



Solar Keymark
Certification Body
CEN 025



Certificazione di Prodotto *Product Certification*

Certificato N.
Certificate No.

ICIM-CLS-000179

ALL'AZIENDA / TO THE FIRM

CLIMART S.r.l.

Viale Della Repubblica, 43
73100, Lecce (LE) - IT

UNITÀ OPERATIVE / OPERATIVES UNITS

--

PER I SEGUENTI PRODOTTI / FOR THE FOLLOWING PRODUCTS

**Sistema solare termico prefabbricato
Factory made solar thermal system**

CON DENOMINAZIONE COMMERCIALE / WITH TRADE NAME/S

SISTEMA SOLARE COMPATTO ALLINONE PREMIUM LT 200

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 12976-1:2022 / EN 12976-1:2021 - UNI EN 12976-2:2019 / EN 12976-2:2019
Specific CEN Keymark Scheme Rules for Solar Thermal Products, ICIM 0062CS**

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

S285

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

Vincenzo Delacqua
Rappresentante Direzione / Management Representative

ICIM S.p.A.

PRIMA EMISSIONE
FIRST ISSUE

21/03/2024

EMISSIONE CORRENTE
CURRENT ISSUE

21/03/2024

DATA DI SCADENZA
EXPIRING DATE

20/03/2027

Summary of		EN12976-2	SOLAR SYSTEM test results		Licence Number		ICIM-CLS-00179						
Annex to Solar KEYMARK Certificate					Issued		2024-03-21						
Company		CLIMART S.r.l.			Country		Italy						
Brand (optional)					Website		www.smart-sol.it						
Street		Viale Della Repubblica, 43			E-mail		info@climartsg.it						
Postal Code		73100 Lecce (LE)			Tel. / Fax								
System classification													
Application(s)					Hot water								
Solar loop, circulation principle					Other								
Direct solar loop / heat exchanger					Direct								
Open, vented or closed solar loop					Closed								
Drain back/down					Always filled (no drain)								
Store location					Outdoor								
Store orientation (of main axis)					Horizontal								
Type of auxiliary heating (internal back-up heat)					None								
If other auxiliary/internal back-up heating, please specify:													
Solar+supplementary OR Solar-only / Solar pre-heat					Solar only / Solar preheat								
Collector(s)					Heat store(s)								
Company		Climart			Company		Climart						
Keymark lic.no. if available		--			Keymark lic.no. if available		--						
Collector name		Per module			Store name		Total nominal volume						
		Gross Area (Ag)	Gross length	Gross width			Gross height	Gross width	Gross depth	Auxiliary heated volume	Electrical aux. heating power		
		m ²	mm	mm			litres	mm	mm	mm	litres	kW	
SISTEMA SOLARE COMPATTO		1,89	951	1890	SISTEMA SOLARE		193	262	951	1890	--	--	
Solar loop controller					Solar loop fluid								
Keymark lic.no. if available		--			Recommended/required		No recommend./requirements						
Company Name		--			Company Name		--						
Solar loop pump - power range		-- W to -- W			Freezing point		-- °C						
System family overview													
Collector name		Number of collectors in each configuration for each store											
		Store name											
		COMPATTO ALLINONE											
SISTEMA SOLARE CON		1											
Testing Laboratory					SPF Institute for Solar Technology								
Website					www.spf.ch								
Test report id. number					S285								
Date of test report					2023-10-31								
Comments of test lab													
Integrated Storage Collector (ICS)													

**ICIM S.p.A. a socio unico**

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Capitale Soc EUR. 260.000,00 int. versato ed esistente

C.F./P. IVA e Iscriz. Reg. Imprese di Milano n. 12908230159 - R.E.A. n. 1596292

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Summary of		EN12976-2		test results		Certification No.		ICIM-CLS-00179	
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Company		CLIMART S.r.l.				Country		Italy	
Brand (optional)						Website		www.smart-sol.it	
Street		Viale Della Repubblica, 43				E-mail		info@climartsg.it	
Postal Code		73100		Lecce (LE)		Tel. / Fax		0 0	
Parameters for systems extrapolation (Annex D)									
		Collector of measured system			Storage tank of measured system				
		$A_{ref} [m^2]$		--	Volume [l]		193		
		η_0		--	$A_{hx} [m^2]$		--		
		$a_1 [W/Km^2]$		--	Piping				
		$a_2 [W/Km^2]$		--					
$IAM (50^\circ)$		--	$U_{loop,p}$		--				
System parameters									
Name of System Configuration		Tested/Extrapolation	$A_c^* [m^2]$	$u_c^* [W/Km^2]$	$U_s [W/K]$	$C_s [MJ/K]$	$S_c [-]$	$D_L [-]$	$f_{aux} [-]$
SOLARE COMPATTO ALLINONE PREMIU		Tested	1,25	0,04	8,80	0,7475	0,00	0,22	--
Testing Laboratory		SPF Institute for Solar Technology							
Website		www.spf.ch							
Test report id. number		S285							
Date of test report		2023-10-31							
Test method		ISO 9459-5 (DST)							
Comments of test lab									
Integrated Storage Collector (ICS)									

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of $\pm 5\%$ to $\pm 15\%$

Version 4.5, 2017-10-24

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Postal Code		73100		Lecce (LE)		Tel. / Fax		0 / 0								
System family overview																
For each storage and collector size, give number of collectors																
Collector name		COMPATTO ALLINONE														
SISTEMA SOLARE COM		1														
Name of system configuration						SISTEMA SOLARE COMPATTO ALLINONE PR										
Collector name		COMPATTO ALLINONE		No. Collectors		1		Storage name		COMPATTO ALLINONE						
Calculated annual results for "solar-only / preheat system"																
Location	Qd,sh	Daily drawoff 170 l					Daily drawoff 200 l					Daily drawoff 250 l				
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol			
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%			
Stockholm SE	0	9492	3417	0	36	11164	3628	0	33	13939	3805	0	27			
WürzburgDE	0	9114	3655	0	40	10691	3870	36	0	13371	4092	0	31			
Davos CH	0	10281	4801	0	47	12110	5062	0	42	15137	5328	0	35			
Athens GR	0	7064	4761	0	67	8326	5245	0	63	10407	5776	0	56			
Perf. indicators for the table above																
Qd,sh	MJ/y	Not relevant for solar domestic hot water system														
Qd	MJ/y	Annual heat demand for domestic hot water														
QL	MJ/y	Annual heat energy delivered by the solar system														
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)														
$f_{sol}=Q_L/Q_d$	-	Solar fraction														
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR											
	G	1.157	1.230	1.684	1.736											
	Ta,ave	7,5	9,0	3,2	18,5											
	Tc,ave	8,5	10,0	5,4	17,8											
	± ΔTc	6,4	3,0	0,8	7,4											
G	kWh/m²	Annual irradiation South, 45°														
Ta,ave	°C	Annual average outdoor air temperature														
Tc,ave	°C	Annual average mains cold water temp.														
ΔTc	K	Seasonal variation of Tc														
Th	45 °C	Desired hot water temperature (mixing valve temperature).														
Max. operating press. - collector side				600 kPa		Max. operating press. - tank side				600 kPa						
Testing Laboratory				SPF Institute for Solar Technology												
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