

Solar Keymark « Capteurs Solaires »

Paris, le 07 janvier 2016

HELIOFRANCE

2862, route de Toulouse 31370 Berat

A l'attention de M. Mykieta

Réf courrier : SOLAR KEYMARK - 2016/01/002

Monsieur,

En tant qu'organisme de certification sous licence du CEN pour délivrer la marque Solar Keymark nous faisons suite à vos demandes d'admission du 27/04/2015 relatif aux produits fabriqués dans l'usine de Berat sous référence suivantes :

- COPERNIC H272.12-N-AR/ H272.12-AR
- COPERNIC V272.12-N-AR/ V272.12-AR
- COPERNIC H232.12-N-AR/ H232.12-AR
- COPERNIC V232.12-N-AR/ V232.12-AR

Compte tenu :

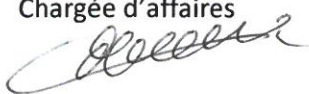
- Du certificat délivré par l'organisme ICM n°106BN/0 et du rapport d'essai associé N. 296464 réalisé par l'Institut Giordano
- Des rapports d'essais n° VAL 14-26049352 et n° VAL 15-26058137/A du CSTB.
- Des conclusions de l'audit du 23 et 24 avril 2015 sur le site de Berat
- Des actions correctives reçue le 20 juillet 2015 et validées le 21 juillet 2015

Nous vous notifions l'admission à la marque Solar Keymark des produits précités et vous communiquons ci-joints les certificats suivants :

Nom du produit	Marque commerciale	Numéro de certificat	Date de validité
COPERNIC H272 / V272 / H232 / V232	Heliofrance	SK 0010	31/10/2019

Veuillez recevoir, Monsieur, nos sincères salutations.

Fadila Meraane
Chargée d'affaires



PJ : 1 certificat

Sophie BOCQUILLON
Chef de pôle





SOLAR THERMAL PRODUCTS
PRODUCTS SOLAIRES THERMIQUES

Granted to / Délivré à

HELIOFRANCE

2862, route de Toulouse
31370 Berat

For the following products / Pour les produits suivants

SOLAR COLLECTOR
CAPTEURS SOLAIRES

COPERNIC H272 / V272 / H232 / V232

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

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

31370 Berat (FRANCE)

This certificate is issued by EUROVENT CERTITA CERTIFICATION according to the specific CEN Keymark Scheme Rules for Solar Thermal Products in respect of the following current standard(s):
EN 12 976-1

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

Ce certificat est délivré par EUROVENT CERTITA CERTIFICATION 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 en vigueur.

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

Effective date : 07-01-2016
Date de début de validité : 2016, January 07th

Expiry date : 31-10-2019
Date de fin de validité 2019, October 31th

Certificate n° SK 0010

Etabli à Paris, le 07 Janvier 2016

For EUROVENT CERTITA CERTIFICATION


Le Directeur Général

François-Xavier BALL

Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate						Licence Number		SK-0010		
						Issued		2015-10-26		
Company holding the		HELIOFRANCE				Country		France		
Brand (optional)		COPERNIC H272 / V272 / H232 / V232				Website		www.heliofrance.com		
Street, street number		2862 Route de Toulouse				E-mail		mykieta@heliofrance.com		
Postal Code / City, province		31370 Bérat				Tel/Fax		33 561 444 689 -1		
Collector Type (flat plate glazed/un-glazed; evacuate tubular)						Flat plate collector - glazed				
Thermal / photo voltaic hybrid collector? (PVT collector)						No				
Integration in the roof possible ? (manufacturers declaration)						No				
Collector name	Aperture area (Aa) m ²	Gross length mm	Gross width mm	Gross height mm	Gross area (AG) m ²	Power output per collector module				
						G = 1000 W/m²				
						Tm-Ta				
						0 K	10 K	30 K	50 K	70 K
						W	W	W	W	W
COPERNIC H272.12-N-AR	2,60	2 192	90	1 241	2,72	1 994	1 871	1 618	1 355	1 082
COPERNIC H272.12-AR	2,60	2 192	90	1 241	2,72	1 994	1 871	1 618	1 355	1 082
COPERNIC V272.12-N-AR	2,60	1 241	90	2 192	2,72	1 994	1 871	1 618	1 355	1 082
COPERNIC V272.12-AR	2,60	1 241	90	2 192	2,72	1 994	1 871	1 618	1 355	1 082
COPERNIC H232.12-N-AR	2,30	1 870	90	1 241	2,32	1 764	1 655	1 431	1 199	957
COPERNIC H232.12-AR	2,30	1 870	90	1 241	2,32	1 764	1 655	1 431	1 199	957
COPERNIC V232.12-N-AR	2,30	1 241	90	1 870	2,32	1 764	1 655	1 431	1 199	957
COPERNIC V232.12-AR	2,30	1 241	90	1 870	2,32	1 764	1 655	1 431	1 199	957
Performance test method						Glazed liquid heating collector - steady state - outdoor				
Performance parameters related to aperture		η_0	a1	a2						
Units		-	W/(m ² K)	W/(m ² K ²)						
Test results - Flow rate and fluid see note 1		0,774	4,729	0,005						
Bi-directional incidence angle		No								
Incidence angle modifiers Kθ(θ)		<i>Kθ values are obligatory for 50°.</i>								
Angle		10°	20°	30°	40°	50°	60°	70°	80°	90°
Kθ(θ)						0,97				0,00
Incidence angle modifier not bi-directional - leave fields blank										
Stagnation temperature - Weather conditions see note 2						Tstg	185	°C		
Effective thermal capacity						ceff = C/Ag	8,9	kJ/(m²K)		
Max. intended operation temperature - see note 3						Tmax,op	200	°C		
Max. operation pressure - see note 3						pmax,op	600	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 m ²)	0,004	0,006	0,011	0,015	0,019				
Pressure drop, ΔP	Pa	18	41	114	224	370				
Optional weather data		Location			Link					
Testing Laboratory		CSTB/Instituto Giordano								
Website		http://www.cstb.fr / www.giodano.it								
Test report id. number		N° VAL 14-26049352 / N°296464/				Date of test report		24/10/2015 16/07/2012		
During the test GDIF/GTOT was always between		0,1	and	0,2						
Comments of testing laboratory:										
The Company HelioFrance has changed her certification body from ICIM to Eurovent Certita Certification. This certificate is established with the previous results used for the certification of the range COPERNIC H272 / V272 / H232 / V232 (report N°296464).										
Note 1	Flow rate	0,019	kg/(s m ²)	Fluid	Water					
Note 2	Irradiance, G = 1000 W/m²; Ambient temperature, Ta=30 °C									
Note 3	Given by manufacturer									
Date sheet version: 4.06 2014-01-15										
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Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Licence Number	SK-0010
	Issued	26/10/2015

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
COPERNIC H272.12-N-AR	3 275	2 195	1 368	2 383	1 565	948	1 779	1 089	630	1 942	1 179	671
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Collector mounting: Fixed or tracking	Fixed; slope = latitude - 15° (rounded to nearest 5°)
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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>.

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	ScenoCalc version: Ver. 4.06 (Jan, 2014)

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Test results - Flow rate and fluid see note 1						0,774	4,729	0,005							
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Incidence angle modifiers K θ (θ)						Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
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Note 1	Flow rate	0,019 kg/(s m ²)	Fluid	Water											
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	ScenoCalc version: Ver. 4.06 (Jan, 2014)