

AENOR

Keymark Certificate Solar thermal energy



078/000316

AENOR certifies that the organization

BDR THERMEA GROUP B.V

registered office	MARCHANTSTRAAT, 55 7300 AA APELDOORN (Holanda - Países Bajos)
supplies	Solar collectors
in compliance with	UNE-EN 12975-1:2006 (EN 12975-1:2006)
Trade Mark Technical information	BAXI SOL200-V Specified in Annexes to the Certificate
Production site	CL MANGANÉS, 2 POLIG. INDUSTRIAL CAN ALBAREDA 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 078.01.
First issued on Validity date	2019-03-14 2024-03-14

Rafael GARCÍA MEIRO
Chief Executive Officer

Original Electronic Certificate

AENOR INTERNACIONAL SA.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



Annex to Solar Keymark Certificate Supplementary Information	Licence Number	078/000316
	Issued	2019-03-14

Annual collector output in kWh/collector at mean fluid temperature ϑ_m													
Collector name	Standard Locations ϑ_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 SOL200-V		2.407	1.679	1.057	1.804	1.211	724	1.333	847	490	1.456	918	522
Annual output per m ² gross area		1.192	831	523	893	599	358	660	419	243	721	455	259
Fixed or tracking collector		Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane		1765 kWh/m ²			1714 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. 6.0 (October 2018). A detailed description of the calculations is available at www.solarkeymark.org/scenocalc													

Additional Information					
Collector heat transfer medium	Water-Glycole				
The collector is deemed to be suitable for roof integration	No				
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	3000		Pa		
Maximum tested negative load	2400		Pa		
Hail resistance using ice balls (diameter)	25		mm		

Additional collector attribute(s)	
<input type="checkbox"/> Using external power source(s) for normal operation	<input type="checkbox"/> Active or passive measure(s) for self-protection
<input type="checkbox"/> Co-generating thermal and electrical power	<input type="checkbox"/> Wind and/or infrared sensitive collector(s) (WISC)
<input type="checkbox"/> Façade collector(s)	

Energy Labelling Information		
	Reference Area, A_{sol} (m ²)	Hydraulic Designation Code
BAXI SOL200-V	2,02	1-H-1234S-7.2.16500-16.6.1199

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})	58%	Zero-loss efficiency (η_0)	0,75	--
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)	3,72	W/(m ² K)
		Second-order coefficient (a_2)	0,014	W/(m ² K ²)
		Incidence angle modifier IAM (50°)	0,91	--
		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.		