

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, Seville, 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



Certificate No: CL16020379
Valid Until: 08/07/2022



Current Issue Date: 09/07/2021
Original Issue Date: 09/07/2016



The attached Scope of Certification bearing the same Certificate Number forms an integral part of this Certificate.
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DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION
FOR CERTIFICATE NO. CL16020379

Certificate Issued To:	TERMICOL ENERGIA SOLAR S.L. Poligono Industrial La Isla: C/Rio Viejo 30-39, 41703 Dos Hermanas, Seville, 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 DM-DCLD-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</u> <u>Solar Collector</u> <u>TxxUS family</u></p> <p>Absorber Materials: BLEUTEC- ALANOD</p> <p>Aluminum Fins with 0.40mm thickness, 95% absorptance and 5% emittance, ultrasonically welded into 8mm riser copper tubes joint with 18mm header copper tubes ;</p>	<p><u>TERMICOL</u> <u>AQUASOL</u> <u>&</u> <u>THERMOSOL</u> <u>GULF</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; Maximum stagnation temperature is 206 °C;</p>



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	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 Aluminum sheet for base sheeting; Neutral silicone watertight sealed and EPDM joint between the solar glass and the Aluminum Casing;	T20USH AQUASOL 2.0H	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 ;
		T25US AQUASOL 2.5	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 ;
		T25USH AQUASOL 2.5H	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;



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			<p>Optical Efficiency is 75.70%; Effective Thermal Capacity is 10.919 J/K.m²; 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;</p>
2	<p><u>Glazed Flat Plate</u> <u>Solar Collector</u> <u>SILVER family</u></p> <p>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% transmittance top cover; Glasswool thermal insulation with</p>	<p><u>TERMICOL</u> <u>AQUASOL</u> <u>&</u> <u>THERMOSOL</u> <u>GULF</u> <u>Brand</u></p> <p>S21</p> <p>ASSF2.1</p> <p>S21H</p> <p>ASSF2.1H</p>	<p>Gross area of 2.14 m²; Aperture area of 2.09 m² and Absorber area of 2.00 m²; 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;</p> <p>Gross area of 2.14 m²; Aperture area of 2.09 m² and Absorber area of 2.00 m²; 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):</p>



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	<p>thermal conductivity of 0.033 W/(m.K) and thickness of 20mm back insulation;</p> <p>Frame structure made of Aluminum Casing;</p>		<p>4,168 kJ/kgK;</p> <p>Fluid Content: 1.1 Liters;</p> <p>Absorber pipe dimensions: Header - 18 mm and Risers – 8mm;</p> <p>Number of risers; 9</p> <p>Distance between risers: 115mm</p> <p>Maximum operating pressure is 8 bar;</p> <p>Minimum/Maximum installation orientation: 15°-90°</p> <p>Maximum stagnation temperature is 201 °C;</p>
		<p>S26</p> <p>ASSF2.6</p>	<p>Gross area of 2.55 m²; Aperture area of 2.43 m² and Absorber area of 2.42 m²;</p> <p>Gross dimensions: 2047 x 1247 x 49 mm;</p> <p>Weight (dry & packed): 34.4 kg;</p> <p>Effective Heat Capacity (including water fluid): 10,893 kJ/kgK;</p> <p>Effective Heat Capacity (without water fluid): 5,096 kJ/kgK;</p> <p>Fluid Content: 1.4 Liters;</p> <p>Absorber pipe dimensions: Header - 18 mm and Risers – 8mm;</p> <p>Number of risers; 11</p> <p>Distance between risers: 115mm</p> <p>Maximum operating pressure is 8 bar;</p> <p>Minimum/Maximum installation orientation: 15°-90°</p> <p>Maximum stagnation temperature is 201 °C;</p>
		<p>S26H</p> <p>ASSF2.6H</p>	<p>Gross area of 2.55 m²; Aperture area of 2.43 m² and Absorber area of 2.42 m²;</p> <p>Gross dimensions: 1247 x 2047 x 49 mm;</p> <p>Weight (dry & packed): 34.4 kg;</p>



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			<p>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>
3	<p><u>Glazed Flat Plate Solar Collector PLATINUM 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 with 91.3%</p>	<p><u>TERMICOL</u> <u>AQUASOL</u> <u>&</u> <u>THERMOSOL</u> <u>GULF</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;</p>



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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;		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;
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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.

Original Issue Date : 09 July 2016

Current Issue Date : 09 July 2021

Valid Until : 08 July 2022

ARIF HUSAIN AL MARZOOQI

Products Conformity Assessment Section Manager
Dubai Central Laboratory Department