



Solar Keymark
Certification Body
CEN 025

Certificazione di Prodotto *Product Certification*

Certificato N.
Certificate No.

ICIM-CLS-000181-00

ALL'AZIENDA / *TO THE FIRM*

Ariston S.p.A.

Viale Aristide Merloni, 45
60044 Fabriano (AN) - IT

UNITÀ OPERATIVE / *OPERATIVES UNITS*

Strada Provinciale 256 Muccese, 37,
60044 Albacina-Borgo Tufico (AN)

PER I SEGUENTI PRODOTTI / *FOR THE FOLLOWING PRODUCTS*

Collettore solare
Solar thermal collector

CON DENOMINAZIONE COMMERCIALE / *WITH TRADE NAME/S*

NNA
VN 2.2-2

Caratteristiche: vedi Allegato / *Characteristics: see Annex*

CONFORMEMENTE ALLA NORMA ED AL DOCUMENTO NORMATIVO ICIM
IN COMPLIANCE WITH THE STANDARD AND WITH ICIM NORMATIVE DOCUMENT

UNI EN 12975-1:2006+A1:2010, UNI EN ISO 9806:2017
Specific CEN Keymark Scheme Rules for Solar Thermal Products, ICIM 0062CS

RAPPORTI DI PROVA ACCREDITATI EN 17025 / *REFERENCE TEST REPORT ACCREDITED EN 17025*

C1855ISO

Il presente Certificato è da ritenersi valido solo se accompagnato dal relativo Allegato / *This Certificate is valid only with the relative Annex*

Rappresentante Direzione / *Management Representative*

ICIM S.p.A.

PRIMA EMISSIONE
FIRST ISSUE

14/02/2025

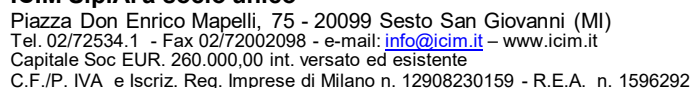
EMISSIONE CORRENTE
CURRENT ISSUE

14/02/2025

DATA DI SCADENZA
EXPIRING DATE

13/02/2028

ICIM S.p.A. - Piazza Don Enrico Mapelli, 75 - 20099 Sesto San Giovanni (MI)
Società soggetta all'attività di direzione e coordinamento di ICIM GROUP Srl



Annex to Solar Keymark Certificate

[illegible]

Annex to Solar Keymark Certificate							Licence Number		ICIM-CLS-000181				
Supplementary Information							Issued		2025-02-14				
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
VN 2.2-2		2.496	1.784	1.214	1.890	1.334	895	1.389	921	589	1.513	996	627
Gross Thermal Yield per m ² gross area		1.140	815	554	863	609	409	634	421	269	691	455	286
Annual efficiency, η_a		65%	46%	31%	53%	37%	25%	54%	36%	23%	56%	37%	23%
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										2800		Pa	
Maximum tested negative load										2400		Pa	
Hail resistance using steel ball (maximum drop height)										35		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)					
VN 2.2-2		2,19		16-V-1234S-A:5.2,970-C:16.4,1995-D				2,01					
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})		55%		Zero-loss efficiency (η_0)				0,70		--			
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)				3,58		W/(m ² K)					
		Second-order coefficient (a ₂)				0,004		W/(m ² K ²)					
		Incidence angle modifier IAM (50°)				0,97		--					
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.													