



#### 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:

#### SAMMLER B. MICHALOPOULOS S.A. 18 Chiou STR-19300-Aspropygos Industrial Zone – 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 on the above-mentioned product(s).

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



Certificate No: CL16020378 Valid Until: 13/07/2022



Current Issue Date: 14/07/2021 Original Issue Date: 14/07/2016



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. CL16020378

Certificate Issued To: SAMMLER B. MICHALOPOULOS S.A.

18 Chiou STR-19300-Aspropygos Industrial Zone -

Athens, Greece

**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	(BRANDS)	Gross area of 2.09 m²; Aperture
	COLLECTOR ARIS BLACK		area of 1.92 m² and Absorber
1.	PAINTED FAMILY	SAMMLER	area of 1.91 m²;
		CRONIUS	Gross dimensions: 2030 x 1030
	Absorber Materials: Aluminum	KALTECH	x 89 mm;
	high selective ALANOD Mirosol	REGULUS	Weight (dry & packed): 42 kg;
	TSS with 0.50mm thickness, 90%	RENERGY	Vertical installation;
	absorptance and 12% emittance,	SOLAR PLUS PRO	Grid type of Absorber;
	laser welded into 8mm riser copper		Absorber capacity is 1.37 l;
	tubes joint with 22mm header	(MODELS)	Absorber pipe dimensions:
	copper tubes;		Header - 22mm x 0.45mm and
	3.2mm thickness Solar Glass with	ARIS 2003	Risers – 8mm x 0.45mm;
91.8% transmittance Rockwool thermal insu density of 40 kg/m³and of 40mm for bottom and Glasswool thermal with density of 40 kg	91.8% transmittance top cover;	CRONIUS P220	Number of tubes: 9 pieces. risers
	Rockwool thermal insulation with	KALTECH KE 2.0E	& 4 exits headers;
	density of 40 kg/m³and thickness	KPR1+ C	Maximum operating pressure is
	of 40mm for bottom insulation	RSTC 2003	10 bar;
	and Glasswool thermal insulation	SP/AR2003	Stagnation temperature is 201
	with density of 40 kg/m³and		°C;
	thickness of 20mm for side		
	insulation;		





## SCOPE OF CERTIFICATION FOR CERTIFICATE NO. CL16020378

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	Frame structure made of Extruded		
	Aluminum 1.3mm thickness-		
	painted RAL7038 and 0.50mm		
	Aluminum Zinc sheet as back		
	plate;		
	EPDM, Silicone watertight sealed		
	between the solar glass and the		
	Aluminum Casing;		
	GLAZED FLAT PLATE SOLAR	(BRANDS)	Gross area of 2.09 m²; Aperture
	<u>COLLECTOR</u>		area of 1.92 m² and Absorber
2.	ARIS SELECTIVE FAMILY	SAMMLER	area of 1.91 m²;
		CRONIUS	Gross dimensions: 2030 x 1030
	Absorber Materials: Aluminum	KALTECH	x 89 mm;
	High Selective ALANOD	REGULUS	Weight (dry & packed): 42 kg;
	Mirotherm with 0.50mm thickness,	RENERGY	Vertical installation;
	95% absorptance and 5%	SOLAR PLUS PRO	Grid type of Absorber;
	emittance, laser welded into 8mm		Absorber capacity is 1.37 l;
	·		Absorber pipe dimensions:
	riser copper tubes joint with 22mm	(MODELS)	Header - 22mm x 0.45mm and
	header copper tubes ; Solar Glass 3.2mm thickness-		Risers – 8mm x 0.45mm;
		ARIS 2004	Number of tubes: 9 pieces. risers
	prismatic – 91.8% efficiency top	CRONIUS S220	& 4 exits headers
	cover;	KALTECH KE 2.0R	Maximum operating pressure is
	Rockwool thermal insulation with	KPR1+	10 bar;
	density of 40 kg/m³and thickness	RSTC 212	Stagnation temperature is 192
	of 40mm for bottom insulation	SP/AR2004	°C;
	and Glasswool thermal insulation		
	with density of 40 kg/m³and		
	thickness of 20mm for side		
	insulation;		
	Frame structure made of Extruded		
	Aluminum Profile 1.3mm thickness		
	- painted RAL7038 and 0.50mm		
	thickness Aluminum Zinc Steel		
	Sheet back plate;		
	EPDM, Silicone sealant watertight sealed		
	between the solar glass and the aluminum		
	casing;		





## SCOPE OF CERTIFICATION FOR CERTIFICATE NO. CL16020378

	(MODELS)	Gross area of 2.09 m²; Aperture
		area of 1.92 m <sup>2</sup> and Absorber
	ARIS 2004H	area of 1.91 m²;
	CRONIUS S220H	Gross dimensions: 1030 x 2030
	KALTECH KE 2.0HR	x 89 mm;
	KPR1+ H	Weight (dry & packed): 42 kg;
	RSTC 212H	Horizontal installation;
		Grid type of Absorber;
		Absorber capacity is 2.04 l;
		Absorber pipe dimensions:
		Header - 22mm x 0.45mm and
		Risers – 8mm x 0.45mm;
		Number of tubes: 18 pieces.
		risers & 4 exits headers
		Maximum operating pressure is
		10 bar;
		Stagnation temperature is 191
		°C;
		Gross area of 2.49 m²; Aperture
	(MODELS)	area of 2.32 m² and Absorber
	(1.05220)	area of 2.29 m <sup>2</sup> ;
	ARIS 2504	Gross dimensions: 2030 x 1230
	CRONIUS S225	x 89 mm;
	KALTECH KE 2.5R	Weight (dry & packed): 45 kg;
	KPR11+	Vertical installation;
	RSTC 253	Grid type of Absorber;
	SP/AR2504	Absorber capacity is 1.64 l;
		Absorber pipe dimensions:
		Header - 22mm x 0.45mm and
		Risers – 8mm x 0.45mm;
		Number of tubes: 9 pieces. risers
ı ı		& 4 exits headers
		Maximum operating pressure is
		Maximum operating pressure is 10 bar;
		Maximum operating pressure is 10 bar; Stagnation temperature is 193





## SCOPE OF CERTIFICATION FOR CERTIFICATE NO. CL16020378

		(BRANDS)	Gross area of 2.15 m²; Aperture
	GLAZED FLAT PLATE SOLAR		area of 1.92 m² and Absorber
3.	COLLECTOR ALTER FAMILY	SAMMLER	area of 1.91 m²;
J.		CRONIUS	Gross dimensions: 2050 x 1050
	Absorber Materials: Aluminum	KALTECH	x 89 mm;
	High Selective ALANOD	REGULUS	Weight (dry & packed): 42 kg;
	Mirotherm Aluminum with	RENERGY	Vertical-Horizontal installation;
	0.50mm thickness, 95%	SOLAR PLUS PRO	Meander type of Absorber;
	absorptance and 5% emittance,		Absorber capacity is 1.48 l;
	laser welded into 8mm riser copper	(MODELS)	Optical Efficiency is 80.2%;
	tubes joint with 22mm header		Absorber pipe dimensions:
	copper tubes ;	CRONIUS S320	Header - 22mm\ox0.45mm and
	3.2mm thickness Solar Glass -	KALTECH KE	Risers − 8mm⊗x0.45;
	prismatic – 91.8% efficiency top	2.0U KPR1+ M	Headers-4 exits & Risers-9
	cover;	RSMC 215	pieces.
	Rockwool thermal insulation with	SP/AL2004	Maximum operating pressure is
	density of 40 kg/m³and thickness		10 bar;
	of 40mm for bottom insulation		Stagnation temperature is 201
	and Rockwool thermal insulation		°C;
	with density of 40 kg/m³ and	(MODELS)	Gross area of 2.55 m²; Aperture
	thickness of 20mm for side		area of 2.29 m² and Absorber
	insulation;	CRONIUS S325	area of 2.26 m²;
	Frame structure made of Extruded	KALTECH KE	Gross dimensions: 2050 x 1250
	Aluminum Profile 1.3mm thickness	2.5U KPR11+ M	x 89 mm;
	– painted RAL7038 and 0.50mm	RSMC 255	Weight (dry & packed): 42 kg;
	thickness Aluminum Zinc Steel	SP/AL2504	Vertical-Horizontal installation;
	Sheet back plate;		Meander type of Absorber;
	EPDM, Silicone sealant watertight sealed		Absorber capacity is 1.76 l;
	between the solar glass and the aluminum		Optical Efficiency is 81.7%;
	casing		Absorber pipe dimensions:
			Header - 22mm⊗x0.45mm and
			Risers – 8mm\sx0.45;
			Headers-4 exits & Risers-11
			pieces.
			Maximum operating pressure is
			10 bar;
			Stagnation temperature is 201
			°C;





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	GLAZED FLAT PLATE SOLAR	(BRANDS)	Gross area of 2.11 m²; Aperture
4.	COLLECTOR ARIS FAMILY		area of 1.91 m² and Absorber
		SAMMLER	area of 1.81 m²;
	Absorber Materials: Solar copper	CRONIUS	Gross dimensions: 2036 x 1037
	sheet with <u>0.2mm</u> thickness, Biolin		x 89 mm;
	coating, laser welded into 8mm		Weight (dry & packed): 38.5 kg;
	riser copper tubes joint with 22mm	(MODELS)	Vertical installation with
	header copper tubes ;		mounting On roof-flat roof;
	3.2mm thickness low iron	ARIS 2001	Grid type of Absorber;
	tempered Solar Glass with high	CRONIUS P221	Absorber capacity is 1.4 l;
	transmittance top cover;		Absorber pipe dimensions:
	Rockwool thermal insulation with		Header - 22mm x 0.7mm and
	density of 40 kg/m³, thermal		Risers – 8mm x 0.45mm;
	conductivity of 0.035 W/(m*K)		Number of tubes: 8 pieces. risers
	and thickness of 40mm for		with Tube Pitch of 105mm;
	insulation;		Test Pressure is 15 bar;
	Frame structure made from		Nominal Flow Rate is 144 l/h;
	Aluminum coated painted 1.3mm		Maximum operating pressure is
	thickness and 0.50mm Aluminum		10 bar;
	Zinc sheet as back plate;		Stagnation temperature is 141
	EPDM, Silicone watertight sealed between		°C;
	the solar glass and the Aluminum Casing;		

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 applied on each individual product.

Original Issue Date : 14 July 2016

Current Issue Date : 14 July 2021

Valid Until : 13 July 2022

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Products Conformity Assessment Section Manager
Dubai Central Laboratory Department