



Certification body
empowered by CEN n°016

KEYMARK LICENSE
CERTIFICAT
SK 0006



SOLAR THERMAL PRODUCTS
PRODUITS SOLAIRES THERMIQUES

Granted to / Délivré à

SONNENKRAFT FRANCE
16, rue de Saint Exupéry – ZA de l'Aérodrome
67 500 HAGUENAU

For the following products / Pour les produits suivants

DOMESTIC SOLAR WATER HEATERS
CHAUFFE-EAU SOLAIRES INDIVIDUELS

SONNENKRAFT – COMPACT E & SKR 500

(References and characteristics given in attached appendix / Références et caractéristiques données en annexe)

Manufactured in the production plant / Fabriqués dans le(s) site(s) :

SANKT VEIT AN DER GLAN (AUTRICHE)

This certificate is issued by CERTITA according to the specific CEN Keymark Scheme Rules for Solar Thermal Products in respect of the following standard(s):

EN 12 976-1

It authorizes the licensee to use the Keymark for the listed products.

Ce certificat est délivré par CERTITA dans les conditions fixées par le référentiel de certification Keymark s'appliquant aux produits solaires thermiques et en référence à la (aux) norme(s) ci-dessous :

EN 12 976-1.

Il autorise l'entreprise à utiliser la Keymark pour les produits visés.

Effective date : 2013-04-19
Date de début de validité

Expiry date : 2013-12-31
Date de fin de validité

Issued at Courbevoie, on 2013-04-19

For CERTITA

François-Xavier BALL
Président

Certificate n° SK 0006

CERTITA S.A.S. Société par actions simplifiée au capital de 40 000 € - 513 133 637 RCS Nanterre – www.certita.fr
39-41, rue Louis Blanc – 92400 COURBEVOIE – Téléphone +33 (0)1 47 17 64 85 – Télécopie +33 (0)1 47 17 62 45

CERTITA 09/2012

Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate				Certification No.		SK 0006					
				Issued		2013-04-19					
Company	SONNENKRAFT France			Country	France						
Street	16, rue de Saint Exupéry – ZA de l'Aérodrome			Website	www.sonnenkraft.fr						
Postal Code	67500	HAGUENAU (France)		E-mail	france@sonnenkraft.com						
				Tel. / Fax	00 33 (0)3 90 59 05 20						
System family overview											
For each storage and collector size, give number of collectors											
Collector name	DHW 300 – PR2		DHW 400 – PR2								
SKR 500	2		2	3							
Name of system configuration				CPE300PR2/R2-O							
Collector name	SKR 500	No. Collectors	2	Storage name	DHW 300 – PR2						
Calculated annual results											
Location Standort Sites	Daily draw-off (litres/day)										
	170	200	250	170	200	250	170	200	250		
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d		
	Qd kWh/y			Qaux,net kWh/y			Qpar kWh/y				
Stockholm SE	2 637	3 101	3 872	1 200	1 323	1 454	104	104	104		
Würzburg DE	2 532	2 970	3 714	1 025	1 156	1 279	104	104	104		
Davos CH	2 856	3 364	4 205	606	733	946	104	104	104		
Athens GR	1 962	2 313	2 891	315	391	489	104	104	104		
Nice FR	2 006	2 365	2 952	287	365	477	104	104	104		
Perf. indicators for the table above											
Qd	kWh/y	Heat demand									
Qaux,net	kWh/y	Auxiliary heat (back-up heat needed)									
Qpar	kWh/y	Electricity for pumps/controllers									
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR	Nice FR					
	G	1 157	1 230	1 684	1 718	1 735					
	Ta	7,5	9,0	3,2	18,5	15,3					
	Tc	8,5	10,0	5,4	17,8	17,2					
	± ΔTc	6,4	3,0	0,8	7,4	7,4					
G	kWh/m ²	Annual irradiation South, 45°									
Ta	°C	Annual mean air temperature									
Tc	°C	Annual mean cold water temp.									
ΔTc	°C	Seasonal variation of Tc									
Th	45 °C	Desired hot water temperature (mixing valve temperature).									
Max. operating press. - collector side				1 000	kPa	Max. operating press. - tank side				1 000	kPa
Testing Laboratory				BELENOS							
Website				www.belenos.pro							
Test report id. number				R11L1009/002, R11L1009/004, R11L1009/007, R11L1009/008							
Date of test report				21/12/2012, 21/12/2012, 10/04/2013, 10/04/2013							
Test method				ISO 9459-5 (DST)							
Comments of test lab											
No comment											
Centre d'Essais de recherche Solaire belenos 190 rue Georges Besse 30000 NIMES Tél. 04 66 38 89 25 - Fax 04 66 04 03 87 Sirat 512 914 292 0001 RCS Nîmes - NAF 7490B											

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ±5 % to ±15 %

Version 2.3, 2013-03-04

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CERTITA 04/2013

Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate					Certification No.		SK 0006		
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Street		16, rue de Saint Exupéry – ZA de l'Aérodrome			Website		www.sonnenkraft.fr		
Postal Code		67500	HAGUENAU (France)		E-mail		france@sonnenkraft.com		
					Tel. / Fax		00 33 (0)3 90 59 05 20		
System family overview									
For each storage and collector size, give number of collectors									
Collector name	DHW 300 – PR2		DHW 400 – PR2						
SKR 500	2		2	3					
					Name of system configuration		CPE400PR2/R2-O		
Collector name		SKR 500	No. Collectors		2	Storage name		DHW 400 – PR2	
Calculated annual results									
Location Standort Sites	Daily draw-off (litres/day)								
	200			250			300		
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Qd kWh/y			Qaux,net kWh/y			Qpar kWh/y		
Stockholm SE	3 101	3 872	4 652	1 428	1 822	2 032	104	104	104
Würzburg DE	2 532	3 714	4 459	1 025	1 568	1 778	104	104	104
Davos CH	3 364	4 205	5 046	675	990	1 261	104	104	104
Athens GR	2 313	2 891	3 469	354	504	649	104	104	104
Nice FR	2 365	2 952	3 539	313	463	619	104	104	104
Perf. indicators for the table above									
Qd	kWh/y	Heat demand							
Qaux,net	kWh/y	Auxiliary heat (back-up heat needed)							
Qpar	kWh/y	Electricity for pumps/controllers							
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR	Nice FR			
	G	1 157	1 230	1 684	1 718	1 735			
	Ta	7,5	9,0	3,2	18,5	15,3			
	Tc	8,5	10,0	5,4	17,8	17,2			
	± ΔTc	6,4	3,0	0,8	7,4	7,4			
G	kWh/m ²	Annual irradiation South, 45°							
Ta	°C	Annual mean air temperature							
Tc	°C	Annual mean cold water temp.							
ΔTc	°C	Seasonal variation of Tc							
Th	45 °C	Desired hot water temperature (mixing valve temperature).							
Max. operating press. - collector side			1 000 kPa		Max. operating press. - tank side			1 000 kPa	
Testing Laboratory			BELENOS						
Website			www.belenos.pro						
Test report id. number			R11L1009/002, R11L1009/004, R11L1009/007, R11L1009/008						
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Comments of test lab									
No comment			<p>Centre d'Essais et de recherche Solaire belenos 190 rue Georges Besse 30000 NIMES Tél. 04 66 38 89 25 - Fax 04 66 04 03 87 Siret 512 914 292 00018 - RCS Nîmes - NAF 7490B</p>						

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System family overview											
For each storage and collector size, give number of collectors											
Collector name	DHW 300 – PR2		DHW 400 – PR2								
SKR 500	2		2	3							
Name of system configuration											
				CPE400PR2/R3-O							
Collector name	SKR 500		No. Collectors	3		Storage name	DHW 400 – PR2				
Calculated annual results											
Location Standort Sites	Daily draw-off (litres/day)										
	200			250			300				
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d		
	Qd kWh/y			Qaux,net kWh/y			Qpar kWh/y				
Stockholm SE	3 101	3 872	4 652	1 156	1 480	1 638	104	104	104		
Würzburg DE	2 532	3 714	4 459	1 025	1 261	1 419	104	104	104		
Davos CH	3 364	4 205	5 046	340	520	682	104	104	104		
Athens GR	2 313	2 891	3 469	172	252	339	104	104	104		
Nice FR	2 365	2 952	3 539	128	198	278	104	104	104		
Perf. indicators for the table above											
Qd	kWh/y	Heat demand									
Qaux,net	kWh/y	Auxiliary heat (back-up heat needed)									
Qpar	kWh/y	Electricity for pumps/controllers									
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR	Nice FR					
	G	1 157	1 230	1 684	1 718	1 735					
	Ta	7,5	9,0	3,2	18,5	15,3					
	Tc	8,5	10,0	5,4	17,8	17,2					
	± ΔTc	6,4	3,0	0,8	7,4	7,4					
G	kWh/m ²	Annual irradiation South, 45°									
Ta	°C	Annual mean air temperature									
Tc	°C	Annual mean cold water temp.									
ΔTc	°C	Seasonal variation of Tc									
Th	45 °C	Desired hot water temperature (mixing valve temperature).									
Max. operating press. - collector side				1 000	kPa	Max. operating press. - tank side				1 000	kPa
Testing Laboratory				BELENOS							
Website				www.belenos.pro							
Test report id. number				R11L1009/002, R11L1009/004, R11L1009/007, R11L1009/008							
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Test method				ISO 9459-5 (DST)							
Comments of test lab											
No comment											
<div style="text-align: right;"> <p>Centre d'Essais et de recherche Solaire belenos 190 rue Georges Besse 30000 NIMES Tél. 04 66 38 89 25 - Fax 04 66 04 03 87 Siret 512 914 292 00055 RCS Nîmes - NAF 7490B</p> </div>											

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