

AENOR

Keymark Certificate Solar thermal energy



078/000160

AENOR certifies that the organization

BDR THERMEA GROUP B.V

registered office MERCHANTSTRAAT, 55 7300 AA APELDOORN (Holanda - Países Bajos)

supplies Solar collectors

in compliance with UNE-EN 12975-1:2006 (EN 12975-1:2006)

Trade Mark BAXI MEDITERRANEO 250
Technical information Specified in Annexes to the Certificate

Production site CL MANGANÉS, 2 08755 CASTELLBISBAL (Barcelona - España)

Certification scheme In order to grant this Certificate, AENOR has tested the product and has verified the quality system implemented for its manufacture. AENOR performs these tasks periodically while the Certificate has not been cancelled, in accordance with Specific Rules RP 78.01.

First issued on 2013-01-17

Last issued 2017-07-24

Validity date 2022-07-24

Rafael GARCÍA
General Manager

Original Electrónico

AENOR INTERNACIONAL S.A.U.
Génova, 6. 28004 Madrid. España
Tel. 91 432 60 00.- www.aenor.com

Product certification body accredited by ENAC, number 01/C-PR002.078



Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate	Certificate No.	078/000160
	Date of issue	24-07-2017

Company	BDR THERMEA GROUP B.V.	Country	NETHERLANDS
Brand (optional)		Website	www.bdrthermea.com
Street, number	MARCHANSTRAAT 55	E-mail	oleguer.fuertes@baxi.es
Postal Code	7300 AA	Tel.	+34 902 89 80 00
City	APPELDOORN	Fax	+34 902 89 80 12

Collector Type (flat plate / evacuate tubular / un-glazed)	Flat plate collector
---	----------------------

Integration in the roof possible?	Yes
--	-----

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 unit G = 1000 W/m ² Tm-Ta :				
						0 K	10 K	30 K	50 K	70 K
						[W]	[W]	[W]	[W]	[W]
BAXI MEDITERRANEO 250	2,404	2.187	1.147	87	2,51	1.839	1.748	1.550	1.328	1.083

Collector efficiency parameters related to aperture area (Aa) Type of fluid and flow rate see note 1	h _{0a}	0,765	-
	a _{1a}	3,653	W/(m ² K)
	a _{2a}	0,012	W/(m ² K ²)

Stagnation temperature - Weather conditions see note 2	t _{stg}	198	°C
---	------------------	-----	----

Effective thermal capacity	C _{eff} = C/Aa	5,23	kJ/(m ² K)
-----------------------------------	-------------------------	------	-----------------------

Max. operation pressure - see note 3	p _{max}	1000	kPa
---	------------------	------	-----

Incidence angle modifiers K _θ (θ)	G _{DIF} /G _{TOT}		θ _T / θ _L	50°	10°	20°	30°	40°	60°	70°
	min	max	K _θ (θ _T)	0,91	1,00	0,99	0,98	0,95	0,84	0,70
	G _{DIF} /G _{TOT} : min&max - while measuring		K _θ (θ _L)	0,91	1,00	0,99	0,98	0,95	0,84	0,70
						<i>Optional values</i>				

Testing Laboratory	TUV Energie und Umwelt GmbH
Website	www.eco-tuv.de
Test report id. number	21217924_EN_P1_MED200; 21217924_EN_P_MED250; 21217924_EN_R_MED250
Date of test report	all 04-06-2012
Perf. test method	EN 12975-2 6.1.5 (indoor)

Comments of testing laboratory :

Note 1	Fluid	Water	Flow rate	0,021 kg/s per m ²
Note 2	Irradiance, G_s=1000 W/m² Ambient temperature, Ta=30 °C			
Note 3	Given by manufacturer			

Stamp & signature of test lab



Annual collector output based on EN 12975 Test Results,
annex to Solar KEYMARK Certificate

Certificate No.

078/000160

Issued

24-07-2017

Annual collector output kWh

Collector name	Location and collector temperature (T _m)													
	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		
BAXI MEDITERRANEO 250	2.861	2.023	1.313	2.322	1.585	983	1.593	1.037	626	1.730	1.115	663		

Collector mounting: Fixed or tracking

Fixed; slope = latitude - 15° (rounded to nearest 5°)

Overview of locations

Location	Latitude °	G _{tot} kWh/m ²	T _a °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°

G _{tot}	Annual total irradiation on collector plane	kWh/m ²
T _a	Mean annual ambient air temperature	°C
T _m	Constant collector operating temperature (mean of in- and outlet temperatures)	°C

Calculation of the annual collector performance is done by the official Solar Keymark spreadsheet tool. Hour by hour the collector output is calculated according to the efficiency parameters from the Keymark test using constant collector operating temperature (T_m). Detailed description with all equations used is available from the Solar Keymark web site (direct link: <http://www.estif.org/solarkeymark/annexb1.php>)

AENOR Internacional, S.A.U. - Génova, 6. - 28004 - Madrid, España - Tel. 91 432 60 00 – www.aenor.com Product certification body accredited by ENAC, number 01/C-PR002.078	Datasheet version:
	VERSION 3.5, 2012.01.13
	Calculation program version: 3.07, October 2011 (SP)