



HELLENIC ELECTRONICS EQUIPMENT QUALITY ASSURANCE CENTER
H.E.E.Q.A.C. S.A.

ACCREDITED BY ESYD FOR TESTING (07-2) & CERTIFICATION (125-2).
NOTIFIED BODY (0848) FOR THE 2006/95/EC & 90/396/EEC DIR.
103 KEFALLHNIAS STR, 112 51 ATHENS - GREECE
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CERTIFICATE OF CONFORMITY

ORIGINAL

CERTIFICATE NUMBER : 400269
DATE OF ISSUE : MARCH 01, 2010
ISSUED TO : HELIOAKMI S.A
ADDRESS : NEA ZOI 19300, ASPROPIRGOS, GREECE
TEST ITEM : HOT WATER BOILER
TYPE/MODEL : MEGASUN ST-300/ MEGASUN ST-260,
MEGASUN ST-200, MEGASUN ST-160, MEGASUN ST-120
MANUFACTURER : HELIOAKMI S.A
APPLICABLE DIRECTIVES : LVD 2006/95/EC, EMC 2008/104/EC
APPLICABLE STANDARDS : EN 60335-1:2002+A11:2004+A12:2006+A1:4004
+A2:2006, EN 60335-2-21:2003+A2:2008,
EN 55014-1:2006, EN61000-3-2:2006,
EN61000-3-3:2008

STATEMENT: THE TEST ITEM COMPLIES WITH THE ABOVE MENTIONED APPLICABLE STANDARDS.

GENERAL REMARKS:

- The test results apply only to the particular sample for which the HEEQAC'S test reports S/N 503382-E dated January 22, 2010 and 503384-E dated February 26, 2010 was issued.
- The tests were performed in accordance with the above mentioned applicable standards in the period from December 07, 2009 up to February 22, 2010.
- This certificate must be read in conjunction with the above mentioned test report.
- After preparation of the necessary technical documentation as well as the declaration of conformity, the CE marking shown bellow can be affixed on this product.
- This certificate is based on a single evaluation of the above mentioned product. It is therefore essential for the manufacturer to ensure that the quality of his production is always in accordance with the applicable standards.
- Copy of this certificate is submitted to the Ministry of Development of Greece.



TEST LABORATORY
FOR H.E.E.Q.A.C. S.A.
G. CHRYSANTHAKOPOULOS
GENERAL MANAGER



DATE OF ISSUE: MARCH 01, 2010



ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΣΥΜΜΟΡΦΩΣΗΣ

Αρ. Πιστοποιητικού SKM 9916/1

Η DQS HELLAS χορηγεί το παρόν Πιστοποιητικό στην επιχείρηση :

ΗΛΙΟΑΚΜΗ Α.Ε.

για το προϊόν :

Ηλιακό Σύστημα 200 BL2 X 4.20 m², 300 BL2 X 5.20 m², 500 BL2 X 6.30 m²

το οποίο παράγεται σύμφωνα με τα τυποποιητικά έγγραφα :

EN 12976-1:2006

EN 12976-2:2006

EN 12975-1:2006

EN 12975-2:2006

στην ακόλουθη θέση :

Θέση Νέα Ζωή - Ασπρόπυργος, Αττική



Το παρόν Πιστοποιητικό χορηγείται σύμφωνα με:

- το Γενικό Κανονισμό Πιστοποίησης Προϊόντων της DQS HELLAS,
- τον Ειδικό Κανονισμό Πιστοποίησης ΕΚΠΠ.001 «ΕΙΔΙΚΟΣ ΚΑΝΟΝΙΣΜΟΣ ΠΙΣΤΟΠΟΙΗΣΗΣ ΗΛΙΑΚΩΝ ΣΥΛΛΕΚΤΩΝ, ΚΑΙ ΟΙΚΙΑΚΩΝ ΗΛΙΑΚΩΝ ΣΥΣΤΗΜΑΤΩΝ ΘΕΡΜΑΝΣΗΣ ΝΕΡΟΥ»

και διέπεται από τους όρους της αντίστοιχης σύμβασης μεταξύ της DQS HELLAS και της επιχείρησης

Ημερομηνία Έκδοσης: 2011-12-01

Ημερομηνία Λήξεως: 2014-11-30

Παναγιώτης Γιαννούτσος
Διευθυντής ΔΠΠ

Dr. Εμμανουήλ Δεληγιαννάκης
Γενικός Διευθυντής



Αρ. Διαπίστευσης: 735

ΓΚΠΠ.08 – 30/05/2010



UL
Management
Systems
Solutions

ΑΔΕΙΑ ΧΡΗΣΕΩΣ KEYMARK

Αρ. Πιστοποιητικού SKM 9916/1

Η DQS HELLAS χορηγεί την παρούσα άδεια στην επιχείρηση :

ΗΛΙΟΑΚΜΗ Α.Ε.

για το προϊόν / τύπο:

Ηλιακό Σύστημα 200 BL2 X 4.20 m², 300 BL2 X 5.20 m², 500 BL2 X 6.30 m²

το οποίο παράγεται σύμφωνα με τα τυποποιητικά έγγραφα :

EN 12976-1 : 2006

EN 12976-2 : 2006

EN 12975-1 : 2006

EN 12975-2 : 2006

στην ακόλουθη θέση :



E 31



Θέση Νέα Ζωή - Ασπρόπυργος, Αττική

Η παρούσα Άδεια χορηγείται σύμφωνα με:

- το Γενικό Κανονισμό Πιστοποίησης Προϊόντων της DQS HELLAS,
- τον Ειδικό Κανονισμό Πιστοποίησης ΕΚΠΠ.001 «ΕΙΔΙΚΟΣ ΚΑΝΟΝΙΣΜΟΣ ΠΙΣΤΟΠΟΙΗΣΗΣ ΗΛΙΑΚΩΝ ΣΥΛΛΕΚΤΩΝ, ΚΑΙ ΟΙΚΙΑΚΩΝ ΗΛΙΑΚΩΝ ΣΥΣΤΗΜΑΤΩΝ ΘΕΡΜΑΝΣΗΣ ΝΕΡΟΥ,
- τον Ειδικό Κανονισμό της CEN Σχήματος SOLAR KEYMARK για ηλιακά θερμικά προϊόντα,

και διέπεται από τους όρους της αντίστοιχης σύμβασης μεταξύ της DQS HELLAS και της επιχείρησης.

Ημερομηνία Έκδοσης: **2011-12-01**

Ημερομηνία Λήξεως: **2014-11-30**

Παναγιώτης Γιαννούτσος
Διευθυντής ΔΠΠ

Dr. Εμμανουήλ Δεληγιαννάκης
Γενικός Διευθυντής



Certificado



Certificate no. **PSK – 044/2010**
Certificado nº

Name and address of the certificate holder:
Nome e morada do titular do certificado:

Helioakmi, S.A.
Nea Zoi, 19300 Aspropyrgos, Attiki
Greece

Product:
Produto:

Thermal solar system and components - Factory made system
Instalação solar térmica prefabricada e seus componentes

Type references:
Referências:

ST - 120

Trademark(s):
Marca(s) comercial(is):

MEGASUN

Technical characteristics:
Características técnicas:

In annex / Em anexo

This product is in conformity with:
Este produto está em conformidade com:

EN 12976-1:2006, EN 12976-2:2006

and with the Specific Keymark Scheme Rules for Solar Thermal Products
e com as Regras Particulares do CEN Keymark Scheme para Produtos Solares Térmicos.

Test report(s) no. / issued by:
Relatório(s) de ensaios nº(s) / emitido(s) por:

Nº 7.V1/LES/2010 / INETI

Additional information (if any):
Informação adicional (se existir):

This certificate is valid until:
Este certificado é válido até:

2015-01-03

and supersedes the certificate no:
e substitui o certificado nº:

Date of issue:
Data de emissão:

2010-09-27

Francisco Barroca
General Manager / Director Geral



This Certificate includes one Annex with 2 (two) pages
Este Certificado é constituído por um Anexo com 2 (duas) páginas

[illegible]

Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate				Registration No. Número		PSK-044/2010	
Resumo dos resultados dos ensaios realizados segundo a norma EN 12976, anexo ao certificado Solar KEYMARK				Date / Data		27.09.2010	
Company / Titular		Helioakmi, S.A.		Country / País		Greece	
Brand (optional) / Marca(s) Comercial(is) (opcional): MEGASUN							
Street / Rua		Nea Zoi		Website		www.helioakmi.com	
Postal Code, Place / Código Postal, Localidade		19300 Aspropyrgos, Attiki		E-mail		megasun@helioakmi.com	
				Tel. / Fax		+30 (210) 5595624 / 723	
System family overview / Identificação da família de sistemas							
Collector type Tipo de colectores		Number of collectors / Número de colectores					
		Storage type / Tipo de depósito					
ST2000		ST120					
1							
Name of system configuration / Nome da configuração do sistema				ST120			
Collector type Tipo de coletor		ST2000		No. Collectors Nº Colectores		1	
				Storage type Tipo de depósito		ST120	
Name of system configuration / Nome da configuração do sistema				Megasun ST 120			
Location Localidade		Daily draw-off litres/day / Consumo diário litros/dia					
		80		110		140	
		l/d		l/d		l/d	
		Qd kWh/ano		QL kWh/ano		f _{solar} %	
Stockholm, SE		1 234		1 696		2 159	
Würzburg, DE		1 182		1 626		2 069	
Davos, CH		1 339		1 841		2 343	
Athens, GR		918		1 261		1 606	
Performance Indicators Ind. Comportamento térmico		Heat demand / Energia necessária					
		System output / Energia fornecida pela instalação solar					
		QL/Qd; Solar fraction / Fração solar					
		Elec. for pumps/controllers / Energia parasita para a bomba e unidade de controlo					
Reference Conditions Condições de referência							
		Stockholm		Würzburg DE		Davos CH	
		Athens GR					
G		1 113		1 229		1 666	
Ta		6.9		8.9		3.2	
Tc		8.5		10.0		5.4	
ΔTc		2.1 - 14.9		7.0 - 13.0		4.6 - 6.2	
Th		10.4 - 25.2					
G kWh/m² Annual irradiation South, 45° / Irradiação anual de Sul, 45°							
Ta °C Annual mean air temperature / Média anual da temperatura do ar							
Tc °C Annual mean cold water temperature / Média anual da temperatura da água da rede							
ΔTc °C Seasonal variation of Tc / Variação sazonal da Tc							
Th 45°C Desired (mix. valve) temperature / Temperatura esperada da válvula de mistura							
Maximum operating pressur collector side				Maximum operating pressur - tank side			
Pressão máxima de funcionamento - circuito primário				Pressão máxima de funcionamento - depósito			
300 kPa				700 kPa			
Testing Laboratory / Laboratório de ensaio				INETI			
Website				www.ineti.pt			
Test report id. number / N° de identificação do relatório de ensaio				n°7.V1/LCS/2010			
Date of test report / Data do relatório de ensaio				07.09.2010			
Test method / Método de ensaio				ISO 9459-2 (CSTG)			
Comments of test lab / Comentários do laboratório de ensaio							

Ilava fca CuvrWw



Certificado



Certificate no. **PSK - 045/2010**
Certificado nº

Name and address of the certificate holder:
Nome e morada do titular do certificado:

Helioakmi, S.A.
Nea Zoi, 19300 Aspropyrgos, Attiki
Greece

Product:
Produto:

Thermal solar system and components - Factory made
system
Instalação solar térmica prefabricada e seus componentes

Type references:
Referências:

ST - 160

Trademark(s):
Marca(s) comercial(is):

MEGASUN

Technical characteristics:
Características técnicas:

In annex / *Em anexo*

This product is in conformity with:
Este produto está em conformidade com:

EN 12976-1:2006, EN 12976-2:2006

and with the Specific Keymark Scheme Rules for Solar Thermal Products
e com as Regras Particulares do CEN Keymark Scheme para Produtos Solares Térmicos.

Test report(s) no. / issued by:
Relatório(s) de ensaios nº(s) / emitido(s) por:

Nº 8.V1/LIS/2010 / INETI

Additional information (if any):
Informação adicional (se existir):

This certificate is valid until:
Este certificado é válido até:

2015-01-03

and supersedes the certificate no:
e substitui o certificado nº:

Date of issue:
Data de emissão:

2010-09-27

Francisco Barroca
General Manager / *Director Geral*



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Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate	Registration No. Número	PSK-045/2010
Resumo dos resultados dos ensaios realizados segundo a norma EN 12976, anexo ao certificado Solar KEYMARK	Date / Data	27.09.2010

Company / Titular	Heliokmi, S.A.	Country / País	Greece
Brand (optional) / Marca(s) Comercial(is) (opcional):	MEGASUN	Website	www.heliokmi.com
Street / Rua	Nea Zoi	E-mail	megasun@heliokmi.com
Postal Code, Place / Código Postal, Localidade	19300 Aspropyrgos, Attiki	Tel. / Fax	+30 (210) 5595624 / 723

System classification / Classificação do sistema	
Flow principle / Princípio de circulação	Thermosyphon / Termossifão
Direct / Directo - Indirect / indirecto	Indirect / Indirecto
Press. principle / Princípio de pressurização	Closed / fechado
Drain back/down / Drenagem interior/exterior	No drain (always filled) / Sem drenagem (sempre cheio)
Storage location / Localização do depósito	Outdoor / Exterior
Storage position / Posição do depósito	Horizontal / Horizontal
Internal back-up / Tipo de apoio interno	None / Nenhum
If other / Outro	
EN12976 type / Tipo de instalação EN12976	Solar only / Apenas Solar

Collector(s) / Colector(s)							Storage(s) / Depósito(s)					
Company / Fabricante			Heliokmi, S.A.				Company / Fabricante			Heliokmi, S.A.		
Keymark reg. no. (optional)			PSK-001/2010									
Nº Certificado Keymark (opcional)												
Model Modelo	Per module / Por módulo			No. Modules Número de módulos			Model Modelo	Total volume Volume total	Gross diameter/width Diámetro total/largura	Gross length Comprimento total	Back-up heated volume Volume do apoio	El. back-up power Potência eléctrica do apoio
	Aperture area (A _a) Área abertura	Gross length Comprimento total	Gross width Largura total									
	m ²	m	m	min	-	max						
ST2500	2.33	2052	1275	1	-	1	ST160	150	530	1320	---	---

Controller / Controlador		Fluid / Fluido	
Company / Fabricante	---	Company / Fabricante	S.M.B.
Model / Modelo	---	Model / Modelo	Neutraguard
Functions / Funções	---	Freezing point / Temperatura de congelamento	-60 °C

System family overview / Identificação da família de sistemas				
Collector Colector	No. collectors / Nº de colectores			
	Storage / Depósito			
	ST160			
ST2500	1			

Testing Laboratory / Laboratório de ensaio	INETI
Website	www.ineti.pt
Test report identification nr / Nº de identificação relatório de ensaio	nº8.V1/LES/2010
Date of test report / Data do relatório de ensaio	07.09.2010

Comments of test lab / Comentários do laboratório de ensaio	

