

CERTIFICATE OF PRODUCT CONFORMITY

Dubai Central Laboratory Department (DCLD) of Dubai Municipality
hereby attests that the product(s)

Solar Collector

(Details as per the attached Scope of Certification)

manufactured by:

TERMICOL ENERGIA SOLAR S.L.

Poligono Industrial La Isla; C/ Rio Viejo 30-39, 41703 Dos Hermanas, Sevilla, Spain

have been assessed in accordance with DCLD Document Ref. No. DM-DCLD-RD-DP21-2001 (IC) "General Rules for DM third party product certification system through factory assessment" and the relevant Specific Rules, and were found in conformity with the standard specification:

BS EN 12975-1:2006 +A1: 2010

Accordingly, DCLD hereby authorizes the above manufacturer
to affix the DCL Product Conformity Mark on the above-mentioned product(s).



for / ENGR. AMIN AHMED AMIN
Director, Dubai Central Laboratory Department
Dubai Municipality



eiāci
مركز الاعتمادات العالمية للاعتماد
Emirates International Accreditation Centre
CB-003-PRD

Certificate No: CL16020379
Valid Until: 08/07/2019



Current Issue Date: 09/07/2018
Original Issue Date: 09/07/2016

The attached Scope of Certification bearing the same Certificate Number forms an integral part of this Certificate.
This Certificate is an electronic document subject to the Terms and Conditions of the Product Certification System and shall not be reproduced except in full.

**DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME**

SCOPE OF CERTIFICATION-REVISION 01

FOR CERTIFICATE NO. CL16020379

Certificate Issued To:	TERMICOL ENERGIA SOLAR S.L. Poligono Industrial La Isla: C/Rio Viejo 30-39, 41703 Dos Hermanas, Sevilla, Spain
Applicable Standard Specification:	BS EN 12975-1:2006 +A1: 2010 – Thermal solar systems and components – Solar Collectors – Part 1: General requirements
Applicable Specific Rules:	DM-DCLD-RD-DP21-2178 (IC) – Specific Rules for FA Certification of Solar Collectors as per BS EN 12975-1: 2006 +A1:2010 RD-DP21-2084 (IC) – Guidelines for Factory Production Control Plan for Solar Collector/ Solar water heating system Manufacturers

S/N	PRODUCT DESCRIPTION	BRAND NAME(S) / MODEL(S)	PRODUCT DETAILS
1.	<p><u>Glazed Flat Plate Solar Collector</u> <u>TxxUS family</u></p> <p>Absorber Materials: BLEUTEC-ALANOD Aluminum Fins with 0.40mm</p>	<p><u>“TERMICOL”</u> <u>” & “AQUASOL”</u> <u>Brand</u></p> <p>T20US</p> <p>AQUASOL 2.0</p>	<p>Gross area of 2.07 m²; Aperture area of 1.89 m² and Absorber area of 1.90 m²; Gross dimensions: 2126 x 973 x 85 mm; Weight (dry & packed): 37 kg; Optical Efficiency is 75.70%; Effective Thermal Capacity is 10.919 J/K.m²; Heat Carrier Volume: 1.02 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Grid Ratio (18/8) is 2/9; Maximum operating pressure is 8 bars; Test Pressure is 13 bars;</p>

DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION-REVISION 01
FOR CERTIFICATE NO. CL16020379

thickness, 95% absorptance and 5% emittance, ultrasonically welded into 8mm riser copper tubes joint with 18mm header copper tubes ; Low Iron Tempered Glass 3.2mm thickness with 94% transmittance top cover; Glasswool thermal insulation with density of 30 kg/m ³ , thermal conductivity of 0.035 W/(m.K) and thickness of 40mm for insulation; Frame structure made of Extruded Anodized Aluminum Case and 50mm	T20USH	Maximum stagnation temperature is 206 °C ; Gross area of 2.02 m ² ; Aperture area of 1.89 m ² and Absorber area of 1.91 m ² ; Gross dimensions: 970 x 2130 x 83 mm; Weight (dry & packed): 36 kg; Optical Efficiency is 75.70%; Effective Thermal Capacity is 10.919 J/K.m ² ; Heat Carrier Volume: 0.95 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Grid Ratio (18/8) is 2/9; Maximum operating pressure is 8 bars; Test Pressure is 13 bars; Maximum stagnation temperature is 206 °C ;
	AQUASOL 2.0H	Gross area of 2.56 m ² ; Aperture area of 2.36 m ² and Absorber area of 2.38 m ² ; Gross dimensions: 2130 x 1.204 x 85 mm; Weight (dry & packed): 39 kg; Optical Efficiency is 75.70%; Effective Thermal Capacity is 10.919 J/K.m ² ; Heat Carrier Volume: 1.27 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Grid Ratio (18/8) is 2/11; Maximum operating pressure is 8 bars; Test Pressure is 13 bars; Maximum stagnation temperature is 206 °C ;
	T25US	Gross area of 2.54 m ² ; Aperture area of 2.36 m ² and Absorber area of 2.38 m ² ; Gross dimensions: 1200 x 2130 x 83 mm; Weight (dry & packed): 40 kg;
	AQUASOL 2.5	
	T25USH	

**DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME**

**SCOPE OF CERTIFICATION-REVISION 01
FOR CERTIFICATE NO. CL16020379**

	Aluminum sheet for base sheeting; Neutral silicone watertight sealed and EPDM joint between the solar glass and the Aluminum Casing;	AQUASOL 2.5H	Optical Efficiency is 75.70%; Effective Thermal Capacity is 10.919 J/K.m ² ; Heat Carrier Volume: 1.05 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Grid Ratio (18/8) is 2/11; Maximum operating pressure is 8 bars; Test Pressure is 13 bars; Maximum stagnation temperature is 206 °C ;
2	<u>Glazed Flat Plate Solar Collector SILVER family*</u> Absorber Materials: TINOX Robust Aluminum with 0.40mm thickness, 94% ± 2% absorptance and 4% ± 2% emittance, laser welded into 8mm riser copper tubes joint with 18mm header copper tubes ; Low Iron Tempered Glass 3.2mm thickness with 91.3%	<u>“TERMICOL” & “AQUASOL” Brand</u> S21 ASSF2.1 S21H ASSF2.1H	Gross area of 2.14 m ² ; Aperture area of 2.09 m ² and Absorber area of 2.00 m ² ; Gross dimensions: 2048 x 1048 x 50 mm; Weight (dry & packed): 28.9 kg; Effective Heat Capacity (including water fluid): 8,975 kJ/kgK; Effective Heat Capacity (without water fluid): 4,168 kJ/kgK; Fluid Content: 1.1 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Number of risers; 9 Distance between risers: 115mm Maximum operating pressure is 8 bar; Minimum/Maximum installation orientation: 15°-90° Maximum stagnation temperature is 201 °C ; Gross area of 2.14 m ² ; Aperture area of 2.09 m ² and Absorber area of 2.00 m ² ; Gross dimensions: 1048 x 2048 x 50 mm; Weight (dry & packed): 28.9 kg; Effective Heat Capacity (including water fluid): 8,975 kJ/kgK; Effective Heat Capacity (without water fluid): 4,168 kJ/kgK;

**DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME**

SCOPE OF CERTIFICATION-REVISION 01

FOR CERTIFICATE NO. CL16020379

	<p>transmittance top cover; Glasswool thermal insulation with thermal conductivity of 0.033 W/(m.K) and thickness of 20mm back insulation; Frame structure made of Aluminum Casing;</p>	<p>S26</p> <p>ASSF2.6</p> <p>S26H</p> <p>ASSF2.6H</p>	<p>Fluid Content: 1.1 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Number of risers; 9 Distance between risers: 115mm Maximum operating pressure is 8 bar; Minimum/Maximum installation orientation: 15°-90° Maximum stagnation temperature is 201 °C;</p> <p>Gross area of 2.55 m²; Aperture area of 2.43 m² and Absorber area of 2.42 m²; Gross dimensions: 2047 x 1247 x 49 mm; Weight (dry & packed): 34.4 kg; Effective Heat Capacity (including water fluid): 10,893 kJ/kgK; Effective Heat Capacity (without water fluid): 5,096 kJ/kgK; Fluid Content: 1.4 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Number of risers; 11 Distance between risers: 115mm Maximum operating pressure is 8 bar; Minimum/Maximum installation orientation: 15°-90° Maximum stagnation temperature is 201 °C;</p> <p>Gross area of 2.55 m²; Aperture area of 2.43 m² and Absorber area of 2.42 m²; Gross dimensions: 1247 x 2047 x 49 mm; Weight (dry & packed): 34.4 kg; Effective Heat Capacity (including water fluid): 10,893 kJ/kgK; Effective Heat Capacity (without water fluid):</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME**

**SCOPE OF CERTIFICATION-REVISION 01
FOR CERTIFICATE NO. CL16020379**

			<p>5,096 kJ/kgK; Fluid Content: 1.4 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Number of risers; 11 Distance between risers: 115mm Maximum operating pressure is 8 bar; Minimum/Maximum installation orientation: 15°-90° Maximum stagnation temperature is 201 °C;</p>
3	<p><u>Glazed Flat Plate</u> <u>Solar Collector</u> <u>PLATINUM</u> <u>family*</u></p> <p>Absorber Materials: TINOX Robust Aluminum Fin with 0.40mm thickness, 94% ± 2% absorptance and 4% ± 2% emittance, laser welded into 8mm riser copper tubes joint with 18mm header copper tubes ; Low Iron Solar Tempered Glass 3.2mm thickness</p>	<p><u>“TERMICOL</u> <u>” &</u> <u>“AQUASOL”</u> <u>Brand</u></p> <p>P21</p> <p>ASPF2.1</p> <p>P21H</p> <p>ASPF2.1H</p>	<p>Gross area of 2.29 m²; Aperture area of 2.01 m² and Absorber area of 2.00 m²; Gross dimensions: 2095 x 1092 x 100 mm; Weight (dry & packed): 38.1 kg; Effective Thermal Capacity: 10.347 J/K; Fluid Content: 1.15 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Number of risers; 9 Distance between risers: 115mm Maximum operating pressure is 8 bar; Minimum/Maximum installation orientation: 15°-90° Maximum stagnation temperature is 210.0 °C;</p> <p>Gross area of 2.29 m², Aperture area of 2.01 m² and Absorber area of 2.00 m²; Gross dimensions: 1092 x 2095 x 100 mm; Weight (dry & packed): 38.1 kg; Effective Thermal Capacity: 10.347 J/K; Fluid Content: 1.15 Liters; Absorber pipe dimensions: Header - 18 mm and Risers – 8mm; Number of risers; 9 Distance between risers: 115mm</p>



**DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME**

**SCOPE OF CERTIFICATION-REVISION 01
FOR CERTIFICATE NO. CL16020379**

with 91.3% transmittance top cover; Glasswool thermal insulation with thickness of 50mm for back insulation; Frame structure made of Aluminum back and side Casing; Structural Silicone Bi-component between the solar glass and the Aluminum Casing;		Maximum operating pressure is 8 bar; Minimum/Maximum installation orientation: 15°-90° Maximum stagnation temperature is 210.0 °C;
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------

*-newly added products

NOTE 1: This document forms part of the Certificate of Product Conformity bearing the same certificate number.

NOTE 2: The above products shall bear the DCL Conformity Mark.

NOTE 3: This supersedes the Scope of Certification issued on 09 July 2018.

Original Issue Date : 09 July 2016

Current Issue Date : 12 March 2019

Valid Until : 08 July 2019

ARIF HUSAIN AL MARZOOQI

Products Conformity Assessment Section Manager
Dubai Central Laboratory Department