



Certificate number	7692 Rev.0	Replaces	-
Issued	09/10/2024	First edition	09/10/2024
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Page	1 of 1	Contract number	PKC0013529

Product Certificate Solar Thermal Products

License holder: **JODO Italia S.r.l.**
Via 11 Settembre, 6/1 – 37019 Peschiera del Garda (VR), Italy

Production site(s): Via Venezia 11 – 37053 Cerea (VR), Italy

Product Solar thermal collector

Model(s): SOLDFP15T

Kiwa Cermet Italia hereby declares that the product can be considered complying to the testing requirements and is entitled to use the Solar Keymark Label, based upon the following aspects:

Laboratory testing of the solar thermal products, which are performed by an accredited laboratory in accordance to EN ISO/IEC 17025:2005 -see annex-, using the following standards:

- ISO 9806:2013
Solar Energy – Solar Thermal Collectors – Test Methods

Specific CEN Keymark Scheme Rules for Solar Thermal Products SKN_N0444R7.

Periodic Inspection of the Factory site(s) performed by Kiwa Cermet Italia.
A description of the test results is given in the annex to this certificate.

This certificate is issued in accordance with the Kiwa Cermet Italia regulations.

Publication of the certificate is allowed.

The validity of this certificate is subject to the positive result of periodic surveillance visits.

The validity of this certificate can be verified on request at the following e-mail address: energy@kiwacermet.it.

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Industry Division Manager
Maurizio Lorenzon

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PRD N° 0069PRD

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements



Annex to Solar Keymark Certificate		Licence Number		7692 Rev.0												
Supplementary Information		Issued		2024-10-09												
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			
SOLDFP15T		3,459	3,096	2,647	2,980	2,583	2,148	2,155	1,835	1,492	2,314	1,975	1,607			
Gross Thermal Yield per m ² gross area		1,088	974	832	937	812	676	678	577	469	728	621	505			
Annual efficiency, η_a		62%	55%	47%	57%	50%	41%	58%	49%	40%	58%	50%	41%			
Fixed or tracking collector																
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)										B		--				
G (W/m ²) >		900		ϑ_a (°C) >		15		H_x (MJ/m ²) >		540						
Maximum tested positive load										2416		Pa				
Maximum tested negative load										2014		Pa				
												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)						
SOLDFP15T							15-V-1122S-A-X-C:X			2.87						
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})							57%			Zero-loss efficiency (η_0)		0.61		--		
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)		0.85		W/(m ² K)					
							Second-order coefficient (a_2)		0.009		W/(m ² K ²)					
							Incidence angle modifier IAM (50°)		1.03		--					
							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.									
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