

## CERTIFICATE OF PRODUCT CONFORMITY

*Dubai Central Laboratory Department (DCLD) of Dubai Municipality,*

*hereby attests that the product(s)*

**THERMAL SOLAR SYSTEMS AND COMPONENTS – SOLAR COLLECTORS**

*(Details as per the attached Scope of Certification)*

*manufactured by:*

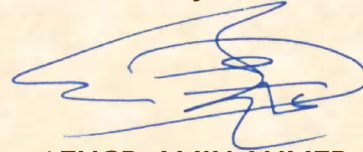
**HELLEN MIKE**

**Tegeas 29, Peristeri, 12133 Athens, Greece**

*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 to the above-mentioned product(s).*



for / **ENGR. AMIN AHMED AMIN**

**Director, Dubai Central Laboratory Department**

**Dubai Municipality**

Verify:



**Certificate No: CL16020371**

**Valid Until: 26 June 2019**



**Current Issue Date: 27 June 2018**

**Original Issue Date: 27 June 2016**

DM-DCLD-F-IC-2031 REV 13

*The attached Scope of Certification bearing the same Certificate No. 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. CL16020371**

<b>Certificate Issued To:</b>	<b>HELIEN MIKE</b> Tegeas 29, Peristeri, 12133 Athens, Greece
<b>Applicable Standard Specification:</b>	BS EN 12975-1:2006 +A1: 2010 – Thermal solar systems and components – Solar Collectors – Part 1: General requirements
<b>Applicable Specific Rules:</b>	RD-DP21-2178 (IC) – Specific Rules Certification of Solar Collectors as per BS EN 12975-1 Through Factory Assessment; RD-DP21-2084 (IC) – Guidelines for Factory Production control Plan for Solar Collector Manufacturers

S/N	PRODUCT DETAILS	BRAND NAME(S) MODEL(S)	PRODUCT DESCRIPTION
1.	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5 mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8 mm riser copper tubes joint with 22 mm header copper tubes;</p> <p>Low iron tempered glass 4mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 50 kg/m<sup>3</sup>, 30 mm thickness, thermal conductivity of 0.035W/(m-K)@ 10°C for back insulation;</p> <p>Glasswool thermal insulation with density of 60 kg/m<sup>3</sup>, 15 mm thickness, thermal conductivity of 0.032W/(m-K)@ 10°C for side insulation;</p> <p>Frame structure made from Aluminum coated painted 1.4 mm thickness and back sheet hot galvanized sheet 0.5 mm thickness.</p> <p>Silicone, EPDM and Aluminum Supports for sealing materials.</p>	<p><b>“HELIEN”</b> <b>Brand</b></p> <p><b>AFS 20/9</b></p>	<p>Gross area of 2 m<sup>2</sup>, Aperture area of 1.87 m<sup>2</sup>, Absorber area of 1.86 m<sup>2</sup>,</p> <p>Gross dimensions: 200 3x 1003 x 85 mm</p> <p>Weight empty: 40 Kg</p> <p>Heat carrier volume: 1.42 liters</p> <p>Absorber pipes dimensions:</p> <p>Header -22 x 0.7 mm, Risers – 8 x 0.4 mm</p> <p>Number of tubes is 9, Tube pitch is 97 mm</p> <p>Maximum operating pressure is 10 bars</p> <p>Test pressure is 20 bars</p> <p>Nominal flow rate is 144 l/h</p> <p>Stagnation temperature 183.3 °C,</p> <p>Mounting In Roof – On Roof – Flat Roof</p>

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S/N	PRODUCT DETAILS	BRAND NAME(S) MODEL(S)	PRODUCT DESCRIPTION
2	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes;</p> <p>Low iron tempered glass 3.2mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation;</p> <p>Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness;</p> <p>Silicone paste, EPDM and Aluminum supports for sealing materials.</p>	<p><b>"HELLEN"</b> <b>Brand</b> <b>AFS-SK 15/9</b></p>	<p>Gross area of 1.51m<sup>2</sup>, Aperture area of 1.38m<sup>2</sup>, Absorber area of 1.38m<sup>2</sup>, Gross dimensions: 1484x1015x86 mm Weight empty : 28.8kg Heat carrier volume:1.23 liters Absorber pipes dimensions: Header diameter - 22x 0.7mm Risers diameter - 8x 0.4mm Number of tubes is 9 Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 99.4 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>
S/N	PRODUCT DETAILS	BRAND NAME(S) MODEL(S)	PRODUCT DESCRIPTION
3	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes;</p> <p>Low iron tempered glass 3.2mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation;</p>	<p><b>"HELLEN"</b> <b>Brand</b> <b>AFS-SK 18/9</b></p>	<p>Gross area of 1.82m<sup>2</sup>, Aperture area of 1.72m<sup>2</sup>, Absorber area of 1.72m<sup>2</sup>, Gross dimensions: 1480x1230x86 mm Weight empty : 31.5kg Heat carrier volume:1.32 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 9</p>

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	<p>Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness; Silicone paste, EPDM and Aluminum supports for sealing materials.</p>		<p>Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 124 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>
4	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes; Low iron tempered glass 3.2mm with high transmittance top cover; Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation; Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness; Silicone paste, EPDM and Aluminum supports for sealing materials.</p>	<p><b>“HELLEN” Brand AFS-SK 20/9</b></p>	<p>Gross area of 2.00m<sup>2</sup>, Aperture area of 1.86m<sup>2</sup>, Absorber area of 1.86m<sup>2</sup>, Gross dimensions: 1980x1010x86 mm Weight empty : 34.0 kg Heat carrier volume:1.42 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 9 Tube pitch is 105 mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 134 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>

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5	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes;</p> <p>Low iron tempered glass 3.2mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation;</p> <p>Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness;</p> <p>Silicone paste, EPDM and Aluminum supports for sealing materials.</p>	<p><b>"HELLEN"</b> <b>Brand</b> <b>AFS-SK HOR</b> <b>20/9</b></p>	<p>Gross area of 2.00m<sup>2</sup>, Aperture area of 1.86m<sup>2</sup>, Absorber area of 1.86m<sup>2</sup>, Gross dimensions: 1010x1980x86 mm Weight empty : 34.8kg Heat carrier volume:2.04 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 18 Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 134 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>
S/N	PRODUCT DETAILS	BRAND NAME(S) MODEL(S)	PRODUCT DESCRIPTION
6	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes;</p> <p>Low iron tempered glass 3.2mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation;</p>	<p><b>"HELLEN"</b> <b>Brand</b> <b>AFS-SK 24/11</b></p>	<p>Gross area of 2.37m<sup>2</sup>, Aperture area of 2.23m<sup>2</sup>, Absorber area of 2.23m<sup>2</sup>, Gross dimensions: 1930x1230x86 mm Weight empty : 41.5kg Heat carrier volume:1.71 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 11</p>

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	<p>Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness; Silicone paste, EPDM and Aluminum supports for sealing materials.</p>		<p>Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 161 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>
7	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes; Low iron tempered glass 3.2mm with high transmittance top cover; Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation; Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness; Silicone paste, EPDM and Aluminum supports for sealing materials.</p>	<p><b>“HELIEN” Brand AFS-SK HOR 24/11</b></p>	<p>Gross area of 2.37m<sup>2</sup>, Aperture area of 2.23m<sup>2</sup>, Absorber area of 2.23m<sup>2</sup>, Gross dimensions: 1230x1930x86 mm Weight empty : 42.1kg Heat carrier volume:2.16 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 18 Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 161 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>

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8	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes;</p> <p>Low iron tempered glass 3.2mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation;</p> <p>Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness;</p> <p>Silicone paste, EPDM and Aluminum supports for sealing materials.</p>	<p><b>"HELLEN"</b> <b>Brand</b> <b>AFS-SK 27/11</b></p>	<p>Gross area of 2.73m<sup>2</sup>, Aperture area of 2.57m<sup>2</sup>, Absorber area of 2.57m<sup>2</sup>, Gross dimensions: 2162x1261x86 mm Weight empty : 47.4kgr Heat carrier volume:1.82 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 11 Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 186 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>
S/N	PRODUCT DETAILS	BRAND NAME(S) MODEL(S)	PRODUCT DESCRIPTION
9	<p>Absorber Materials: Selective Mirotherm Aluminum with 0.5mm thickness, Absorption coefficient 95 +/-2, Emission coefficient 5 +/- 2, laser welded 8mm riser copper tubes joint with 22mm header copper tubes;</p> <p>Low iron tempered glass 3.2mm with high transmittance top cover;</p> <p>Rockwool thermal insulation with density of 70 kg/m<sup>3</sup>, thermal conductivity of 0.035W/(m-K) &amp; thickness of 30mm for insulation;</p>	<p><b>"HELLEN"</b> <b>Brand</b> <b>AFS-SK HOR 27/11</b></p>	<p>Gross area of 2.73m<sup>2</sup>, Aperture area of 2.57m<sup>2</sup>, Absorber area of 2.57m<sup>2</sup>, Gross dimensions: 1261x2162x86 mm Weight empty : 48.2kgr Heat carrier volume:2.57 liters Absorber pipes dimensions: Header diameter -22x 0.7mm Risers diameter -8x 0.4mm Number of tubes is 19</p>

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	<p>Frame structure made from ALUMINIUM coated painted 1.0mm thickness and back sheet Aluzinc sheet 0.4 mm thickness; Silicone paste, EPDM and Aluminum supports for sealing materials.</p>		<p>Tube pitch is 105mm Maximum operating pressure is 10 bars Test pressure is 20 bars Nominal flow rate is 186 l/h Stagnation temperature 151.9 °C, Mounting In roof – On roof – Flat roof.</p>
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*NOTE1: This document forms part of the Certificate of Product Conformity bearing the same certificate number.*

*NOTE2: The above products shall bear the DCL Conformity Mark.*

*Original Issue Date : 27 June 2016*

*Current Issue Date : 27 June 2018*

*Valid Until : 26 June 2019*



**ARIF HUSAIN AL MARZOOQI**

Director of Products Conformity Assessment Section  
Dubai Central Laboratory Department