Dear customers,

Thank you for trusting our company and its products.

Our company manufactures and installs solar water heaters since 1983. Our long experience, the quality of our products and our passion for renewable energy sources, has established us in the market of Cyprus and abroad. Our company has exported to Ireland, Spain, Egypt and Lebanon. Through our effort to expand beyond the borders of Cyprus we want to spread the message that renewable energy sources are now necessary for the survival of our planet.

At Vesta we manufacture our products with respect for the environment. The raw materials we use have almost zero pollutants and are mostly recyclable materials. Our hot water cylinders and solar panels have as their predominant material copper which is the most recyclable metal that exists with beneficial properties for water and people.

The design of our products is done by experienced engineers with the primary goal of quality, high efficiency and longevity. The continuous improvement of our products and production processes is a priority for us.

Our products comply with all European Standards, such as the Energy Marking for hot water cylinders. In addition, our solar panels are certified with Solar Keymark, the highest European Certification available specifically for solar panels. We attach our certificates for your information.

The product you find in your home has been made by us with a lot of love and we ask you to take care of it. You do not need to do much, but it is important to do proper maintenance so that you can enjoy it for many years. We urge you to comply with the maintenance program that we attach to you, so that the guarantee we give you with this letter is valid.

Thank you for your support and we remain at your disposal for whatever you need.

Yours sincerely

Thessalia Frantzi

Director

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Warranty

1. Vesta provides a limited warranty of 5 (five) years for the main components of their products (solar collector, hot water cylinders, plastic water tanks), from the date of purchase, against any possible leaks due to holes. All supplied peripheral components not manufactured by Vesta (such as resistors, thermostats, valves, circulators, expansion vessels, closed circuit hoses, insulation materials, thermometers, pressure gauges, differential thermostats, safety valves, anti-vacuum valves, antifreeze liquids, screws, joints) are offered with a warranty, similar to that offered by their manufacturer, against any manufacturing error or defect.

2. Any form of actual or reciprocal damage resulting from incorrect or improper installation of the product and / or its components or any form of actual or reciprocal damage resulting from improper use and maintenance is expressly excluded from this warranty. The warranty remains valid if the customer accepts and complies with all conditions and instructions regarding the use and maintenance of the product. Maintenance of products and especially components of high-pressure hot water cylinders such as expansion tank, safety valve, vacuum valve must be done strictly once a year by us or an approved installer. We recommend replacing these components every 2 years. All installation procedures and product connections must comply with applicable regulations (electrical, plumbing, plumbing, town planning, etc.) applicable in both the area and the country of use. The importer-distributor is solely responsible for the introduction and distribution of the products in the market, while the responsibility for the installation lies with the installer. The correct operation and performance of the products depends on the careful preparation and study, the correct installation of the products, the ventilation, the adjustment of the thermostat, the correct choice of materials and connection components, the correct piping and the insulation for which is responsible the installer and not in any way Vesta. In the event of a manufacturing defect in accordance with paragraph 1 of this warranty, the defective material will be shipped, at the buyer's expense, to the Vesta factory for inspection and repair - if repaired - or for replacement if repair is not possible, manufacturer's judgment. In case of on-site repair, all staff travel expenses, all costs related to the transportation, removal and reinstallation of the product and / or its components are covered by the customer. Vesta is not liable for any damages and claims of any kind and / or nature caused by the product and / or its installation and / or any defects in the product and is therefore not responsible for covering any claims or refunds for unnecessary transport personnel, charges for transport and installation / removal of the product, unnecessary consumption of energy or water, incorrect installation of the product and / or its components, non-compliance with local regulations (electrical, plumbing, town planning, plumbing, etc.), damage to buildings or housing, compensation for third party property, loss of profits, loss of customers, etc. Vesta's liability is limited solely to the replacement of defective materials and therefore the burden of the cost of proof does not belong to Vesta.

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EXCEPTIONS - The following are excluded from the warranty:

• The collector glass breaks for any reason, including hail damage (we recommend that the collector glass be covered by your insurance policy).

• When the chlorides in the water exceed 250mg / l.

• Water should not be corrosive; the pH of water should be 6.5 - 9.5.

• Damage to the hot water cylinder due to the inability to install the pressure reducing valve in areas where the water supply pressure exceeds 4 Bar.

• Damage to the hot water cylinder, resulting from water quality.

• Damage to the hot water cylinder, when the tank feed water comes from rivers, lakes, wells, boreholes or desalination processes.

• Damage to the hot water cylinder due to negligent maintenance and replacement or poor maintenance by an unauthorized person and accessories not manufactured by Vesta such as the expansion tank, safety valve, vacuum valve, etc.

• When the electric thermostat is set to operate continuously above 60 ° C.

• Installers must ensure that they select the appropriate lightning protection devices in accordance with the technical regulations of the country where the product will be installed.

• When the product is treated incorrectly, damaged or installed by an unauthorized and unskilled person.

• Damage to the product caused by incorrect installation and / or mishandling of the product and / or its components.

• Damage to the product and / or its components caused during transport, removal and / or due to improper storage of the product.

• Damage to the product resulting from acts of God, frost, wear, force majeure.

• Scale deposits in the collector (open circuit only).

• Frost damage to the product for open circuit (direct type) systems. An open circuit system has no protection against freezing and is not suitable for installation in areas prone to freezing conditions. This system is NOT GUARANTEED for refrigeration damage. In areas prone to frost or in areas with desalinated water, a closed-circuit system should be used.

• When the closed circuit is not supplemented with the antifreeze provided by Vesta (for closed circuit systems).

• Connecting, adapting, integrating, or assembling other equipment or components that directly or indirectly affect the operation or performance of this product.

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• When the service and / or repair was done by unauthorized and unskilled personnel.

• When local plumbing, electrical, sanitary, urban and other regulations are not followed.

• Aesthetic defects.

• Good wear (for example, corrosion).

• For plastic water tanks, in case the tank is not placed properly on the support stand or placed on a surface that is not smooth and flat resulting in the tank breaking.

• The warranty does not cover problems related to the installation of the products. The installer should address any problems associated with the installation.

• The guarantee is not valid if you do not comply with the payment terms on the scheduled dates.

• Any repair, inspection, maintenance and replacement of any component should in no way lead to an extension of the warranty period.

Every user / buyer, who buys a product from our company, is considered to accept the terms mentioned herein, without exception.

This is the only written warranty provided by Vesta and Vesta does not undertake or authorize any Distributor, dealer or employee of Vesta to increase or modify the terms and conditions of this warranty.

Any dispute or disagreement regarding the interpretation of both the terms and provisions of this guarantee is subject to Cypriot law and the Cypriot courts of Nicosia in Cyprus.

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Maintenance Program

For information and maintenance appointments please contact us at our company's phone number 22351821 or email info@vestasolar.com .

Maintenance of the systems should be done strictly once a year.

1st Date of Maintenance	
Invoice number	
Name of Maintenance Manager	
Observations	
Signature	

2nd Date of Maintenance	
Invoice number	
Name of Maintenance Manager	
Observations	
Signature	

3rd Date of Maintenance	
Invoice number	
Name of Maintenance Manager	
Observations	
Signature	

4th Date of Maintenance	
Invoice number	
Name of Maintenance Manager	
Observations	
Signature	

5th Date of Maintenance	
Invoice number	
Name of Maintenance Manager	
Observations	
Signature	

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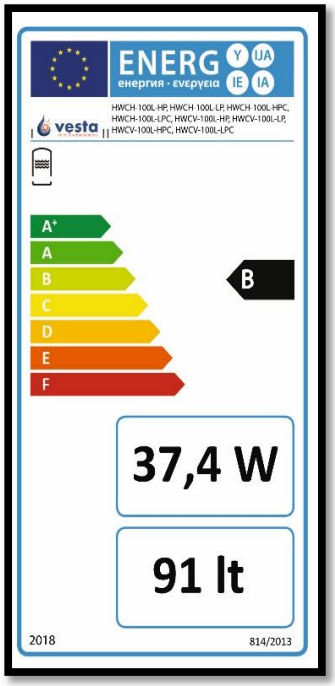

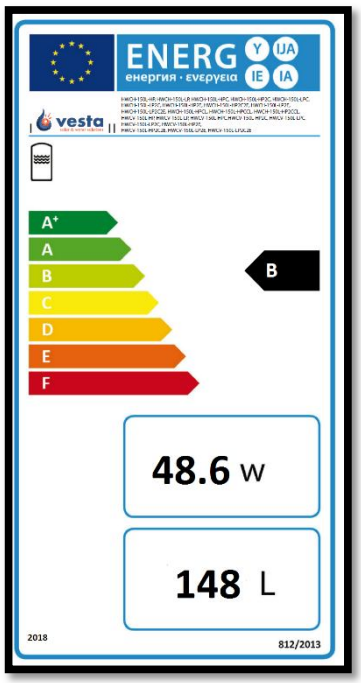

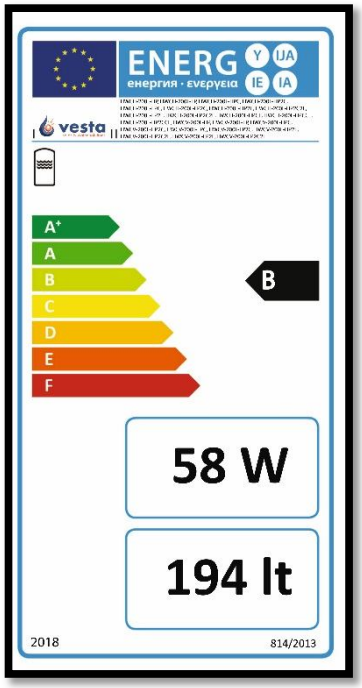

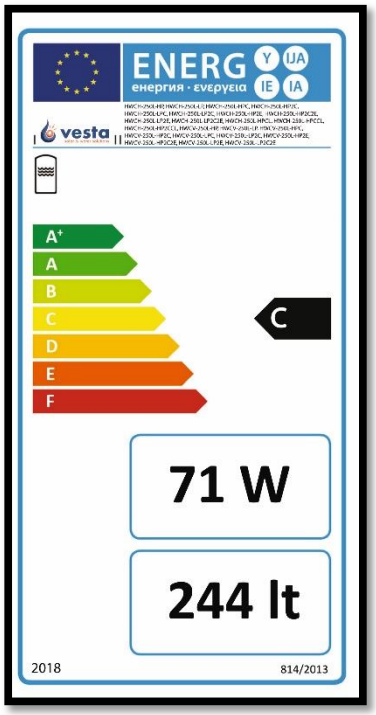

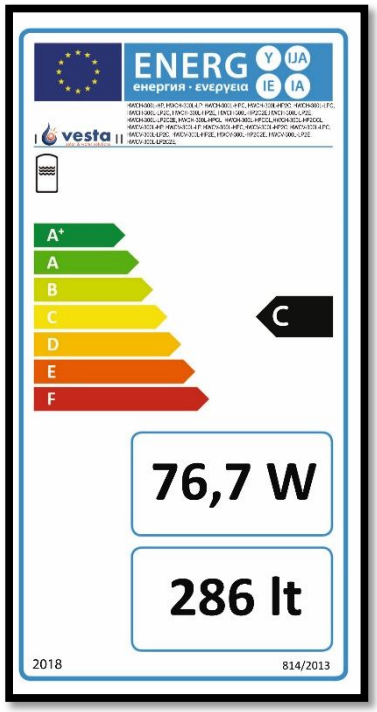

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TÜV NORD

KEYMARK CERTIFICATE
SK08055391501

TUV CYPRUS LTD Certifies that the organization

VESTA SOLAR HEATERS LTD

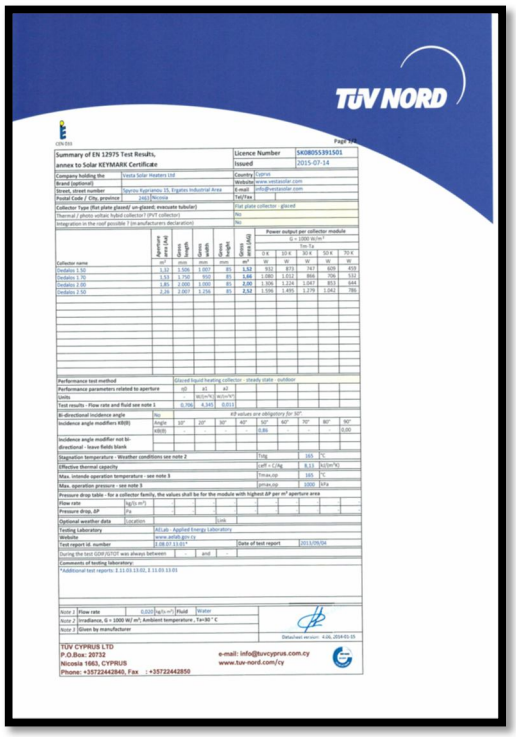
Address:	Spyrou Kyprianou 15 Ergates Industrial Area, 2643 Nicosia
Supplies:	Solar thermal collectors
In compliance with:	EN 12975-1:2006+A1:2010 & EN 12975-2:2006
Certified Product:	Solar Collector
Model / Type ref:	DEDALOS 1.50 DEDALOS 1.70 DEDALOS 2.00 DEDALOS 2.50
Test Results:	Annex to certificate
Certification scheme:	The Initial Certificate with number 126BN/0 of Solar Keymark Certification Body CEN025 was issued on 20/12/2013. In order to grant this certificate, TUV CYPRUS has visited the manufacturing site and verified the implementation of the quality management system. TUV CYPRUS performs these tasks periodically while the certificate has not been cancelled, in accordance with the Product Certification Regulations and the Rules for Authorization to use Conformity Mark for Solar Collectors.

SOLAR KEYMARK CERTIFICATION BODY CEN 033

Accredited by ESYD Certificate No. 885

TUV CYPRUS (TUV NORD) LTD
Certification Body

N.copia : 14/07/2015
Initial Certification : 20/12/2013
Valid until : 13/07/2020



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Page 1/2

Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate

Licence Number SK08055391501
Issued 2015-07-14

Company holding the brand (optional): Vesta Solar Heaters Ltd
Country: Cyprus
Website: www.vestasolar.com
Street, street number: Spyrou Kyprianou 15, Ergates Industrial Area
E-mail: info@vestasolar.com
Postal Code / City, province: 2643 Nicosia
Tel/Fax:
Collector Type (flat plate glazed/ un-glazed; evacuate tubular): Flat plate collector - glazed
Thermal / photo voltaic hybrid collector? (PVT collector): No
Integration in the roof possible ? (in manufacturers declaration): No

Power output per collector module G = 1000 W/m²

Collector name	Aperture area (Aa)	Gross length	Gross width	Gross height	Gross area (Ag)	Tm 0 K	Tm 10 K	Tm 30 K	Tm 50 K	Tm 70 K
	m²	mm	mm	mm	m²	W	W	W	W	W
Dedalos 1.50	1.32	1.506	1.007	85	1.52	952	873	747	609	458
Dedalos 1.70	1.53	1.750	959	85	1.68	1.080	1.012	866	706	532
Dedalos 2.00	1.85	2.000	1.000	85	2.00	1.306	1.224	1.047	853	644
Dedalos 2.50	2.26	2.007	1.256	85	2.52	1.596	1.495	1.278	1.042	785

Performance test method: Glazed liquid heating collector - steady state - outdoor
Performance parameters related to aperture: η0 = 81 %; a1 = 3,3 W/(m²K); a2 = 0,015 W/(m²K²)
Units
Test results - Flow rate and fluid see note 1: 0,700 l/s; 4,345 kJ/K; 0,013 kJ/K²
Bi-directional incidence angle: No — K(θ) values are obligatory for 30°

Incidence angle modifiers K(θ)	Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
	K(θ)					0,86				0,00

Incidence angle modifier not bi-directional - leave fields blank
Stagnation temperature - Weather conditions see note 2: Tstg = 165 °C
Effective thermal capacity: Ceff = C/Ag = 8,13 kJ/(m²K)
Max. intende operation temperature - see note 3: Tmax,op = 165 °C
Max. operation pressure - see note 3: pmax,op = 1000 kPa
Pressure drop table - for a collector family, the values shall be for the module with highest ΔP per m² aperture area

Flow rate	kg/(s·m²)									
Pressure drop, ΔP	Pa									
Optional weather data	Location: Athens									

Testing Laboratory: AELab - Applied Energy Laboratory
Website: www.aelab.gov.cy
Test report id. number: 3.08.07.11.01* — Date of test report: 2011/09/04
During the test GDIF/GTOT was always between: - and
Comments of testing laboratory:
*Additional test reports: 3.11.03.13.02, 3.11.03.13.01

Note 2	Flow rate	0,020 kg/(s·m²)	Fluid: Water
Note 2	Irradiance, G = 1000 W/ m², Ambient temperature , Ta=30 ° C		
Note 3	Given by manufacturer		

Datasheet version: 4.06, 2014-01-15

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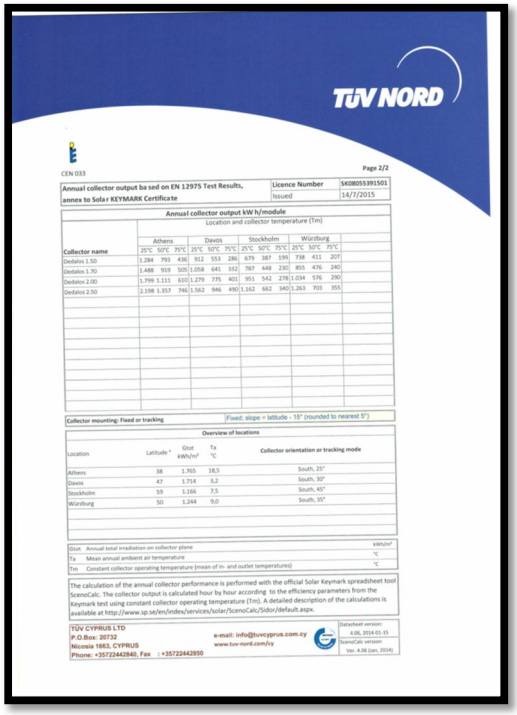

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CEN 033

Page 2/2

Annual collector output ba sed on EN 12975 Test Results, annex to Sola r KEYMARK Certificate

Licence Number SK08055391501
Issued 14/7/2015

Annual collector output kW h/module
Location and collector temperature (Tm)

Collector name	Athens			Davos			Stockholm			Würzburg		
	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C
Dedalos 1.50	1.284	793	436	912	553	286	679	387	199	738	411	207
Dedalos 1.70	1.488	919	505	1.058	641	332	787	448	230	855	476	240
Dedalos 2.00	1.799	1.111	610	1.279	775	401	951	542	278	1.034	576	290
Dedalos 2.50	2.198	1.357	746	1.562	946	490	1.162	662	340	1.263	703	355

Collector mounting: Fixed or tracking: Fixed: slope = latitude - 15° (rounded to nearest 5°)

Overview of locations

Location	Latitude °	Gtot kWh/m²	Ta °C	Collector orientation or tracking mode
Athens	38	1.765	18,5	South, 25°
Davos	47	1.714	3,2	South, 30°
Stockholm	59	1.166	7,5	South, 45°
Würzburg	50	1.244	9,0	South, 35°

Gtot: Annual total irradiation on collector plane — kWh/m²
Ta: Mean annual ambient air temperature — °C
Tm: Constant collector operating temperature (mean of in- and outlet temperatures) — °C

The calculation of the annual collector performance is performed with the official Solar Keymark spreadsheet tool ScenoCalc. The collector output is calculated hour by hour according to the efficiency parameters from the Keymark test using constant collector operating temperature (Tm). A detailed description of the calculations is available at http://www.sp.se/en/index/services/solar/ScenoCalc/Sidor/default.aspx.

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Datasheet version: 4.06, 2014-01-15
ScenoCalc version: Ver. 4.06 (Jan, 2014)

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