	Deutschland	
Brand (optional)			Website	www.se-system.de	
Street, street number	Haardter Weg 1-3		E-mail	info@se-system.de	
Postal Code / City, province	D-66663	Merzig-Schwemlingen	Tel/Fax	49	6861 939 29 30

Collector Type (flat plate glazed/un-glazed; evacuate tubular)	Flat plate collector - glazed
Thermal / photo voltaic hybid collector? (PVT collector)	No
Integration in the roof possible ? (manufacturers declaration)	No

Collector name	Aperture area (Aa)	Gross length	Gross width	Gross height	Gross area (AG)	Power output per collector module G = 1000 W/m² Tm-Ta 0 K	10 K	30 K	50 K	70 K
	m²	mm	mm	mm	**m²**	W	W	W	W	W
SEKOT 3	3.03	1 224	2 773	116	**3.39**	2 323	2 199	1 940	1 669	1 386
SEKOT 4	4.05	1 226	3 642	116	**4.47**	3 098	2 932	2 588	2 226	1 849
SEKOT 5	5.04	1 226	4 651	116	**5.70**	3 858	3 651	3 222	2 773	2 302

Performance test method	Glazed liquid heating collector - steady state - outdoor									
Performance parameters related to aperture area	η0	a1	a2							
Units	-	W/(m²K)	W/(m²K²)							
Test results - Flow rate and fluid see note 1	0.766	4.056	0.005							

Bi-directional incidence angle modifiers?	No	*Kϑ values are obligatory for 50°.*									
Incidence angle modifiers Kθ(θ)	Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
	Kθ(θ)					0.91				0.00
Incidence angle modifier not bi-directional - leave fields blank										

Stagnation temperature - Weather conditions see note 2	Tstg	215	°C
Effective thermal capacity	ceff = C/Ag	5.579	kJ/(m²K)
Max. intende operation temperature - see note 3	Tmax,op	k.A.	°C
Max. operation pressure - see note 3	pmax,op	1000	kPa

Pressure drop table - for a collector family, the values shall be for the module with highest ΔP per m² aperture area											
Flow rate	kg/(s m²)										
Pressure drop, ΔP	Pa										

Optional weather data	Location		Link
Testing Laboratory	TZSB der IZES gGmbH		
Website	www.izes.de/tzsb/		
Test report id. number	KT08_08; KT08_09	Date of test report	2008-09-26, 2008-09-29

During the test GDIF/GTOT was always between	0.12	and	0.21

Comments of testing laboratory:

Reissue of the data sheet with additional enery output calculation

Note 1	**Flow rate**	0.019	kg/(s m²)	**Fluid**	Water
Note 2	**Irradiance, G = 1000 W/m²; Ambient temperature , Ta=30 °C**				
Note 3	**Given by manufacturer**				

Datasheet version: 4.06, 2014-01-15

Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Licence Number	011-7S533F
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Annual collector output kWh/module

	Location and collector temperature (Tm)											
	Athens			Davos			Stockholm			Würzburg		
Collector name	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C
SEKOT 3	3 592	2 496	1 638	2 688	1 848	1 196	1 978	1 278	791	2 150	1 371	835
SEKOT 4	4 791	3 329	2 184	3 585	2 465	1 596	2 638	1 705	1 055	2 867	1 829	1 114
SEKOT 5	5 966	4 145	2 720	4 465	3 069	1 987	3 285	2 123	1 314	3 570	2 278	1 388

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

Overview of locations

Location	Latitude °	Gtot kWh/m²	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/m²
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.