



MESCOLI
C A L D A I E D A L 1 9 6 2

CONFORMITÀ AI REQUISITI
D.M. 16 FEBBRAIO 2016 (CONTO TERMICO 2.0) ED
ALLEGATO IV DEL DECRETO LEGISLATIVO 8 NOVEMBRE 2021, N. 199 PUBBLICATO IN
GAZZETTA UFFICIALE IL 30 NOVEMBRE 2021.

La sottoscritta Società, rivenditrice in Italia dei collettori solari della ditta
"GASOKOL GmbH - Austria" attesta che i seguenti modelli di collettori solari:

• **GEVOSOL 23**

Rispondono ai requisiti minimi richiesti per l'accesso all'incentivo riportati nelle Regole Applicative del D.M. 16/02/2016 al capitolo 5, paragrafo 10.2.

Rispondono inoltre ai requisiti riportati nell' Allegato IV del Decreto Legislativo 8 novembre 2021, n. 199 pubblicato in Gazzetta Ufficiale il 30 novembre 2021 per l'ottenimento alla detrazione di imposta e tutti gli incentivi previsti dalla Normativa.

Più precisamente:

- i collettori solari sono in possesso della certificazione Solar Keymark (vedere certificato in allegato n. **011-7S2846 F**);
- i collettori solari hanno valori di producibilità specifica, espressa in termini di energia solare annua prodotta per unità di superficie lorda A_G calcolata a partire dal dato contenuto nella certificazione Solar Keymark per una temperatura media di funzionamento di 50°C, **superiore a 300 kWh/m² anno, con riferimento alla località Würzburg** (vedere risultati test in allegato n. **011-7S2846 F** secondo EN ISO 9806).

Valori di energia solare annua prodotta per singolo collettore riferita a Würzburg:

MODELLO COLLETTORE	SUPERFICIE LORDA A_G [m ²]	ENERGIA TERMICA ANNUA Q_{col} [kWh]	ENERGIA SOLARE ANNUA PER UNITÀ DI SUPERFICIE LORDA Q_u [kWh/m ²]
GEVOSOL 23	2,25	1.035	460

- I collettori solari, e le serie di bollitori e puffer sotto elencate hanno garanzia 5 anni solo in abbinamento a sistemi solari:
 - Bollitori per A.C.S. serie FIX, FAR, FAT, VAT e VSS;
 - Puffer serie GEA e PS;
 - Puffer combinati per A.C.S. serie TRIGENIO, TRIGENIO B e GAMMA.
- Accessori e componenti elettrici/elettronici sono garantiti 2 anni.

Vignola, lì 20 giugno 2022

MESCOLI CALDAIE SRL

Il Legale Rappresentante
Mescoli Dott. Ing. Gianni

MESCOLI CALDAIE S R L - 41058 Vignola (MO) ITALY - Via del Commercio, 285
Tel + 39 059 772733 - E-mail: info@mescolicaldaie.it - Web: www.mescolicaldaie.it

C.F. e P.IVA : 02147410365 - CCIAA 0268978 - Nr. Reg. Tribunale MO 37943 Cap. soc. € 100.000,00 i.v.

ZERTIFIKAT

Zertifikatinhaber

GASOKOL GmbH
Solarpark 1
4351 Saxen
ÖSTERREICH

Herstellwerk

Saxen

Produkt

Sonnenkollektoren

Typ, Modell

gevoSol 23, gevoSol 26, gevoSol 27, gevoSol 49,
gevoSol 55, gevoSol 82, gevoSol 109, gevoSol 136

Prüfgrundlage(n)

DIN EN 12975-1:2011-01
DIN EN ISO 9806:2018-04
CEN-KEYMARK-Programmregeln Solarthermische Produkte Version 31 (2018-03)

Konformitätszeichen



Registernummer

011-7S2846 F

Gültig bis

2023-07-31

Nutzungsrecht

Dieses Zertifikat berechtigt zum Führen des oben stehenden Konformitätszeichens in Verbindung mit der genannten Registernummer.

Weitere Angaben siehe Anhang.

2018-07-12

Robert Zorn M.Sc.
Geschäftsführer

ANHANG

Seite 1 von 1

Zertifikat

011-7S2846 F von 2018-07-12

Technische Angaben

siehe Datenblatt für den Prüfbericht von 2018-07-06

Bemerkung(en):

- Die Prüfung der Frostbeständigkeit nach DIN EN ISO 9806, Abschnitt 15 ist nicht erforderlich. Laut Herstellerangabe dürfen die zertifizierten Kollektoren in frostgefährdeten Gebieten nur unter Verwendung geeigneter Frostschutzmittel oder geeigneter Frostschutz-Regeleinrichtung betrieben werden.

Die Kundenspezifisch gefertigte Kollektorserie gevoSol beinhaltet die Standardmodule mit einer Bruttofläche von 2,3 m² und 2,6 m² gevoSol und 2,7 , 5,5 , 8,2 , 10,9 und 13,6 gevoSol, Serie P, auch Sonderbauformen mit einer Bruttofläche von 2 m² bis 14 m².

**Prüflaboratorium/
Überwachungsstelle**

TÜV Rheinland Energy GmbH
51101 Köln

Prüfbericht(e)

21242669.001, 21242669.002, 21242669.003 von 2018-07-06



Licence Number	011-7S2846 F
Date issued	2021-03-03
Issued by	TÜV Rheinland Energy GmbH

Licence holder	GASOKOL GmbH	Country	Austria
Brand (optional)		Web	www.gasokol.at
Street, Number	Solarpark 1	E-mail	office@gasokol.at
Postcode, City	A-4351 Saxon	Tel	+43 7269 76600-0

Collector Type	Flat plate collector
----------------	----------------------

[illegible]

Power output per m ² gross area	709	676	603	518	422	133
--	-----	-----	-----	-----	-----	-----

Performance parameters test method	Quasi dynamic									
Performance parameters (related to A _G)	η0, b	a1	a2	a3	a4	a5	a6	a7	a8	Kd
Units	-	W/(m²K)	W/(m²K²)	J/(m³K)	-	J/(m²K)	s/m	W/(m²K⁴)	W/(m²K⁴)	-
Test results	0.716	3.12	0.014	0.000	0.00	6 600	0.000	0.00	0.0E+00	0.94

Incidence angle modifier test method	Quasi dynamic - outdoor
--------------------------------------	-------------------------

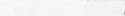
Incidence angle modifier	Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
Transversal	$K_{\text{gl, coll}}$	1.00	0.99	0.98	0.96	0.93	0.88	0.77	0.39	0.00
Longitudinal	$K_{\text{gl, coll}}$	1.00	0.99	0.98	0.96	0.93	0.88	0.77	0.39	0.00

Heat transfer medium for testing	Water		
Flow rate for testing (per gross area, A_G)	dm/dt	0.043	kg/(sm ²)
Maximum temperature difference during thermal performance test	$(\vartheta_m - \vartheta_a)_{\max}$	90	K
Standard stagnation temperature ($G = 1000 \text{ W/m}^2$; $\vartheta_a = 30^\circ\text{C}$)	ϑ_{stg}	200	°C
Maximum operating temperature	$\vartheta_{\text{max,op}}$	200	°C
Maximum operating pressure	$p_{\text{max,op}}$	1000	kPa

Testing laboratory	TÜV Rheinland Energy GmbH	www.tuv.com/solar	
Test report(s)	21242669.01	Dated	06.07.2018
	21242669.02		06.07.2018
	21242669.03		06.07.2018

Comments of testing laboratory		Datasheet version: 6.1. 2019-07-11
--------------------------------	--	------------------------------------

Die Kundenspezifisch gefertigte Kollektorserie gevoSol beinhaltet die Standardmodule mit einer Bruttofläche von 2,3 bis 14 m² sowie auch Sonderbauformen, sämtliche Zwischengrößen und Sonderabmessungen. The customer specific collector series gevoSol comprises the standard modules with a gross area between 2,3 and 14 m² as well as special construction forms and all intermediate sizes. All tests were performed under the latest edition EN ISO 9806:2017.


TÜV Rheinland®
 Gener. Richtg.
 TÜV Rheinland Energy GmbH
 Am Grauen Stein
 51105 Köln



Annex to Solar Keymark Certificate	Licence Number	011-7S2846 F
Supplementary Information	Issued	2021-03-03

Annual collector output in kWh/collector at mean fluid temperature ϑ_m

Standard Locations		Athens			Davos			Stockholm			Würzburg		
Collector name	θ _m	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C
gevoSol 23		2 561	1 854	1 219	1 961	1 365	856	1 442	954	578	1 571	1 035	616
gevoSol 26		2 937	2 126	1 398	2 248	1 565	981	1 654	1 094	662	1 801	1 186	706
gevoSol 49		5 498	3 980	2 618	4 209	2 930	1 837	3 096	2 049	1 240	3 371	2 221	1 322
gevoSol 72		8 218	5 949	3 913	6 291	4 380	2 746	4 628	3 063	1 853	5 040	3 320	1 976
gevoSol 96		10 939	7 918	5 208	8 374	5 830	3 655	6 161	4 077	2 467	6 708	4 419	2 630
gevoSol 120		13 659	9 887	6 503	10 457	7 280	4 564	7 693	5 091	3 081	8 376	5 518	3 284

Annual output per m ² gross area	1 138	824	542	871	607	380	641	424	257	698	460	274
Annual efficiency, η_a	64%	47%	31%	53%	37%	23%	55%	36%	22%	56%	37%	22%
Fixed or tracking collector	Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane	1765 kWh/m ²			1630 kWh/m ²			1166 kWh/m ²			1244 kWh/m ²		
Mean annual ambient air temperature	18.5°C			3.2°C			7.5°C			9.0°C		
Collector orientation or tracking mode	South, 25°			South, 30°			South, 45°			South, 35°		

The collector is operated at constant temperature ϑ_m (mean of in- and outlet temperatures). The calculation of the annual collector performance is performed with the official Solar Keymark spreadsheet tool Scenocalc Ver. 6.1 (July 2019). A detailed description of the calculations is available at <http://www.estif.org/solarkeymarknew/>

Additional Information

Collector heat transfer medium	Water-Glycole
The collector is deemed to be suitable for roof integration	Yes

The collector was tested successfully under the following conditions:

Climate class (A+, A, B or C)					A	--
G (W/m ²) >	1000	θ _a (°C) >	20	H _x (MJ/m ²) >	600	
Maximum tested positive load					5400	Pa
Maximum tested negative load					1000	Pa
Hail resistance using ice balls (diameter)					35	mm

Additional collector attribute(s)

☐ Using external power source(s) for normal operation	☐ Active or passive measure(s) for self-protection
☐ Co-generating thermal and electrical power	☒ Façade collector(s) (applicable)

Energy Labelling Information		Additional Informative Technical Data	
	Reference Area, A _{sol} (m ²)	Hydraulic Designation Code	Aperture Area, A _a (m ²)
gevoSol 23	2.25	9-VH-12S-A:7.3,1930-C:20.8,2010	2.01
gevoSol 26	2.58	10-VH-12S-A:7.3,1930-C:20.8,2170	2.33
gevoSol 49	4.83	10,10-VH-12S-A:7.3,1930-C:20.8,1200	4.40
gevoSol 72	7.22	10,10,10-13S-A:7.3,1930-C:20.8,1200	6.60
gevoSol 96	9.61	10,10,10,10-12S-A:7.3,1930-C:20.8,1200	8.80
gevoSol 120	12.00	10,10,10,10-13S-A:7.3,1930-C:20.8,1200	11.00

Data required for CDR (EU) No 811/2013 - Reference Area A _{sol}		Data required for CDR (EU) No 812/2013 - Reference Area A _{sol}	
Collector efficiency (η_{col})	56%	Zero-loss efficiency (η_0)	0.71
Remark: Collector efficiency (η_{col}) is defined in CDR (EU) No 811/2013 as collector efficiency of the solar collector at a temperature difference between the solar collector and the surrounding air of 40 K and a global solar irradiance of 1000 W/m ² , expressed in % and rounded to the nearest integer. Deviating from the regulation η_{col} is based on reference area (A _{sol}) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806:2017.		First-order coefficient (a_1)	3.12
		Second-order coefficient (a_2)	0.014
		Incidence angle modifier IAM (50°)	0.92
		Remark: The data given in this section are related to collector reference area (A _{sol}) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806. Consistent data sets for either aperture or gross area can be used in calculations like in the regulation 811 and 812 and simulation programs.	