


Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate						Licence Number		011-7S2385 R		
						Issued		2014-08-29		
Company holding the		Baxi Calefacción S.L.U.				Country		Spain		
Brand (optional)		-				Website		www.baxi.es		
Street, street number		Salvador Espriu, 9				E-mail		vicente.abarca@baxi.es		
Postal Code / City, province		08908	L'Hospitalet Llobregat			Tel		+34 902 898 000		
Collector Type (flat plate glazed/un-glazed; evacuate tubular)						Evacuated tubular collector				
Thermal / photo voltaic hybrid collector? (PVT collector)						No				
Integration in the roof possible ? (manufacturers declaration)						No				
Collector name	Aperture area (Aa)	Gross length	Gross width	Gross height	Gross area (AG)	Power output per collector module				
						G = 1000 W/m²				
						Tm-Ta				
						0 K	10 K	30 K	50 K	70 K
	m²	mm	mm	mm	m²	W	W	W	W	W
BAXI AR 20	2.15	1 954	1 416	93	2.77	1 651	1 621	1 553	1 477	1 391
BAXI AR 30	3.22	1 954	2 125	93	4.15	2 473	2 427	2 326	2 211	2 083
Performance test method	Glazed liquid heating collector - steady state - indoor									
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	0.768	1.36	0.0053							
Bi-directional incidence angle	Yes	<i>Kθ values are obligatory for 50°.</i>								
Incidence angle modifiers Kθ(θT) transversal direction	Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
	Kθ(θT)	1.00	1.02	1.04	1.05	0.99	0.85	0.60	0.19	0.00
Incidence angle modifiers Kθ(θL) longitudinal direction	Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
	Kθ(θL)	1.00	0.99	0.98	0.96	0.92	0.86	0.73	0.33	0.00
Stagnation temperature - Weather conditions see note 2	Tstg						313	°C		
Effective thermal capacity	ceff = C/Ag						7.8	kJ/(m²K)		
Max. intended operation temperature - see note 3	Tmax,op						-	°C		
Max. operation pressure - see note 3	pmax,op						800	kPa		
Optional weather data	Location					Link				
Testing Laboratory	Institut für Solarenergieforschung GmbH									
Website	www.isfh.de									
Test report id. number	50-14/KB					Date of test report	27.08.2014			
During the test GDIF/GTOT was always between		-	and		-					
Comments of testing laboratory:										
1) The collector efficiency parameter and incidence angle modifiers are related to G(DIF)/G(TOT)=0.15.										
2) The incidence angle modifier was determined outdoor according to a quasi-dynamic test procedure.										
Note 1	Flow rate	0.019	kg/(s m²)	Fluid	Water					
Note 2	Irradiance, G = 1000 W/m²; Ambient temperature, Ta=30 °C									
Note 3	Given by manufacturer									
						 Institut für Solarenergieforschung GmbH Am Ohlenberg 1 D-31869 Emmertal Tel.: 0 51 51 / 999-100 Fax: 0 51 51 / 999-500				
Datasheet 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	011-7S2385 R
	Issued	29.08.2014

Annual collector output kWh/module														
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 AR 20	2 724	2 399	2 066	2 343	2 030	1 728	1 670	1 410	1 169	1 796	1 517	1 254		
BAXI AR 30	4 079	3 594	3 094	3 510	3 041	2 588	2 502	2 111	1 751	2 689	2 272	1 878		

Collector mounting: Fixed or tracking	Fixed; slope = latitude - 15° (rounded to nearest 5°)
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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

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 (T_m). A detailed description of the calculations is available at <http://www.sp.se/en/index/services/solar/ScenoCalc/Sidor/default.aspx>.