



Annex to Solar Keymark Certificate						Licence Number		011-7S1321 F			
						Date issued		2015-03-18			
						Issued by		DINCERTCO			
Licence holder		DOMA Solartechnik GmbH				Country		Austria			
Brand (optional)						Web		www.domasolar.com			
Street, Number		Sonnenstrasse 1				E-mail		office@domasolar.com			
Postcode, City		AT-6822 Satteins				Tel		+43 5524 53530			
Collector Type						Flat plate collector					
Collector name						Power output per collector					
						G _b = 850 W/m ² , G _d = 150 W/m ² & u = 1.3 m/s θ _m - θ _a					
Gross height		Gross area (A _G)		Gross length		Gross width		Aperture area (A _a)		0 K	
mm		m ²		mm		mm		m ²		W	
DOMA FLEX Alu										10 K	
1.135x3.075m		3.49		1'135		3'075		3.03		2'424	
1.135x4.085m		4.64		1'135		4'085		4.03		3'220	
1.135x5.095m		5.78		1'135		5'095		5.04		4'016	
1.135x6.105m		6.93		1'135		6'105		6.05		4'812	
1.135x7.115m		8.08		1'135		7'115		7.06		5'608	
1.595x3.075m		4.90		1'595		3'075		4.36		3'406	
1.595x4.085m		6.52		1'595		4'085		5.81		4'525	
1.595x5.095m		8.13		1'595		5'095		7.26		5'644	
1.595x6.105m		9.74		1'595		6'105		8.71		6'763	
1.595x7.115m		11.35		1'595		7'115		10.17		7'881	
2.055x3.075m		6.32		2'055		3'075		5.69		4'389	
2.055x4.085m		8.39		2'055		4'085		7.58		5'830	
2.055x5.095m		10.47		2'055		5'095		9.48		7'272	
2.055x6.105m		12.55		2'055		6'105		11.38		8'713	
2.055x7.115m		14.62		2'055		7'115		13.27		10'154	
Customer-specific *											
Power output per m ² gross area						694		659		581	
Performance parameters test method						Steady state - indoor					
Performance parameters (related to A _G)						η ₀ , b		a1		a2	
Units						-		W/(m ² K)		W/(m ² K ²)	
Test results						0.704		3.76		0.012	
Incidence angle modifier test method						Quasi dynamic - outdoor					
Incidence angle modifier						Angle		10°		20°	
Transversal						K _{θT, coll}		1.00		1.00	
Longitudinal						K _{θL, coll}		1.00		1.00	
Heat transfer medium for testing						Water-Glycole					
Flow rate for testing (per gross area, A _G)						dm/dt		0.020		kg/(sm ²)	
Maximum temperature difference during thermal performance test						(θ _m -θ _a) _{max}		70		K	
Standard stagnation temperature (G = 1000 W/m ² ; θ _a = 30 °C)						θ _{stg}		180		°C	
Maximum operating temperature						θ _{max op}		180		°C	
Maximum operating pressure						p _{max, op}		600		kPa	
Testing laboratory						AIT Austrian Institute of Technology GmbH				www.ait.ac.at	
Test report(s)						2.04.00723.1.0-LT 2.04.00723.1.0-QT				Dated	
										23.02.2010 16.07.2010	
Comments of testing laboratory						Datasheet version: 6.0, 2018-10-30					
* This collector type is also offered in customer-specific dimensions						 INSTITUT FÜR SOLARTECHNIK 					
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											

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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
DOMA FLEX Alu													
1.135x3.075m		3'876	2'672	1'661	2'922	1'976	1'202	2'148	1'368	797	2'341	1'488	857
1.135x4.085m		5'149	3'550	2'206	3'881	2'625	1'596	2'853	1'817	1'059	3'110	1'976	1'139
1.135x5.095m		6'422	4'428	2'751	4'841	3'273	1'991	3'558	2'266	1'321	3'879	2'465	1'421
1.135x6.105m		7'695	5'305	3'297	5'801	3'922	2'385	4'264	2'715	1'583	4'648	2'954	1'702
1.135x7.115m		8'968	6'183	3'842	6'760	4'571	2'780	4'969	3'164	1'845	5'417	3'442	1'984
1.595x3.075m		5'447	3'755	2'334	4'106	2'776	1'688	3'018	1'922	1'120	3'290	2'091	1'205
1.595x4.085m		7'236	4'989	3'100	5'455	3'688	2'243	4'009	2'553	1'488	4'371	2'777	1'601
1.595x5.095m		9'025	6'222	3'866	6'803	4'600	2'798	5'001	3'184	1'856	5'452	3'464	1'996
1.595x6.105m		10'814	7'455	4'633	8'152	5'512	3'352	5'992	3'816	2'224	6'532	4'151	2'392
1.595x7.115m		12'603	8'689	5'399	9'500	6'424	3'907	6'983	4'447	2'592	7'613	4'837	2'788
2.055x3.075m		7'018	4'838	3'007	5'290	3'577	2'175	3'888	2'476	1'444	4'239	2'694	1'552
2.055x4.085m		9'323	6'427	3'994	7'028	4'752	2'890	5'166	3'289	1'918	5'632	3'578	2'062
2.055x5.095m		11'628	8'016	4'982	8'765	5'927	3'604	6'443	4'103	2'392	7'024	4'463	2'572
2.055x6.105m		13'933	9'606	5'969	10'503	7'102	4'319	7'720	4'916	2'866	8'416	5'348	3'082
2.055x7.115m		16'238	11'195	6'957	12'240	8'276	5'033	8'997	5'729	3'340	9'809	6'232	3'592
Customer-specific *													
Annual output per m ² gross area		1'111	766	476	837	566	344	615	392	228	671	426	246
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	Yes		
The collector was tested successfully under the following conditions:			
Climate class (A+, A, B or C)			C
G (W/m ²) >	ϑ_a (°C) >	H_x (MJ/m ²) >	
Maximum tested positive load			1000 Pa
Maximum tested negative load			1000 Pa
Hail resistance using steel ball (maximum drop height)			m

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)	

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Energy Labelling Information				
	Reference Area, A_{sol} (m ²)	Hydraulic Designation Code		
1.135x3.075m	3.49	4,5-H-XXR-A:6.4,2850-C:20.4,997		
1.135x4.085m	4.64	4,5-H-XXR-A:6.4,3860-C:20.4,997		
1.135x5.095m	5.78	4,5-H-XXR-A:6.4,4870-C:20.4,997		
1.135x6.105m	6.93	4,5-H-XXR-A:6.4,5880-C:20.4,997		
1.135x7.115m	8.08	4,5-H-XXR-A:6.4,6890-C:20.4,997		
1.595x3.075m	4.90	6,7-H-XXR-A:6.4,2850-C:20.4,1425		
1.595x4.085m	6.52	6,7-H-XXR-A:6.4,3860-C:20.4,1425		
1.595x5.095m	8.13	6,7-H-XXR-A:6.4,4870-C:20.4,1425		
1.595x6.105m	9.74	6,7-H-XXR-A:6.4,5880-C:20.4,1425		
1.595x7.115m	11.35	6,7-H-XXR-A:6.4,6890-C:20.4,1425		
2.055x3.075m	6.32	8,9-H-XXR-A:6.4,2850-C:20.4,1885		
2.055x4.085m	8.39	8,9-H-XXR-A:6.4,3860-C:20.4,1885		
2.055x5.095m	10.47	8,9-H-XXR-A:6.4,4870-C:20.4,1885		
2.055x6.105m	12.55	8,9-H-XXR-A:6.4,5880-C:20.4,1885		
2.055x7.115m	14.62	8,9-H-XXR-A:6.4,6890-C:20.4,1885		
Customer-specific *				
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})	54%	Zero-loss efficiency (η_0)	0.69	--
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)	3.42	W/(m ² K)
		Second-order coefficient (a_2)	0.012	W/(m ² K ²)
		Incidence angle modifier IAM (50°)	0.95	--
		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.		