

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:

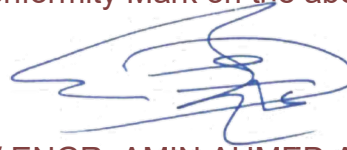
TERMICOL ENERGIA SOLAR S.L.

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



Certificate No: CL16020379
Valid Until: 08/07/2021



Current Issue Date: 09/07/2020
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
FOR CERTIFICATE NO. CL16020379

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| 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 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 |
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| 1. | <p><u>Glazed Flat Plate Solar Collector 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 ; Low Iron Tempered</p> | <p><u>TERMICOL AQUASOL & THERMOSOL GULF Brand T20US AQUASOL 2.0</u></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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| <p>Glass 3.2mm thickness with 94% transmittance top cover; Glasswool thermal insulation with density of 30 kg/m³, 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;</p> | <p>T20USH AQUASOL 2.0H</p> | <p>Gross area of 2.02 m²; Aperture area of 1.89 m² and Absorber area of 1.91 m²; 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.m²; 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;</p> |
| | <p>T25US AQUASOL 2.5</p> | <p>Gross area of 2.56 m²; Aperture area of 2.36 m² and Absorber area of 2.38 m²; 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.m²; 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;</p> |
| | <p>T25USH AQUASOL 2.5H</p> | <p>Gross area of 2.54 m²; Aperture area of 2.36 m² and Absorber area of 2.38 m²; Gross dimensions: 1200 x 2130 x 83 mm; Weight (dry & packed): 40 kg; Optical Efficiency is 75.70%; Effective Thermal Capacity is 10.919 J/K.m²;</p> |

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| | | | <p>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 Solar Collector 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 thermal conductivity of</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): 4,168 kJ/kgK; Fluid Content: 1.1 Liters;</p> |

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| | 0.033 W/(m.K) and thickness of 20mm back insulation; Frame structure made of Aluminum Casing; | | <p>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>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; 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>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; 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> |

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| | | | <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 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% transmittance top cover; Glasswool thermal insulation with</p> | <p><u>TERMICOL AQUASOL & THERMOSOL GULF 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;</p> |

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| 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; | | 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 2020

Valid Until : 08 July 2021



ARIF HUSAIN AL MARZOOQI

Products Conformity Assessment Section Manager
Dubai Central Laboratory Department