



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:

HEWALEX SP. Z.O.O. SP.K.

ul. Slowackiego 33, 43-502 Czechowice-Dziedzice, Poland

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: CL17020440 Valid Until: 20/01/2022



Current Issue Date: 21/01/2021 Original Issue Date: 05/04/2017



DM-DCLD-F-IC-2031 Rev 18

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.

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SCOPE OF CERTIFICATION FOR CERTIFICATE NO. CL17020440

Certificate Issued To: HEWALEX SP. Z.O.O. SP. K

ul. Słowackiego 33, 43-502 Czechowice-Dziedzice,

Poland

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

Certification of Solar Collectors as per BS EN

12975-1 through Factory Assessment

DM-DCLD-RD-DP21-2084 (IC) - Guidelines for

Factory Production control Plan for Solar Collector

Manufacturers

| s/N | PRODUCT DESCRIPTION | BRAND NAME(S) / MODEL(S) | PRODUCT DETAILS |
|-----|---|---|--|
| | Glazed Flat Plate Solar Collector | | Gross area of 2.05 m²; Aperture |
| 1 | Model KS 2100 TAC | HEWALEX & | area of 1.82 m² and Absorber area |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Clear Solar Glass 3.0mm thickness with 91.1% transmittance top cover; Mineral wool thermal insulation with thermal conductivity of 0.039 W/(m.K), density of 120 kg/m³, and thickness of 20mm for lateral insulation and density of 50 kg/m³ and thickness of 40mm for back insulation; Enclosure side material made of aluminum case and aluminum sheet | HEWALEX & ECOTOP Brand HEWALEX KS 2100 TAC ECOTOP VHT 2.1 | area of 1.82 m² and Absorber area of 1.84 m²; Gross dimensions: 2018 x 1019 x 89 mm; Weight (dry & packed): 34.5 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 0.81 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 8 pcs. of 6mm; Distance between risers is 115mm; Maximum operating pressure is 10 bar; Maximum operating temperature is 250°; Maximum stagnation temperature is 204.2 °C; Vertical installation (max. 90°) |
| | insulation; Enclosure side material made of | | |





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| _ 1 | | | |
|-----|---|---------------------------|--|
| 2 | Glazed Flat Plate Solar Collector | HEWALEX & | Gross area of 2.09 m ² ; Aperture |
| | Model KS 2100 TLP AC | ECOTOP Brand | area of 1.82 m² and Absorber area |
| | Absorber Materials: BlueTec Eta Plus | | of 1.83 m²; |
| | Aluminum Sheet with 0.40mm | | Gross dimensions: 2018 x 1036 x |
| | thickness, 95% absorptance and 5% | | 89 mm; |
| | emittance, laser welded into 6mm | HEWALEX | Weight (dry & packed): 34.5 kg; |
| | riser copper tubes joint with 18mm | KS 2100 TLP AC | Effective Thermal Capacity is |
| | header copper tubes; | | 8.986 J/K; |
| | Matt Tempered Glass with low iron | ECOTOP VHM 2.1 | Fluid Content: 0.85 Liters; |
| | content 3.2mm thickness with 91.4% | | Absorber pipe dimensions: Header |
| | transmittance top cover; | | - 2 pcs. of 18 mm and Risers $-$ 10 |
| | Mineral wool thermal insulation with | | pcs. of 6mm; |
| | thermal conductivity of 0.039 | | Distance between risers is 92mm; |
| | W/(m.K), density of 120 kg/m³, and | | Maximum operating pressure is 10 |
| | thickness of 20mm for lateral | | bar; |
| | insulation and density of 50 kg/m³ | | Maximum operating temperature |
| | and thickness of 40mm for back | | is 250°; |
| | insulation; | | Maximum stagnation temperature |
| | Enclosure side material made of | | is 212.8 °C; |
| | Aluminum Case and Aluminum sheet | | Vertical installation (max. 90°) |
| | for enclosure back material; | | |
| | Glue MS Polymer | | |
| 2 | Glazed Flat Plate Solar Collector Model KS 2600 TLP AC | UEWALEY O | Gross area of 2.65 m ² ; Aperture |
| 3 | | HEWALEX & | area of 2.36 m² and Absorber area |
| | | ECOTOP Brand | of 2.37 m ² ; |
| | Absorber Materials: BlueTec Eta Plus | | |
| | | | Gross dimensions: 2018 x 1314 x |
| | Aluminum Sheet with 0.40mm | 11511115 | Gross dimensions: 2018 x 1314 x 89 mm; |
| | | HEWALEX | |
| | Aluminum Sheet with 0.40mm | HEWALEX KS 2600 TLP AC | 89 mm; |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm | | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron content 3.2mm thickness with 91.4% | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 13 |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron content 3.2mm thickness with 91.4% transmittance top cover; | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 13 pcs. of 6mm; Distance between risers is 92mm; |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron content 3.2mm thickness with 91.4% transmittance top cover; Mineral wool thermal insulation with | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 13 pcs. of 6mm; Distance between risers is 92mm; Maximum operating pressure is 10 |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron content 3.2mm thickness with 91.4% transmittance top cover; Mineral wool thermal insulation with thermal conductivity of 0.039 | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 13 pcs. of 6mm; Distance between risers is 92mm; Maximum operating pressure is 10 bar; |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron content 3.2mm thickness with 91.4% transmittance top cover; Mineral wool thermal insulation with thermal conductivity of 0.039 W/(m.K), density of 120 kg/m³, and | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 13 pcs. of 6mm; Distance between risers is 92mm; Maximum operating pressure is 10 bar; Maximum operating temperature |
| | Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Matt Tempered Glass with low iron content 3.2mm thickness with 91.4% transmittance top cover; Mineral wool thermal insulation with thermal conductivity of 0.039 W/(m.K), density of 120 kg/m³, and thickness of 20mm for lateral | KS 2600 TLP AC | 89 mm; Weight (dry & packed): 42.4 kg; Effective Thermal Capacity is 8.986 J/K; Fluid Content: 1.09 Liters; Absorber pipe dimensions: Header – 2 pcs. of 18 mm and Risers – 13 pcs. of 6mm; Distance between risers is 92mm; Maximum operating pressure is 10 bar; |





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| | Enclosure side material made of | | Vertical installation (max. 90°) |
|---|---|-----------------------------|--|
| | Aluminum Case and Aluminum sheet | | vertical installation (max. 30) |
| | for enclosure back material; | | |
| | Glue MS Polymer | | |
| | Glazed Flat Plate Solar Collector | HEWALEX & | |
| 4 | Model KS 2100F TLP AC | ECOTOP Brand | Gross area of 2.06 m ² ; Aperture |
| | Model KS 2100F ILF AC | ECOTOP BI AIIU | area of 1.93 m ² and Absorber area |
| | Absorber Materials: BlueTec Eta Plus | | |
| | | LIEWALEY | of 1.93 m²; |
| | Aluminum Sheet with 0.40mm | HEWALEX | Gross dimensions: 2020 x 1019 x |
| | thickness, 95% absorptance and 5% | KS 2100F TLP AC | 90 mm; |
| | emittance, laser welded into 6mm | | Weight (dry & packed): 33.7 kg; |
| | riser copper tubes joint with 18mm | ECOTOP VHM 2.1N | Effective Thermal Capacity is |
| | header copper tubes ; | | 8.740 J/K; |
| | Tempered Glass with low iron | | Fluid Content: 0.87 Liters; |
| | content 3.2mm thickness with 91.4% | | Absorber pipe dimensions: Header |
| | transmittance top cover; | | – 2 pcs. of 18 mm and Risers – 11 |
| | Melamin foam thermal insulation | | pcs. of 6mm; |
| | with thickness of 10mm for lateral | | Distance between risers is 88mm; |
| | insulation and mineral wool thermal | | Flow pattern: Vertical tube-grid |
| | insulation thickness of 40mm for | | Maximum operating pressure is 10 |
| | back insulation; | | bar; |
| | Enclosure side material made of | | Maximum operating temperature |
| | Aluminum Case and Aluminum sheet | | is 250°C; |
| | for enclosure back material with Air | | Maximum stagnation temperature |
| | filtration; | | is 201.2 °C; |
| | Sealing material: EPDM | | Vertical installation (max. 90°) |
| | | | |
| 5 | Glazed Flat Plate Solar Collector | HEWALEX & | Gross area of 2.62 m²; Aperture |
| 5 | | | |
| | Model KS 2600F TLP AC | ECOTOP Brand | area of 2.47 m² and Absorber area |
| | Model KS 2600F TLP AC | <u>ECOTOP Brand</u> | area of 2.47 m^2 and Absorber area of 2.47 m^2 ; |
| | Model KS 2600F TLP AC Absorber Materials: BlueTec Eta Plus | ECOTOP Brand | |
| | | <i>ECOTOP Brand</i> HEWALEX | of 2.47 m ² ; |
| | Absorber Materials: BlueTec Eta Plus | | of 2.47 m ² ; Gross dimensions: 2020 x 1297 x |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm | HEWALEX | of 2.47 m ² ; Gross dimensions: 2020 \times 1297 \times 90 mm; |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% | HEWALEX | of 2.47 m²; Gross dimensions: 2020 x 1297 x 90 mm; Weight (dry & packed): 41.8 kg; |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm | HEWALEX KS 2600F TLP AC | of 2.47 m²; Gross dimensions: 2020 x 1297 x 90 mm; Weight (dry & packed): 41.8 kg; Effective Thermal Capacity is |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm | HEWALEX KS 2600F TLP AC | of 2.47 m²; Gross dimensions: 2020 x 1297 x 90 mm; Weight (dry & packed): 41.8 kg; Effective Thermal Capacity is 11.123 J/K; |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; | HEWALEX KS 2600F TLP AC | of 2.47 m ² ; Gross dimensions: 2020 x 1297 x 90 mm; Weight (dry & packed): 41.8 kg; Effective Thermal Capacity is 11.123 J/K; Fluid Content: 1.1 Liters; |
| | Absorber Materials: BlueTec Eta Plus Aluminum Sheet with 0.40mm thickness, 95% absorptance and 5% emittance, laser welded into 6mm riser copper tubes joint with 18mm header copper tubes; Tempered Glass with low iron | HEWALEX KS 2600F TLP AC | of 2.47 m ² ; Gross dimensions: 2020 x 1297 x 90 mm; Weight (dry & packed): 41.8 kg; Effective Thermal Capacity is 11.123 J/K; Fluid Content: 1.1 Liters; Absorber pipe dimensions: Header |





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with thickness of 10mm for lateral insulation and mineral wool thermal insulation thickness of 40mm for back insulation;

Enclosure side material made of Aluminum Case and Aluminum sheet for enclosure back material with Air filtration;

Sealing material: EPDM

Flow pattern: Vertical tube-grid

Maximum operating pressure is 10
bar;

Maximum operating temperature
is 250°C;

Maximum stagnation temperature
is 187.7°C;

Vertical installation (max. 90°)

NOTE 1: The above products shall bear the DCL Conformity Mark applied on each individual product.

NOTE 2: This document forms part of the Certificate of Product Conformity bearing the same certificate number.

Original Issue Date : 05 April 2017

Current Issue Date : 21 January 2021

Valid Until : 20 January 2022

ARIF HUSAIN AL MARZOOQI

Products Conformity Assessment Section Manager

Dubai Central Laboratory Department