

<b>Summary of EN 12975 Test Results,</b>						<b>Licence Number</b>		<b>011-7S2090 F</b>				
annex to Solar KEYMARK Certificate						Issued		15 May 2014				
Company holding the						Country		P.R. China				
Brand (optional)						Website		www.apricus.com				
Street, street number						E-mail		jasmine@apricus.com				
Postal Code / City, province						Tel/Fax		+86 (0)25 58649129 / 58648103				
Collector Type (flat plate glazed/un-glazed; evacuate tubular)						Flat plate collector - glazed						
Thermal / photo voltaic hybrid collector? (PVT collector)						No						
Integration in the roof possible ? (manufacturers declaration)						No						
Collector name	Aperture area (Aa) m <sup>2</sup>	Gross length mm	Gross width mm	Gross height mm	Gross area (AG) m <sup>2</sup>	Power output per collector module						
						G = 1000 W/m <sup>2</sup>						
						T <sub>m</sub> -T <sub>a</sub>						
						0 K	10 K	30 K	50 K	70 K		
						W	W	W	W	W		
FPC-A26	2.27	1984	1224	80	2.43	1668	1559	1327	1076	807		
Performance test method						Glazed liquid heating collector - steady state - outdoor						
Performance parameters related to aperture						η <sub>0</sub>	a <sub>1</sub>	a <sub>2</sub>				
Units						-	W/(m <sup>2</sup> K)	W/(m <sup>2</sup> K <sup>2</sup> )				
Test results - Flow rate and fluid see note 1						0.735	4.719	0.010				
Bi-directional incidence angle						No K <sub>θ</sub> values are obligatory for 50°.						
Incidence angle modifiers K <sub>θ</sub> (θ)						Angle	10°	20°	30°	40°	50°	
						K <sub>θ</sub> (θ)	1.00	0.98	0.96	0.92	0.85	
							0.74	0.50	0.00	0.00		
Incidence angle modifier not bi-directional - leave fields blank												
Stagnation temperature - Weather conditions see note 2						T <sub>stg</sub>	163 °C					
Effective thermal capacity						c <sub>eff</sub> = C/Ag	5.1 kJ/(m <sup>2</sup> K)					
Max. intended operation temperature - see note 3						T <sub>max,op</sub>	100 °C					
Max. operation pressure - see note 3						p <sub>max,op</sub>	800 kPa					
Pressure drop table - for a collector family, the values shall be for the module with highest ΔP per m <sup>2</sup> aperture area												
Flow rate	kg/(s m <sup>2</sup> )	-	-	-	-	-	-	-	-	-	-	
Pressure drop, ΔP	Pa	-	-	-	-	-	-	-	-	-	-	
Optional weather data						Location	Link					
Testing Laboratory						TUV Rheinland (Shanghai) Co., Ltd.						
Website						www.tuv.com						
Test report id. number						154035430_EN_P_A26_Report_Ga			Date of test report			13 May 2014
During the test GDIF/GTOT was always between						0.11	and	0.91				
Comments of testing laboratory:												
Note 1	Flow rate	0.020 kg/(s m <sup>2</sup> )	Fluid	Water								
Note 2	Irradiance, G = 1000 W/m <sup>2</sup> ; Ambient temperature, T <sub>a</sub> = 30 °C											
Note 3	Given by manufacturer											





Annual collector output based on EN 12975 Test Results, annex to Solar KEYMARK Certificate	Licence Number	011-7S2090 F
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Annual collector output kWh/module												
Collector name	Location and collector temperature (T <sub>m</sub> )											
	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
FPC-A26	2 428	1 515	851	1 733	1 064	568	1 285	742	389	1 399	789	406

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

Overview of locations				
Location	Latitude °	G <sub>tot</sub> kWh/m <sup>2</sup>	T <sub>a</sub> °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 <sub>tot</sub>	Annual total irradiation on collector plane	kWh/m <sup>2</sup>
T <sub>a</sub>	Mean annual ambient air temperature	°C
T <sub>m</sub>	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<sub>m</sub>). A detailed description of the calculations is available at <http://www.sp.se/en/index/services/solar/ScenoCalc/Sidor/default.aspx>.

<b>DIN CERTCO • Alboinstraße 56 • 12103 Berlin</b> <b>Tel: +49 30 7562-1131 • Fax: +49 30 7562-1141 • E-Mail: info@dincertco.de •</b> <b>www.dincertco.de</b>	Datasheet version:
	4.06, 2014-01-15
	ScenoCalc version:
	Ver. 4.06 (Jan, 2014)