DICHIARAZIONE DI CONFORMITA’

L’Azienda: **GROUPE ATLANTIC ITALIA SPA**
con sede in: **Via Maggiore Piovesana, 105 – Conegliano (TV)**
in relazione ai collettori solari piani: **HELIO PLAN / VARSUN 2.0**

DICHIARA QUANTO SEGUE:

I collettori solari piani

HELIO PLAN / VARSUN 2.0

equivalenti ai collettori solari piani

FK 8203N 4H FG/BF

sono conformi alla certificazione europea Solar Keymark, come attestato dal certificato **N. 011-7S1323 F** rilasciato alla compagnia **GREENoneTEC Solarindustrie GmbH** in data 07.09.2020 dal laboratorio di certificazione **Institut für Gebäudeenergetik, Thermotechnik und Energiespeicherung (IGTE).**

Il certificato **N. 011-7S1323 F** fa riferimento al collettore solare piano **FK 8203N 4H FG/BF** con i seguenti **Test Report Id. Number**:

- Test Report Id. Number: **20COL1537/1** – Date of Test Report: **02.09.2020**
- Test Report Id. Number: **20COL1538/1** – Date of Test Report: **02.09.2020**
- Test Report Id. Number: **20COL1538Q/1** – Date of Test Report: **02.09.2020**

Tali Test Report Id. Number sono associati in maniera univoca al Licence Number **011-7S1323 F** .

Si rilascia il presente documento per i fini consentiti dalla legge.

Faenza, 18 Maggio 2022

In fede
GROUPE ATLANTIC ITALIA SPA

Groupe Atlantic Italia S.p.A.
Via Maggiore Piovesana 105 - I-31015 Conegliano (TV) - ITALY
P.I. 02147970128 C.F.02084230131
N. REA 419107 pec: ygnis@registerpec.it
Capitale Sociale €120.000,00
Società soggetta alla direzione e coordinamento di Atlantic Sociètè Française Developpement Thermique

YGNIS - Direct Sales Division
Via Lombardia 56
21040 Castronno (VA) - ITALY
Tel. +39 0332 895240 Fax +39 0332 893063
info@ygnis.it www.ygnis.it

ACV Atlantic – Wholesalers Division
Via Pana 98
48018 Faenza (RA) – ITALY
Tel. +39 0546 646144 Fax +39 0546 646150
italia.info@acv.com info.atlanticitalia@groupe-atlantic.com
www.atlantic-comfort.it www.acv.com

GREENoneTEC
SOLAR COLLECTORS

GREENoneTEC Solarindustrie GmbH · Industriepark St. Veit · Energieplatz 1 · A-9300 St. Veit/Glan

Spett. Le
Groupe Atlantic Italia Spa
Via Maggiore Piovesana 105
I 31015 Conegliano (TV)

GREENoneTEC
Solarindustrie GmbH
Industriepark St. Veit
Energieplatz 1
A-9300 St. Veit/Glan

T: +43 (0) 4212 281 36-0
F: +43 (0) 4212 281 36-250

www.greenonetec.com

St.Veit, il 16. Maggio 2022

Oggetto: Dichiarazione corrispondenza prodotto GREENoneTEC Solarindustrie GmbH

Con la presente, dichiariamo che, i codici prodotti per conto di Groupe Atlantic Italia Spa, sono equivalenti ai codici GREENoneTEC Solarindustrie GmbH riportati nella tabella sottostante.

Cod. Cliente	Descrizione Groupe Atlantic Italia	Cod. GREENoneTEC	Descrizione GREENoneTEC
10901300	Collettore Solare HELIO PLAN / VARSUN 2.0	110100551.0	FK8203N 4H FG/BF

I prodotti elencati sono conformi alla certificazione europea Solar Keymark. In particolare è possibile trovare i certificati con i seguenti numeri di licenza:

Cod. Cliente	Descrizione Groupe Atlantic Italia	Cod. GREENoneTEC	Certificato Solar Keymark n°
10901300	Collettore Solare HELIO PLAN / VARSUN 2.0	110100551.0	011-7S1323 F

GREENoneTEC è custode del fascicolo tecnico, relativamente ai propri codici.

GREENoneTEC Solarindustrie GmbH

GREENoneTEC
GREENoneTEC Solarindustrie GmbH
Industriepark St. Veit, Energieplatz 1
9300 St. Veit an der Glan, Austria
Tel.: +43 (0) 4212 28 136-0, Fax-DW: -250
UID-Nr.: ATU39877601, FN: 141541z

DIN CERTCO
Gesellschaft für Konformitätsbewertung mbH

CERTIFICATE

Certificate holder	**GREENoneTEC Solarindustrie GmbH** **Industriepark St. Veit** **Energieplatz 1** **9300 St. Veit/Glan** **AUSTRIA**
Production facility	St. Veit
Product	Solar collectors
Type, Model	FK8203N 4H FG/BF, FK8203N 2H FG/BF FK8233N 4H FG/BF, FK8233N 2H FG/BF
Testing basis	DIN EN 12975-1:2011-01 DIN EN ISO 9806:2018-04 SOLAR KEYMARK Scheme Rules (2020-06)
Mark of conformity	
Registration No.	011-7S1323 F
Valid until	2025-06-30
Right of use	This certificate entitles the holder to use the mark of conformity shown above in conjunction with the specified registration number. See annex for further information.

GESELLSCHAFT FÜR KONFORMITÄTSBEWERTUNG MBH
DIN CERTCO

2021-05-17 S. Sy

Dipl.-Wi.-Ing. (FH) Sören Scholz
Head of Certification Body

DAkkS
Deutsche Akkreditierungsstelle
D-ZE-11125-01-00

DIN CERTCO
Gesellschaft für Konformitätsbewertung mbH

ANNEX

Certificate	011-7S1323 F dated 2021-05-17
Technical Data	See data sheet, part of the test report of 2020-09-02 Note(s): - The freeze resistance test according to DIN EN ISO 9806, clause 14 was not necessary. According to the manufacturer's declaration, the certified solar collectors may be used in frost exposed areas only in combination with appopriate frost protection mixtures or with appropriate frost protection controller.
Testing laboratory/ Inspection body	Universität Stuttgart Institut für Gebäudeenergetik, Thermotechnik und Energie- speicherung Pfaffenwaldring 6-6 a 70569 Stuttgart GERMANY
Test report(s)	20COL1537/1, 20COL1538Q/1 dated 2020-09-02

TÜVRheinland®
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Precisely Right.

IGTE

Annex to Solar Keymark Certificate		Licence Number	011-7S1323 F
		Date issued	2020-09-07
		Issued by	DIN CERTCO

Licence holder	GREENoneTEC Solarindustrie GmbH	**Country**	Austria
Brand (optional)		**Web**	www.greenonetec.com
Street, Number	Industriepark St. Veit, Energieplatz 1	**E-mail**	info@greenonetec.com
Postcode, City	A – 9300 St. Veit/Glan	**Tel**	+43 (0) 4212 28136-0

Collector Type	Flat plate collector

Collector name	Gross area (A_G)	Gross length	Gross width	Gross height	Power output per collector Gb = 850 W/m2, Gd = 150 W/m2 & u = 1.3 m/s $\vartheta_m - \vartheta_a$					
					0 K	10 K	30 K	50 K	70 K	118 K
	m²	mm	mm	mm	W	W	W	W	W	W
FK8203N 4H FG/BF	2.02	1 730	1 170	85	1 476	1 394	1 216	1 020	807	223
FK8203N 2H FG/BF	2.02	1 730	1 170	85	1 476	1 394	1 216	1 020	807	223
FK8233N 4H FG/BF	2.34	2 000	1 170	85	1 710	1 615	1 409	1 182	935	258
FK8233N 2H FG/BF	2.34	2 000	1 170	85	1 710	1 615	1 409	1 182	935	258
FK8253N 4H FG/BF	2.52	2 150	1 170	85	1 841	1 739	1 517	1 273	1 007	278
FK8253N 2H FG/BF	2.52	2 150	1 170	85	1 841	1 739	1 517	1 273	1 007	278
Power output per m² gross area					731	690	602	505	400	110

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	0.734	3.96	0.011	0.000	0.00	11 450	0.000	0.00	0.0	0.97

Incidence angle modifier test method		Quasi dynamic - outdoor								
Incidence angle modifier	Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
Transversal	$K_{\theta T,coll}$	1.00	1.00	0.99	0.98	0.96	0.89	0.71	0.36	0.00
Longitudinal	$K_{\theta L,coll}$	1.00	1.00	0.99	0.98	0.96	0.89	0.71	0.36	0.00

Heat transfer medium for testing		Water	
Flow rate for testing (per gross area, A_G)	dm/dt	0.020	kg/(sm²)
Maximum temperature difference during thermal performance test	$(\vartheta_m-\vartheta_a)_{max}$	88	K
Standard stagnation temperature (G = 1000 W/m²; ϑ_a = 30 °C)	ϑ_{stg}	200	°C
Maximum operating temperature	ϑ_{max_op}	-	°C
Maximum operating pressure	$p_{max,op}$	1000	kPa

Testing laboratory	Institut für Gebäudeenergetik, Thermotechnik und Energiespeicherung (IGTE)	http://www.igte.uni-stuttgart.de	
Test report(s)	20COL1537/1 20COL1538/1 20COL1538Q/1	**Dated**	02.09.2020 02.09.2020 02.09.2020

Comments of testing laboratory — Datasheet version: 6.1, 2019-09-26

This data sheet replaces the data sheet issued on 02.09.2020
Correction of collector names
Thermal performance parameters are given from test report 20COL1537/1 (FK8203N 4H FG/BF)

TZS Forschungs- und Testzentrum für Solaranlagen
Institut für Thermodynamik und Wärmetechnik
Universität Stuttgart
Pfaffenwaldring 6, 70550 Stuttgart (Vaihingen)

Annex to Solar Keymark Certificate	Licence Number	011-7S1323 F
Supplementary Information	Issued	2020-09-07

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
FK8203N 4H FG/BF	2 397	1 648	1 030	1 780	1 185	708	1 316	826	476	1 440	896	508
FK8203N 2H FG/BF	2 397	1 648	1 030	1 780	1 185	708	1 316	826	476	1 440	896	508
FK8233N 4H FG/BF	2 776	1 909	1 193	2 063	1 372	820	1 524	957	551	1 668	1 038	588
FK8233N 2H FG/BF	2 776	1 909	1 193	2 063	1 372	820	1 524	957	551	1 668	1 038	588
FK8253N 4H FG/BF	2 990	2 056	1 285	2 221	1 478	883	1 641	1 030	593	1 796	1 118	634
FK8253N 2H FG/BF	2 990	2 056	1 285	2 221	1 478	883	1 641	1 030	593	1 796	1 118	634
Annual output per m² gross area	1 186	816	510	881	587	350	651	409	235	713	444	251
Annual efficiency, η_a	67%	46%	29%	54%	36%	21%	56%	35%	20%	57%	36%	20%
Fixed or tracking collector	Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane	1765 kWh/m²			1630 kWh/m²			1166 kWh/m²			1244 kWh/m²		
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 ϑm (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 (September 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/m²) >	1000	ϑ_a (°C) >	20	H_X (MJ/m²) >		600
Maximum tested positive load					3000	Pa
Maximum tested negative load					2500	Pa
Hail resistance using steel ball (maximum drop height)					2	m

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)

Energy Labelling Information

	Reference Area, A_{sol} (m²)
FK8203N 4H FG/BF	2.02
FK8203N 2H FG/BF	2.02
FK8233N 4H FG/BF	2.34
FK8233N 2H FG/BF	2.34
FK8253N 4H FG/BF	2.52
FK8253N 2H FG/BF	2.52

Data required for CDR (EU) No 811/2013 - Reference Area A_{sol}

Collector efficiency (η_{col})	55%

Remark: Collector efficiency (ηcol) 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/m², expressed in % and rounded to the nearest integer. Deviating from the regulation ηcol is based on reference area (Asol) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806:2017.

Additional Informative Technical Data

	Hydraulic Designation Code	Aperture Area, A_a (m²)
FK8203N 4H FG/BF	12-V-1234S-7.2,1568-20.4,1215-D	1.84
FK8203N 2H FG/BF	12-V-12S-7.2,1568-20.4,1215	1.84
FK8233N 4H FG/BF	12-V-1234S-7.2,1838-20.4,1215-D	2.22
FK8233N 2H FG/BF	12-V-12S-7.2,1838-20.4,1215	2.22
FK8253N 4H FG/BF	12-V-1234S-7.2,1988-20.4,1215-D	2.31
FK8253N 2H FG/BF	12-V-12S-7.2,1988-20.4,1215	2.31

Data required for CDR (EU) No 812/2013 - Reference Area A_{sol}

Zero-loss efficiency (η_0)	0.73	--
First-order coefficient (a_1)	3.96	W/(m²K)
Second-order coefficient (a_2)	0.011	W/(m²K²)
Incidence angle modifier IAM (50°)	0.96	--

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.

DIN CERTCO ● Alboinstraße 56 ● 12103 Berlin, Germany
Tel: +49 30 7562-1131 ● Fax: +49 30 7562-1141 ● E-Mail: info@dincertco.de ● www.dincertco.de