


Annex to Solar Keymark Certificate					Licence Number		011-7S3276 F							
					Date issued		2025-01-14							
					Issued by		DINCERTCO							
Licence holder		DIMAS SA			Country		Greece							
Brand (optional)					Web		www.dimas-solar.gr							
Street, Number		2nd km Argos – Nafplio			E-mail		am@dimas-solar.gr							
Postcode, City		21200, Argos			Tel		+30 27510 20920							
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	104 K W
SUPREME 25-HX					2.52	1 257	2 006	85	1 869	1 787	1 610	1 412	1 193	776
Power output per m ² gross area									742	709	639	560	474	308
Performance parameters test method		Quasi dynamic												
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		0.744	3.13	0.010	0.000	0.00	11 470	0.000	0.00	0.0E+00	0.98			
Incidence angle modifier test method		Quasi dynamic - outdoor												
Incidence angle modifier		Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°			
Transversal		$K_{\theta T, coll}$	1.00	0.99	0.98	0.97	0.94	0.86	0.63	0.32	0.00			
Longitudinal		$K_{\theta L, coll}$	1.00	0.99	0.98	0.97	0.94	0.86	0.63	0.32	0.00			
Heat transfer medium for testing					Water									
Flow rate for testing (per gross area, A_G)					dm/dt	0.020	kg/(sm ²)							
Maximum temperature difference during thermal performance test					$(\vartheta_m - \vartheta_a)_{max}$	74	K							
Standard stagnation temperature (G = 1000 W/m ² ; $\vartheta_a = 30\text{ °C}$)					ϑ_{stg}	230	°C							
Maximum operating temperature					$\vartheta_{max, op}$	99	°C							
Maximum operating pressure					$p_{max, op}$	1000	kPa							
Testing laboratory		Institut für Gebäudeenergetik, Thermotechnik und Energiespeicherung (IGTE)					http://www.igte.uni-stuttgart.de							
Test report(s)		24COL1749 24COL1718Q					Dated		23.10.2024 29.11.2024					
Comments of testing laboratory					Ver. 6.2 (13.01.2022)									
This data sheet replaces the SK data sheet issued on November 29th 2024. The reason for the replacement is that there was an error in the comments of testing laboratory.					 <p>Forschungs- und Testzentrum für Solaranlagen Institut für Thermodynamik und Wärmetechnik Universität Stuttgart Pfaflerwaldring 6, 70550 Stuttgart (Vaihingen)</p>									
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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Supplementary Information					Issued		2024-11-29						
Gross Thermal Yield in kWh/collector at mean fluid temperature ϑ_m													
Collector name	Standard Locations	Athens			Davos			Stockholm			Würzburg		
		ϑ_m	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C
SUPREME 25-HX		3 034	2 259	1 568	2 356	1 704	1 149	1 723	1 183	766	1 880	1 287	822
Gross Thermal Yield per m ² gross area		1 204	896	622	935	676	456	684	469	304	746	511	326
Annual efficiency, η_a		68%	51%	35%	57%	41%	28%	59%	40%	26%	60%	41%	26%
Fixed or tracking collector		Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane		1765 kWh/m ²			1630 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. 6.2 (13.01.2022). A detailed description of the calculations is available at http://www.estif.org/solarkeymarknew/													
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 steel ball (maximum drop height)										1.8		m	
Additional collector attribute(s)													
Using external power source(s) for normal operation					No		Active or passive measure(s) for self-protection					No	
Co-generating thermal and electrical power					No		Façade collector(s)					No	
Energy Labelling Information							Additional Informative Technical Data						
			Reference Area, A_{sol} (m ²)		Hydraulic Designation Code				Aperture Area, A_a (m ²)				
SUPREME 25-HX			2.52		9,8-V-12S-7.2,1147-20.6,1917				2.32				
Data required for CDR (EU) No 811/2013 - Reference Area							Data required for CDR (EU) No 812/2013 - Reference Area A_{sol}						
Collector efficiency (η_{col})			60%				Zero-loss efficiency (η_0)			0.74		--	
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. Consistent data sets for either aperture or gross area can be used in calculations like in the regulation 811 and 812 and simulation programs.							First-order coefficient (a_1)			3.13		W/(m ² K)	
							Second-order coefficient (a_2)			0.010		W/(m ² K ²)	
							Incidence angle modifier IAM (50°)			0.95		--	

