

Annex to Solar Keymark Certificate					Licence Number		011-7S2551 F				
					Date issued		2022-01-26				
					Issued by		DIN CERTCO				
Licence holder		Arvendo Vertriebs- und			Country		Germany				
Brand (optional)					Web		www.arvendo.de				
Street, Number		Haller Straße 220			E-mail		info@arvendo.de				
Postcode, City		D- 33334 Gütersloh			Tel		49 5241 / 687429				
Collector Type					Flat plate collector						
Collector name		Gross area (A_G) m ²	Gross length mm	Gross width mm	Gross height mm	Power output per collector G _b = 850 W/m ² , G _d = 150 W/m ² & u = 1.3 m/s $\vartheta_m - \vartheta_a$					
						0 K W	10 K W	30 K W	50 K W	70 K W	88 K W
Arvendo Sun 2.5		2.53	2 102	1 202	80	1 856	1 762	1 556	1 327	1 072	823
						0	0	0	0	0	0
Power output per m² gross area						735	697	616	525	424	326
Performance parameters test method		Steady state - indoor									
Performance parameters (related to A_G)		η_0, b	a1	a2	a3	a4	a5	a6	a7	a8	Kd
Units		-	W/(m ² K)	W/(m ² K ²)	J/(m ³ K)	-	J/(m ² K)	s/m	W/(m ² K ⁴)	W/(m ² K ⁴)	-
Test results		0.748	3.59	0.012			5 660				0.88
Incidence angle modifier test method		Quasi dynamic - outdoor									
Incidence angle modifier		Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
Transversal		K _{θT, coll}	1.00	0.99	0.98	0.96	0.93	0.87	0.75	0.37	0.00
Longitudinal		K _{θL, coll}	1.00	0.99	0.98	0.96	0.93	0.87	0.75	0.37	0.00
Heat transfer medium for testing		Water									
Flow rate for testing (per gross area, A_G)		dm/dt					0.020			kg/(sm²)	
Maximum temperature difference during thermal performance test		($\vartheta_m - \vartheta_a$) _{max}					58			K	
Standard stagnation temperature (G = 1000 W/m²; ϑ_a = 30 °C)		ϑ_{stg}					200			°C	
Maximum operating temperature		$\vartheta_{max, op}$					100			°C	
Maximum operating pressure		p _{max, op}					1000			kPa	
Testing laboratory		ISFH CalTeC					https://isfh.de/				
Test report(s)		021-22/B					Dated		26.01.2022		
Comments of testing laboratory		Ver. 6.2 (13.01.2022)									
						Institut für Solarenergieforschung GmbH Am Ohrberg 1 D-34890 Emmerthal Tel.: 05151/999-100 Fax: 05151/999-500					
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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Annex to Solar Keymark Certificate Supplementary Information							Licence Number		011-7S2551 F				
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Gross Thermal Yield in kWh/collector at mean fluid temperature ϑ_m													
Standard Locations		Athens			Davos			Stockholm			Würzburg		
Collector name	ϑ_m	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C
Arvendo Sun 2.5		2 916	2 049	1 316	2 200	1 500	927	1 621	1 046	622	1 762	1 126	660