



<b>Summary of EN 12976 Test Results,</b> annex to Solar KEYMARK Certificate Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar	<b>Registration No.</b> Registernummer Num. d'enregistrement <b>SKM 9921/3</b>
	<b>Date / Datum / Date</b> 28/1/2013

<b>Company / Firma / Société</b> COSMOSOLAR LTD	<b>Country/Land/Pays</b> Greece
<b>Street / Straße / Rue</b> Ntrei Road, Dervenochorion Gate	<b>Website</b> <a href="http://www.cosmosol">http://www.cosmosol</a>
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b> 322 00 Viotia	<b>E-mail</b> <a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a>
<b>Tel. / Fax</b> +030 210 3478897 / 210 34794	

<b>System classification / G / F</b>	
<b>Flow principle / G / F</b>	Thermosyphon / G / F
<b>Direct / indirect / G / F</b>	Direct / G / F
<b>Press. principle / G / F</b>	Closed / G / F
<b>Drain back/down / G / F</b>	No drain (always filled) / G / F
<b>Storage location / G / F</b>	Outdoor / G / F
<b>Storage position / G / F</b>	Horizontal / G / F
<b>Int. back-up / G / F</b>	None / G / F
<b>If other: / G / F</b>	English / Deutsch / Francais
<b>EN12976 type / G / F</b>	Solar only / G / F

<b>Collector(s) / Kollektor(en) / Capteur(s)</b>					<b>Storage(s) / Akkumulator(en) / F</b>								
<b>Company / Hersteller / Manufactuer</b> COSMOSOLAR LTD <b>Keymark reg. no. (optional)</b> SKM 9921/1					<b>Company / Hersteller / Manufactuer</b> COSMOSOLAR LTD								
Model Bezeichnung Modèle	Per module / G / F			No. modules G F		Model Bezeichnung Modèle	Total volume		Gross diameter/width Diam. / Breite (Außenmaß) Diam. / Largeur hors Tout	Gross length Länge (Außenmaß) longueur hors tout	Back-up heated volume		El. back-up power G F
	Aperture area (A <sub>a</sub> ) Aperturfäche (A <sub>a</sub> ) Superficie d'entrée (A <sub>a</sub> )	Gross length Länge (Außenmaß) Longueur Hors tout	Gross width Breite (Außenmaß) Largeur hors Tout				G F	litres			mm	mm	
MNE 16	1,302	1519	1019	1	-	1	120L	107	530	1120	~	~	~
MNE 04	1,613	1517	1247	1	-	1	160L	149	530	1320	~	~	~
MNE 20	1,768	2017	1017	1	-	1	200L	186	580	1320	~	~	~
MNE 01	1,995	1917	1197	1	-	1	250L	245	580	2120	~	~	~
MNE 03	2,266	2022	1278	1	-	1	300L	290	580	2120	~	~	~

<b>Controller / G / F</b>			<b>Fluid / G / F</b>		
<b>Company/Hersteller/Manufacteur</b> COSMOSOLAR LTD <b>Model / Bezeichnung / Modèle</b> MNE .....			<b>Company/Hersteller/Manufacteur</b> <b>Model / Bezeichnung / Modèle</b> Propylene glycol solution		
<b>Functions</b> G English F Deutsch F Francais			<b>Freezing point</b> G -4 to - F 36 °C		

<b>System family overview / G / F</b>						
Collector G F	No. collectors / G / F					
	Storage / G / F					
	120L	160L	200L	250L	300L	
MNE 16		2	2			
MNE 04	1					
MNE 20	1		2	2		2
MNE 01		1	1	2		2
MNE 03		1	1			

<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b> Website <b>Test report id. number / Prüberichtsnummer / F</b> <b>Date of test report / Datum G / date F</b>	NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB <a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a> 6040 DE2, 6042 DE2 6/9/2011
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<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b> English Deutsch Francais	Stamp & signature of test lab
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<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b> Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar	<b>Registration No.</b> Registernummer Num. d'enregistrement <b>Date / Datum / Date</b>	<b>SKM 9921/3</b>  <b>28/1/2013</b>
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<b>Company / Firma / Société</b> <b>Street / Straße / Rue</b> <b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>	<b>COSMOSOLAR LTD</b> <b>Ntrei Road, Dervenochorion Gate</b> <b>322 00 Viotia</b>	<b>Country/Land/Pays</b> <b>Website</b> <b>E-mail</b> <b>Tel. / Fax</b>	<b>Greece</b> <a href="http://www.cosmosol">http://www.cosmosol</a> <a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a> <b>+99 210 3478897 / 210 34794</b>
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System family overview / G / F																		
Collector type G F	Number of collectors / G / F																	
	Storage type / G / F																	
	120L			160L			200L			250L			300L					
MNE 16				2			2											
MNE 04	1																	
MNE 20		1						2		2						2		
MNE 01					1				1		2						2	
MNE 03						1			1									

Name of system konfiguration / G / F												GLK 120/1.89			
Collector type G F	MNE 04			No. collectors G F			1			Storage type G F			120L		

Calculated annual results / G / F												
Location G F	Daily draw-off litres/day / G / F /											
	80	110	140	80	110	140	80	110	140	80	110	140
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y		
Stockholm, SE	1.244	1.708	2.172	552	646	683	44,4	37,8	31,5			
Würzburg, DE	1.191	1.638	2.085	555	654	694	46,5	39,9	33,3			
Davos, CH	1.349	1.848	2.356	749	865	911	55,5	46,8	38,7			
Athens, GR	929	1.270	1.621	724	894	972	77,9	70,3	60,0			

Perf. indicators G F	Q <sub>d</sub>	Heat demand / G / F
	Q <sub>L</sub>	System output / G / F
	f <sub>sol</sub>	Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F
	Q <sub>par</sub>	Elec. for pumps/controllers / G / F

Ref. conditions G F		Stockholm	Würzburg DE	Davos CH	Athens GR
	G	1.156	1.226	1.682	1.717
	T <sub>a</sub>	7,5	9,0	3,2	18,5
	T <sub>c</sub>	8,5	10,0	5,4	17,8
	ΔT <sub>c</sub>	2.1 - 14.9	7.0 - 13.0	4.6 - 6.2	10.4 - 25.2

G	kWh/m <sup>2</sup>	Annual irradiation South, 45° / G / F
T <sub>a</sub>	°C	Annual mean air temp. / G / F
T <sub>c</sub>	°C	Annual mean cold water temp. / G / F
ΔT <sub>c</sub>	°C	Seasonal variation of T <sub>c</sub> / G / F
T <sub>h</sub>	45°C	Desired (mix. valve) temp. / G / F

Max. operating press. - collector side G F	200	kPa	Max. operating press. - tank side G F	1.000	kPa
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Testing Laboratory / Prüflaboratorium / Laboratoire d'essais	Demokritos
Website	<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>
Test report id. number / Prüberichtnummer / F	6040 DE2, 6042 DE2
Date of test report / G / F	6/9/2011
Test method / G / F	ISO 9459-5 (DST)

Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire <a href="#">English</a> <a href="#">Deutsch</a> <a href="#">Français</a>	Stamp & signature of test lab
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<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b> Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar	<b>Registration No.</b>	<b>SKM 9921/3</b>
	Registernummer	
	Num. d'enregistrement	
	<b>Date / Datum / Date</b>	<b>28/1/2013</b>

<b>Company / Firma / Société</b>	<b>COSMOSOLAR LTD</b>	<b>Country/Land/Pays</b>	<b>Greece</b>
<b>Street / Straße / Rue</b>	<b>Ntrei Road, Dervenochorion Gate</b>	<b>Website</b>	<b><a href="http://www.cosmosol">http://www.cosmosol</a></b>
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>	<b>322 00 Viotia</b>	<b>E-mail</b>	<b><a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a></b>
		<b>Tel. / Fax</b>	<b>+99 210 3478897 / 210 34794</b>

System family overview / G / F																		
Collector type G F	Number of collectors / G / F																	
	Storage type / G / F																	
	120L			160L			200L			250L			300L					
MNE 16				2			2											
MNE 04	1																	
MNE 20		1					2			2						2		
MNE 01				1				1			2						2	
MNE 03					1				1									

<b>Name of system konfiguration / G / F</b>												<b>GLK 120/2.05</b>	
<b>Collector type</b>	<b>MNE 20</b>			<b>No. collectors</b>			<b>1</b>			<b>Storage type</b>			<b>120L</b>
G				G			1			G			
F				F						F			

Calculated annual results / G / F												
Location G F	Daily draw-off litres/day / G / F /											
	80	110	140	80	110	140	80	110	140	80	110	140
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y		
Stockholm, SE	1.244	1.708	2.172	576	678	717	46,3	39,7	33,0			
Würzburg, DE	1.191	1.638	2.085	576	686	730	48,3	41,9	35,0			
Davos, CH	1.349	1.848	2.356	788	911	964	58,4	49,3	40,9			
Athens, GR	929	1.270	1.621	743	929	1.016	80,0	73,1	62,7			
<b>Perf. indicators</b>	<b>Q<sub>d</sub> Heat demand / G / F</b>											
G	<b>Q<sub>L</sub> System output / G / F</b>											
F	<b>f<sub>sol</sub> QL/Q<sub>d</sub>; solar fraction / G / F</b>											
	<b>Q<sub>par</sub> Elec. for pumps/controllers / G / F</b>											

Ref. conditions G F	Stockholm					Würzburg DE					Davos CH					Athens GR					
	G	1.156					1.226					1.682					1.717				
	Ta	7,5					9,0					3,2					18,5				
	Tc	8,5					10,0					5,4					17,8				
	ΔTc	2.1 - 14.9					7.0 - 13.0					4.6 - 6.2					10.4 - 25.2				
G	kWh/m <sup>2</sup>	<b>Annual irradiation South, 45° / G / F</b>																			
Ta	°C	<b>Annual mean air temp. / G / F</b>																			
Tc	°C	<b>Annual mean cold water temp. / G / F</b>																			
ΔTc	°C	<b>Seasonal variation of Tc / G / F</b>																			
Th	45°C	<b>Desired (mix. valve) temp. / G F</b>																			

<b>Max. operating press. - collector side</b>				<b>Max. operating press. - tank side</b>			
G	200		kPa	G	1.000		kPa
F				F			

<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>	<b>Demokritos</b>
<b>Website</b>	<b><a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a></b>
<b>Test report id. number / Prüberichtsnummer / F</b>	<b>6040 DE2, 6042 DE2</b>
<b>Date of test report / G / F</b>	<b>6/9/2011</b>
<b>Test method / G / F</b>	<b>ISO 9459-5 (DST)</b>

<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>	
<a href="#">English</a> <a href="#">Deutsch</a> <a href="#">Français</a>	



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>		<b>Registration</b>																
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat		Registernummer	<b>SKM 9921/3</b>															
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar		Num. d'enregistrement																
		Date / Datum / Date	28/1/2013															
<b>Company / Firma / Société</b>		<b>Country/Land/Pays</b>	Greece															
COSMOSOLAR LTD		<b>Website</b>	<a href="http://www.cosmosol">http://www.cosmosol</a>															
<b>Street / Straße / Rue</b>		<b>E-mail</b>																
Ntrei Road, Dervenochorion Gate		<a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a>																
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		<b>Tel. / Fax</b>	+99 210 3478897 / 210 34794															
322 00 Viotia																		
<b>System family overview / G / F</b>																		
<b>Collector type</b>	<b>Number of collectors / G / F</b>																	
	<b>Storage type / G / F</b>																	
G																		
F																		
	120L			160L			200L			250L			300L					
MNE 16				2			2											
MNE 04	1																	
MNE 20		1					2			2			2					
MNE 01			1			1			2			2		2				
MNE 03					1			1										
<b>Name of system konfiguration / G / F</b>				GLK 160/2.30														
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>														
G	MNE 01	G	1	160L														
F		F																
<b>Calculated annual results / G / F</b>																		
<b>Daily draw-off litres/day / G / F /</b>																		
<b>Location</b>	110			140			170			110			140			170		
	G	l/d			l/d			l/d			l/d			l/d			l/d	
F																		
	Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y								
Stockholm, SE	1.708	2.172	2.637	731	823	894	42,8	37,9	33,9									
Würzburg, DE	1.638	2.085	2.532	735	831	902	44,9	39,9	35,6									
Davos, CH	1.848	2.356	2.856	981	1.095	1.183	53,1	46,5	41,4									
Athens, GR	1.270	1.621	1.962	972	1.139	1.261	76,6	70,3	64,3									
<b>Perf. indicators</b>		<b>Q<sub>d</sub> Heat demand / G / F</b>																
G	<b>Q<sub>L</sub> System output / G / F</b>																	
F	<b>f<sub>sol</sub> QL/Q<sub>d</sub>; solar fraction / G / F</b>																	
	<b>Q<sub>par</sub> Elec. for pumps/controllers / G / F</b>																	
<b>Ref. conditions</b>		Stockholm SE	Würzburg DE	Davos CH	Athens GR													
G		1.156	1.226	1.682	1.717													
F		7,5	9,0	3,2	18,5													
		8,5	10,0	5,4	17,8													
		2.1 - 14.9	7.0 - 13.0	4.6 - 6.2	10.4 - 25.2													
G	kWh/m <sup>2</sup>	<b>Annual irradiation South, 45° / G / F</b>																
Ta	°C	<b>Annual mean air temp. / G / F</b>																
Tc	°C	<b>Annual mean cold water temp. / G / F</b>																
ΔTc	°C	<b>Seasonal variation of Tc / G / F</b>																
Th	45°C	<b>Desired (mix. valve) temp. / G / F</b>																
<b>Max. operating press. - collector side</b>		200 kPa				<b>Max. operating press. - tank side</b>												
G						1.000 kPa												
F																		
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>		Demokritos																
<b>Website</b>		<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>																
<b>Test report id. number / Prüberichtnummer / F</b>		6040 DE2, 6042 DE2																
<b>Date of test report / G / F</b>		6/9/2011																
<b>Test method / G / F</b>		ISO 9459-5 (DST)																
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>		English Deutsch Francais																



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>																						
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
				<b>Date / Datum / Date</b>		28/1/2013																						
<b>Company / Firma / Société</b>		COSMOSOLAR LTD		<b>Country/Land/Pays</b>		Greece																						
<b>Street / Straße / Rue</b>		Ntrei Road, Dervenochorion Gate		<b>Website</b>		<a href="http://www.cosmosol">http://www.cosmosol</a>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		322 00 Viotia		<b>E-mail</b>		<a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a>																						
				<b>Tel. / Fax</b>		+99 210 3478897 / 210 34794																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
		250L		300L																								
MNE 16				2																								
MNE 04		1																										
MNE 20				2		2																						
MNE 01		1		1		2																						
MNE 03		1		1																								
<b>Name of system konfiguration / G / F</b>						GLK 160/2.58																						
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G MNE 03		G 1		G 160L																								
F		F		F																								
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		110			140			170			110			140			170											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		1.708			2.172			2.637			774			876			955			45,3			40,3			36,2		
Würzburg, DE		1.638			2.085			2.532			775			885			964			47,3			42,4			38,1		
Davos, CH		1.848			2.356			2.856			1.051			1.183			1.270			56,9			50,2			44,5		
Athens, GR		1.270			1.621			1.962			1.007			1.191			1.332			79,3			73,5			67,9		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>		Stockholm		Würzburg DE		Davos CH		Athens GR																				
G		1.156		1.226		1.682		1.717																				
G		Ta		9,0		3,2		18,5																				
F		Tc		10,0		5,4		17,8																				
		ΔTc		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																				
G		kWh/m <sup>2</sup> Annual irradiation South, 45° / G / F																										
Ta		°C Annual mean air temp. / G / F																										
Tc		°C Annual mean cold water temp. / G / F																										
ΔTc		°C Seasonal variation of Tc / G / F																										
Th		45°C Desired (mix. valve) temp. / G / F																										
<b>Max. operating press. - collector side</b>				200 kPa		<b>Max. operating press. - tank side</b>				1.000 kPa																		
G						G																						
F						F																						
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						Demokritos																						
<b>Website</b>						<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						6040 DE2, 6042 DE2																						
<b>Date of test report / G / F</b>						6/9/2011																						
<b>Test method / G / F</b>						ISO 9459-5 (DST)																						
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>																												
English																												
Deutsch																												
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Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
				<b>Date / Datum / Date</b>		28/1/2013																						
<b>Company / Firma / Société</b>		COSMOSOLAR LTD		<b>Country/Land/Pays</b>		Greece																						
<b>Street / Straße / Rue</b>		Ntrei Road, Dervenochorion Gate		<b>Website</b>		<a href="http://www.cosmosolar.com">http://www.cosmosolar.com</a>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		322 00 Viotia		<b>E-mail</b>		<a href="mailto:info@cosmosolar.com">info@cosmosolar.com</a>																						
				<b>Tel. / Fax</b>		+99 210 3478897 / 210 34794																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
		250L		300L																								
MNE 16				2																								
MNE 04		1																										
MNE 20		1		2		2																						
MNE 01		1		1		2																						
MNE 03		1		1																								
<b>Name of system konfiguration / G / F</b>						GLK 160/3.10																						
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G MNE 16		G 2		G 160L																								
F		F		F																								
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		110			140			170			110			140			170											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		1.708			2.172			2.637			820			937			1.025			48,0			43,1			38,9		
Würzburg, DE		1.638			2.085			2.532			817			946			1.034			49,9			45,4			40,8		
Davos, CH		1.848			2.356			2.856			1.130			1.279			1.384			61,1			54,3			48,5		
Athens, GR		1.270			1.621			1.962			1.042			1.253			1.410			82,1			77,3			71,9		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>		Stockholm		Würzburg DE		Davos CH		Athens GR																				
G		1.156		1.226		1.682		1.717																				
G		Ta		9,0		3,2		18,5																				
F		Tc		10,0		5,4		17,8																				
		ΔTc		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																				
G		kWh/m <sup>2</sup>		Annual irradiation South, 45° / G / F																								
Ta		°C		Annual mean air temp. / G / F																								
Tc		°C		Annual mean cold water temp. / G / F																								
ΔTc		°C		Seasonal variation of Tc / G / F																								
Th		45°C		Desired (mix. valve) temp. / G / F																								
<b>Max. operating press. - collector side</b>				200 kPa		<b>Max. operating press. - tank side</b>				1.000 kPa																		
G						G																						
F						F																						
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						Demokritos																						
<b>Website</b>						<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						6040 DE2, 6042 DE2																						
<b>Date of test report / G / F</b>						6/9/2011																						
<b>Test method / G / F</b>						ISO 9459-5 (DST)																						
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>																												
English																												
Deutsch																												
Français																												



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>																						
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
				<b>Date / Datum / Date</b>		28/1/2013																						
<b>Company / Firma / Société</b>		COSMOSOLAR LTD		<b>Country/Land/Pays</b>		Greece																						
<b>Street / Straße / Rue</b>		Ntrei Road, Dervenochorion Gate		<b>Website</b>		<a href="http://www.cosmosolar.com">http://www.cosmosolar.com</a>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		322 00 Viotia		<b>E-mail</b>		<a href="mailto:info@cosmosolar.com">info@cosmosolar.com</a>																						
				<b>Tel. / Fax</b>		+99 210 3478897 / 210 34794																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
		250L		300L																								
MNE 16				2																								
MNE 04		1																										
MNE 20				2		2																						
MNE 01		1		1		2																						
MNE 03		1		1																								
<b>Name of system konfiguration / G / F</b>						GLK 200/2.30																						
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G		MNE 01		G		1																						
F				F		200L																						
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		170			200			250			170			200			250											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		2.637			3.101			3.881			911			972			1.007			34,6			31,4			26,0		
Würzburg, DE		2.532			2.970			3.714			920			981			1.016			36,3			33,0			27,4		
Davos, CH		2.856			3.364			4.205			1.191			1.261			1.296			41,7			37,5			30,8		
Athens, GR		1.962			2.313			2.891			1.279			1.375			1.437			65,2			59,5			49,7		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>		Stockholm		Würzburg DE		Davos CH		Athens GR																				
G		1.156		1.226		1.682		1.717																				
G		Ta		7,5		9,0		3,2		18,5																		
F		Tc		8,5		10,0		5,4		17,8																		
		ΔTc		2.1 - 14.9		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																		
G		kWh/m <sup>2</sup>		Annual irradiation South, 45° / G / F																								
Ta		°C		Annual mean air temp. / G / F																								
Tc		°C		Annual mean cold water temp. / G / F																								
ΔTc		°C		Seasonal variation of Tc / G / F																								
Th		45°C		Desired (mix. valve) temp. / G / F																								
<b>Max. operating press. - collector side</b>				200 kPa		<b>Max. operating press. - tank side</b>				1.000 kPa																		
G						G																						
F						F																						
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						Demokritos																						
<b>Website</b>						<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						6040 DE2, 6042 DE2																						
<b>Date of test report / G / F</b>						6/9/2011																						
<b>Test method / G / F</b>						ISO 9459-5 (DST)																						
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>																												
English Deutsch Français																												



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b> Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar	<b>Registration No.</b> Registernummer Num. d'enregistremen <b>Date / Datum / Date</b>	<b>SKM 9921/3</b>  <b>28/1/2013</b>
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<b>Company / Firma / Société</b> <b>Street / Straße / Rue</b> <b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>	<b>COSMOSOLAR LTD</b> <b>Ntrei Road, Dervenochorion Gate</b> <b>322 00 Viotia</b>	<b>Country/Land/Pays</b> <b>Website</b> <b>E-mail</b> <b>Tel. / Fax</b>	<b>Greece</b> <a href="http://www.cosmosolar.com">http://www.cosmosolar.com</a> <a href="mailto:info@cosmosolar.com">info@cosmosolar.com</a> <b>+99 210 3478897 / 210 34794</b>
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**System family overview / G / F**

Collector type G F	Number of collectors / G / F														
	Storage type / G / F														
	120L			160L			200L			250L			300L		
MNE 16				2			2								
MNE 04	1														
MNE 20		1					2			2			2		
MNE 01				1			1			2			2		
MNE 03					1			1							

**Name of system konfiguration / G / F** GLK 200/2.58

<b>Collector type</b> G F	<b>MNE 03</b>  <b>No. collectors</b> G F	<b>1</b>  <b>Storage type</b> G F	<b>200L</b>
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**Calculated annual results / G / F**

Location G F	Daily draw-off litres/day / G / F /																	
	170			200			250			170			200			250		
	l/d			l/d			l/d			l/d			l/d			l/d		
	Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y								
Stockholm, SE	2.637	3.101	3.881	972	1.042	1.086	36,9	33,6	28,0									
Würzburg, DE	2.532	2.970	3.714	981	1.051	1.095	38,8	35,4	29,5									
Davos, CH	2.856	3.364	4.205	1.288	1.367	1.419	45,1	40,6	33,8									
Athens, GR	1.962	2.313	2.891	1.349	1.472	1.542	68,8	63,6	53,3									
<b>Perf. indicators</b> G F	Q <sub>d</sub>	<b>Heat demand / G / F</b>																
	Q <sub>L</sub>	<b>System output / G / F</b>																
	f <sub>sol</sub>	<b>Q<sub>L</sub>/Q<sub>d</sub>; solar fraction / G / F</b>																
	Q <sub>par</sub>	<b>Elec. for pumps/controllers / G / F</b>																

Ref. conditions G F		Stockholm	Würzburg DE	Davos CH	Athens GR	
	G	1.156	1.226	1.682	1.717	
	G	T <sub>a</sub>	7,5	9,0	3,2	18,5
	F	T <sub>c</sub>	8,5	10,0	5,4	17,8
	F	ΔT <sub>c</sub>	2.1 - 14.9	7.0 - 13.0	4.6 - 6.2	10.4 - 25.2

G	kWh/m <sup>2</sup>	<b>Annual irradiation South, 45° / G / F</b>
T <sub>a</sub>	°C	<b>Annual mean air temp. / G / F</b>
T <sub>c</sub>	°C	<b>Annual mean cold water temp. / G / F</b>
ΔT <sub>c</sub>	°C	<b>Seasonal variation of T<sub>c</sub> / G / F</b>
Th	45°C	<b>Desired (mix. valve) temp. / G / F</b>

<b>Max. operating press. - collector side</b> G F	<b>200</b> kPa	<b>Max. operating press. - tank side</b> G F	<b>1.000</b> kPa
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<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b> <b>Website</b> <b>Test report id. number / Prüberichtsnummer / F</b> <b>Date of test report / G / F</b> <b>Test method / G / F</b>	<b>Demokritos</b> <a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a> <b>6040 DE2, 6042 DE2</b> <b>6/9/2011</b> <b>ISO 9459-5 (DST)</b>
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<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b> <a href="#">English</a> <a href="#">Deutsch</a> <a href="#">Français</a>	
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<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>																						
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
				<b>Date / Datum / Date</b>		<b>28/1/2013</b>																						
<b>Company / Firma / Société</b>		<b>COSMOSOLAR LTD</b>		<b>Country/Land/Pays</b>		<b>Greece</b>																						
<b>Street / Straße / Rue</b>		<b>Ntrei Road, Dervenochorion Gate</b>		<b>Website</b>		<b><a href="http://www.cosmosolar.com">http://www.cosmosolar.com</a></b>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		<b>322 00 Viotia</b>		<b>E-mail</b>		<b><a href="mailto:info@cosmosolar.com">info@cosmosolar.com</a></b>																						
				<b>Tel. / Fax</b>		<b>+99 210 3478897 / 210 34794</b>																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
MNE 16				2																								
MNE 04		1																										
MNE 20		1				2																						
MNE 01				1		2																						
MNE 03				1																								
<b>Name of system konfiguration / G / F</b>						<b>GLK 200/3.10</b>																						
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G		MNE 16		G		2																						
F				F		200L																						
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		170			200			250			170			200			250											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		2.637			3.101			3.881			1.051			1.121			1.174			39,9			36,2			30,2		
Würzburg, DE		2.532			2.970			3.714			1.060			1.139			1.191			41,9			38,3			32,1		
Davos, CH		2.856			3.364			4.205			1.410			1.498			1.551			49,4			44,5			36,9		
Athens, GR		1.962			2.313			2.891			1.437			1.568			1.664			73,2			67,8			57,6		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>				Stockholm		Würzburg DE		Davos CH		Athens GR																		
G				1.156		1.226		1.682		1.717																		
G		Ta		7,5		9,0		3,2		18,5																		
F		Tc		8,5		10,0		5,4		17,8																		
		ΔTc		2.1 - 14.9		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																		
G		kWh/m <sup>2</sup>		Annual irradiation South, 45° / G / F																								
Ta		°C		Annual mean air temp. / G / F																								
Tc		°C		Annual mean cold water temp. / G / F																								
ΔTc		°C		Seasonal variation of Tc / G / F																								
Th		45°C		Desired (mix. valve) temp. / G / F																								
<b>Max. operating press. - collector side</b>				200		kPa		<b>Max. operating press. - tank side</b>				1.000		kPa														
G								G																				
F								F																				
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						<b>Demokritos</b>																						
<b>Website</b>						<b><a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a></b>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						<b>6040 DE2, 6042 DE2</b>																						
<b>Date of test report / G / F</b>						<b>6/9/2011</b>																						
<b>Test method / G / F</b>						<b>ISO 9459-5 (DST)</b>																						
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>																												
English																												
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Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer									
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen									
				<b>Date / Datum / Date</b>		28/1/2013							
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<b>Street / Straße / Rue</b>		Ntrei Road, Dervenochorion Gate		<b>Website</b>		<a href="http://www.cosmosolar.com">http://www.cosmosolar.com</a>							
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		322 00 Viotia		<b>E-mail</b>		<a href="mailto:info@cosmosolar.com">info@cosmosolar.com</a>							
				<b>Tel. / Fax</b>		+99 210 3478897 / 210 34794							
<b>System family overview / G / F</b>													
<b>Collector type</b>		<b>Number of collectors / G / F</b>											
G		<b>Storage type / G / F</b>											
F		120L		160L		200L		250L		300L			
MNE 16				2		2							
MNE 04		1											
MNE 20			1			2		2		2			
MNE 01				1		1		2		2			
MNE 03					1		1						
<b>Name of system konfiguration / G / F</b>								GLK 200/4.10					
<b>Collector type</b>		MNE 20		<b>No. collectors</b>		2		<b>Storage type</b>		200L			
G				G				G					
F				F				F					
<b>Calculated annual results / G / F</b>													
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>											
G		170	200	250	170	200	250	170	200	250	170	200	250
F		l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y		
Stockholm, SE		2.637	3.101	3.881	1.200	1.296	1.367	45,5	41,8	35,2			
Würzburg, DE		2.532	2.970	3.714	1.209	1.314	1.384	47,8	44,2	37,3			
Davos, CH		2.856	3.364	4.205	1.656	1.778	1.857	58,0	52,9	44,2			
Athens, GR		1.962	2.313	2.891	1.568	1.752	1.927	79,9	75,8	66,7			
<b>Perf. indicators</b>		<b>Q<sub>d</sub> Heat demand / G / F</b>											
G		<b>Q<sub>L</sub> System output / G / F</b>											
F		<b>f<sub>sol</sub> QL/Q<sub>d</sub>; solar fraction / G / F</b>											
		<b>Q<sub>par</sub> Elec. for pumps/controllers / G / F</b>											
<b>Ref. conditions</b>		Stockholm	Würzburg DE	Davos CH	Athens GR								
G		1.156	1.226	1.682	1.717								
G		T <sub>a</sub> 7,5	9,0	3,2	18,5								
F		T <sub>c</sub> 8,5	10,0	5,4	17,8								
		ΔT <sub>c</sub> 2.1 - 14.9	7.0 - 13.0	4.6 - 6.2	10.4 - 25.2								
G	kWh/m <sup>2</sup>	<b>Annual irradiation South, 45° / G / F</b>											
T <sub>a</sub>	°C	<b>Annual mean air temp. / G / F</b>											
T <sub>c</sub>	°C	<b>Annual mean cold water temp. / G / F</b>											
ΔT <sub>c</sub>	°C	<b>Seasonal variation of T<sub>c</sub> / G / F</b>											
Th	45°C	<b>Desired (mix. valve) temp. / G / F</b>											
<b>Max. operating press. - collector side</b>				<b>Max. operating press. - tank side</b>									
G		200 kPa		G		1.000 kPa							
F				F									
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						Demokritos							
<b>Website</b>						<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>							
<b>Test report id. number / Prüberichtsnummer / F</b>						6040 DE2, 6042 DE2							
<b>Date of test report / G / F</b>						6/9/2011							
<b>Test method / G / F</b>						ISO 9459-5 (DST)							
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>													
English Deutsch Français													



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>																						
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
				<b>Date / Datum / Date</b>		<b>28/1/2013</b>																						
<b>Company / Firma / Société</b>		<b>COSMOSOLAR LTD</b>		<b>Country/Land/Pays</b>		<b>Greece</b>																						
<b>Street / Straße / Rue</b>		<b>Ntrei Road, Dervenochorion Gate</b>		<b>Website</b>		<b><a href="http://www.cosmosol">http://www.cosmosol</a></b>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		<b>322 00 Viotia</b>		<b>E-mail</b>		<b><a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a></b>																						
				<b>Tel. / Fax</b>		<b>+99 210 3478897 / 210 34794</b>																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
		250L		300L																								
MNE 16				2																								
MNE 04		1																										
MNE 20		1		2		2																						
MNE 01		1		1		2																						
MNE 03		1		1																								
<b>Name of system konfiguration / G / F</b>						<b>GLK 250/4.10</b>																						
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G		MNE 20		G		250L																						
F				F																								
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		200			250			300			200			250			300											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		3.101			3.881			4.652			1.358			1.472			1.551			43,7			38,0			33,3		
Würzburg, DE		2.970			3.714			4.459			1.367			1.498			1.577			46,1			40,2			35,3		
Davos, CH		3.364			4.205			5.046			1.831			1.962			2.050			54,4			46,7			40,6		
Athens, GR		2.313			2.891			3.469			1.805			2.050			2.208			78,1			71,0			63,6		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>		Stockholm		Würzburg DE		Davos CH		Athens GR																				
G		1.156		1.226		1.682		1.717																				
G		Ta		7,5		9,0		3,2		18,5																		
F		Tc		8,5		10,0		5,4		17,8																		
		ΔTc		2.1 - 14.9		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																		
G		kWh/m <sup>2</sup>		Annual irradiation South, 45° / G / F																								
Ta		°C		Annual mean air temp. / G / F																								
Tc		°C		Annual mean cold water temp. / G / F																								
ΔTc		°C		Seasonal variation of Tc / G / F																								
Th		45°C		Desired (mix. valve) temp. / G / F																								
<b>Max. operating press. - collector side</b>				200 kPa		<b>Max. operating press. - tank side</b>				1.000 kPa																		
G						G																						
F						F																						
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						<b>Demokritos</b>																						
<b>Website</b>						<b><a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a></b>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						<b>6040 DE2, 6042 DE2</b>																						
<b>Date of test report / G / F</b>						<b>6/9/2011</b>																						
<b>Test method / G / F</b>						<b>ISO 9459-5 (DST)</b>																						
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>																												
English																												
Deutsch																												
Français																												



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>							
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer									
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen									
				<b>Date / Datum / Date</b>		28/1/2013							
<b>Company / Firma / Société</b>		COSMOSOLAR LTD		<b>Country/Land/Pays</b>		Greece							
<b>Street / Straße / Rue</b>		Ntrei Road, Dervenochorion Gate		<b>Website</b>		<a href="http://www.cosmosol">http://www.cosmosol</a>							
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		322 00 Viotia		<b>E-mail</b>		<a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a>							
				<b>Tel. / Fax</b>		+99 210 3478897 / 210 34794							
<b>System family overview / G / F</b>													
<b>Collector type</b>		<b>Number of collectors / G / F</b>											
G		<b>Storage type / G / F</b>											
F		120L		160L		200L		250L		300L			
MNE 16				2		2							
MNE 04		1											
MNE 20			1			2		2		2			
MNE 01				1		1		2		2			
MNE 03					1								
<b>Name of system konfiguration / G / F</b>								GLK 250/4.60					
<b>Collector type</b>		MNE 01		<b>No. collectors</b>		2		<b>Storage type</b>		250L			
G				G				G					
F				F				F					
<b>Calculated annual results / G / F</b>													
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>											
G		200	250	300	200	250	300	200	250	300	200	250	300
F		l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y		
Stockholm, SE		3.101	3.881	4.652	1.410	1.568	1.664	45,5	40,4	35,8			
Würzburg, DE		2.970	3.714	4.459	1.419	1.594	1.691	47,8	42,9	37,9			
Davos, CH		3.364	4.205	5.046	1.927	2.129	2.260	57,3	50,6	44,8			
Athens, GR		2.313	2.891	3.469	1.840	2.146	2.339	79,5	74,2	67,4			
<b>Perf. indicators</b>		<b>Q<sub>d</sub> Heat demand / G / F</b>											
G		<b>Q<sub>L</sub> System output / G / F</b>											
F		<b>f<sub>sol</sub> QL/Q<sub>d</sub>; solar fraction / G / F</b>											
		<b>Q<sub>par</sub> Elec. for pumps/controllers / G / F</b>											
<b>Ref. conditions</b>		Stockholm	Würzburg DE	Davos CH	Athens GR								
G		1.156	1.226	1.682	1.717								
G		T <sub>a</sub> 7,5	9,0	3,2	18,5								
F		T <sub>c</sub> 8,5	10,0	5,4	17,8								
		ΔT <sub>c</sub> 2.1 - 14.9	7.0 - 13.0	4.6 - 6.2	10.4 - 25.2								
G	kWh/m <sup>2</sup>	<b>Annual irradiation South, 45° / G / F</b>											
T <sub>a</sub>	°C	<b>Annual mean air temp. / G / F</b>											
T <sub>c</sub>	°C	<b>Annual mean cold water temp. / G / F</b>											
ΔT <sub>c</sub>	°C	<b>Seasonal variation of T<sub>c</sub> / G / F</b>											
Th	45°C	<b>Desired (mix. valve) temp. / G / F</b>											
<b>Max. operating press. - collector side</b>				200	kPa	<b>Max. operating press. - tank side</b>				1.000	kPa		
G						G							
F						F							
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						Demokritos							
<b>Website</b>						<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>							
<b>Test report id. number / Prüberichtsnummer / F</b>						6040 DE2, 6042 DE2							
<b>Date of test report / G / F</b>						6/9/2011							
<b>Test method / G / F</b>						ISO 9459-5 (DST)							
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>													
English Deutsch Français													



<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>																						
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
				<b>Date / Datum / Date</b>		<b>28/1/2013</b>																						
<b>Company / Firma / Société</b>		<b>COSMOSOLAR LTD</b>		<b>Country/Land/Pays</b>		<b>Greece</b>																						
<b>Street / Straße / Rue</b>		<b>Ntrei Road, Dervenochorion Gate</b>		<b>Website</b>		<b><a href="http://www.cosmosol">http://www.cosmosol</a></b>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		<b>322 00 Viotia</b>		<b>E-mail</b>		<b><a href="mailto:info@cosmosolar.co">info@cosmosolar.co</a></b>																						
				<b>Tel. / Fax</b>		<b>+99 210 3478897 / 210 34794</b>																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
		250L		300L																								
MNE 16				2																								
MNE 04		1																										
MNE 20		1		2		2																						
MNE 01		1		1		2																						
MNE 03		1		1		2																						
<b>Name of system konfiguration / G / F</b>																												
<b>GLK 300/4.10</b>																												
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G		MNE 20		G		2																						
F				F		300L																						
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		250			300			400			250			300			400											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		3.881			4.652			6.202			1.498			1.621			1.726			38,6			34,8			27,8		
Würzburg, DE		3.714			4.459			5.948			1.515			1.638			1.743			40,8			36,7			29,3		
Davos, CH		4.205			5.046			6.728			1.997			2.137			2.251			47,5			42,4			33,5		
Athens, GR		2.891			3.469			4.625			2.059			2.278			2.453			71,2			65,7			53,0		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>				Stockholm		Würzburg DE		Davos CH		Athens GR																		
G				1.156		1.226		1.682		1.717																		
G		Ta		7,5		9,0		3,2		18,5																		
F		Tc		8,5		10,0		5,4		17,8																		
		ΔTc		2.1 - 14.9		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																		
G		kWh/m <sup>2</sup>		Annual irradiation South, 45° / G / F																								
Ta		°C		Annual mean air temp. / G / F																								
Tc		°C		Annual mean cold water temp. / G / F																								
ΔTc		°C		Seasonal variation of Tc / G / F																								
Th		45°C		Desired (mix. valve) temp. / G / F																								
<b>Max. operating press. - collector side</b>				200		kPa		<b>Max. operating press. - tank side</b>				1.000		kPa														
G								G																				
F								F																				
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						<b>Demokritos</b>																						
<b>Website</b>						<b><a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a></b>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						<b>6040 DE2, 6042 DE2</b>																						
<b>Date of test report / G / F</b>						<b>6/9/2011</b>																						
<b>Test method / G / F</b>						<b>ISO 9459-5 (DST)</b>																						
<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>																												
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<b>Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate</b>				<b>Registration No.</b>		<b>SKM 9921/3</b>																						
Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat				Registernummer																								
Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar				Num. d'enregistremen																								
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<b>Company / Firma / Société</b>		COSMOSOLAR LTD		<b>Country/Land/Pays</b>		Greece																						
<b>Street / Straße / Rue</b>		Ntrei Road, Dervenochorion Gate		<b>Website</b>		<a href="http://www.cosmosolar.com">http://www.cosmosolar.com</a>																						
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>		322 00 Viotia		<b>E-mail</b>		<a href="mailto:info@cosmosolar.com">info@cosmosolar.com</a>																						
				<b>Tel. / Fax</b>		+99 210 3478897 / 210 34794																						
<b>System family overview / G / F</b>																												
<b>Collector type</b>		<b>Number of collectors / G / F</b>																										
G		<b>Storage type / G / F</b>																										
F		120L		160L		200L																						
		250L		300L																								
MNE 16				2																								
MNE 04		1																										
MNE 20				2		2																						
MNE 01		1		1		2																						
MNE 03		1		1																								
<b>Name of system konfiguration / G / F</b>						GLK 300/4.60																						
<b>Collector type</b>		<b>No. collectors</b>		<b>Storage type</b>																								
G		MNE 01		G		2																						
F				F		300L																						
<b>Calculated annual results / G / F</b>																												
<b>Location</b>		<b>Daily draw-off litres/day / G / F /</b>																										
G		250			300			400			250			300			400											
F		l/d			l/d			l/d			l/d			l/d			l/d											
		Q <sub>d</sub> kWh/y			Q <sub>L</sub> kWh/y			f <sub>sol</sub> %			Q <sub>par</sub> kWh/y																	
Stockholm, SE		3.881			4.652			6.202			1.594			1.726			1.840			41,1			37,1			29,7		
Würzburg, DE		3.714			4.459			5.948			1.603			1.743			1.866			43,2			39,1			31,4		
Davos, CH		4.205			5.046			6.728			2.146			2.304			2.435			51,0			45,7			36,2		
Athens, GR		2.891			3.469			4.625			2.155			2.400			2.628			74,5			69,2			56,8		
<b>Perf. indicators</b>																												
G		Q <sub>d</sub>		Heat demand / G / F																								
F		Q <sub>L</sub>		System output / G / F																								
		f <sub>sol</sub>		Q <sub>L</sub> /Q <sub>d</sub> ; solar fraction / G / F																								
		Q <sub>par</sub>		Elec. for pumps/controllers / G / F																								
<b>Ref. conditions</b>				Stockholm		Würzburg DE		Davos CH		Athens GR																		
G				1.156		1.226		1.682		1.717																		
G		Ta		7,5		9,0		3,2		18,5																		
F		Tc		8,5		10,0		5,4		17,8																		
		ΔTc		2.1 - 14.9		7.0 - 13.0		4.6 - 6.2		10.4 - 25.2																		
G		kWh/m <sup>2</sup>		Annual irradiation South, 45° / G / F																								
Ta		°C		Annual mean air temp. / G / F																								
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ΔTc		°C		Seasonal variation of Tc / G / F																								
Th		45°C		Desired (mix. valve) temp. / G / F																								
<b>Max. operating press. - collector side</b>				200		kPa		<b>Max. operating press. - tank side</b>				1.000		kPa														
G								G																				
F								F																				
<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>						Demokritos																						
<b>Website</b>						<a href="http://www.solar.demokritos.gr">www.solar.demokritos.gr</a>																						
<b>Test report id. number / Prüberichtsnummer / F</b>						6040 DE2, 6042 DE2																						
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