Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultas d'essais selon EN 12976, Annexe au certificat Solar	**Registration No.** Registernummer Num. d'enregistremen	**011-7S686 A**
	Date / Datum / Date	26.06.2009

Company / Firma / Société	Ekos srl		**Country**/Land/Pays		Italy
Street / Straße / Rue	Via Bassi 81		**Website**		www.ekosistemi.it
Postal Code, Place / PLZ, Ort / Code postal, Place	33080	Fiume Veneto (PN)	**E-mail**		michele.tesolin@ekosistemi.it
			Tel.	+39	434 560 798

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

Collector(s) / Kollektor(en) / Capteur(s)

Company / Hersteller / Manufactuer	Ekos srl
Keymark reg, no. (optional)	

Model Bezeichnung Modéle	**Per module** / G / F: **Aperture area (A_a)** Aperturfläche (A_a) Superficie d'entrée (A_a)	**Gross length** Länge (Außenmaß) Longueur Hors tout	**Gross width** Breite (Außenmaß) Largeur hors Tout	**No. modules** G F		
	m²	m	m	min	-	max
EasySun 120	1.84	1780	1200	1	-	1
EasySun170	2.42	1780	1766	1	-	1
EasySun 200	3.05	1780	1910	1	-	1
EasySun 250	3.73	1780	2405	1	-	1

Storage(s) / Akkumulator(en) / F

Company / Hersteller / Manufactuer	Ekos srl

Model Bezeichnung Modéle	**Total volume** G F	**Gross diameter/width** Diam. / Breite (Außenmaß) Diam. / Largeur hors Tout	**Gross length** Länge (Außenmaß) longeur hors tout	**Back-up heated volume** G F	**El. back-up power** G F
	litres	mm	mm	litres	kW
EasySun 120	115	470	1420	0	0
EasySun 170	149	470	1785	0	0
EasySun 200	185	470	2100	0	0
EasySun 250	235	470	2560	0	0

Controller / G / F	
Company/Hersteller/Manufacteu	-
Model / Bezeichnung / Modéle	-
Functions G F	

Fluid / G / F		
Company/Hersteller/Manufacteu	Water	
Model / Bezeichnung / Modéle	-	
Freezing point G F	0	°C

System family overview / G / F

Collector G F	**No. collectors** / G / F **Storage** / G / F EasySun 120	EasySun 170	EasySun 200	EasySun 250
EasySun 120	1			
EasySun170		1		
EasySun 200			1	
EasySun 250				1

Testing Laboratory / Prüflaboratorium / Laboratoire d'essais	TZS, ITW University of Stuttgart
Website	www.tzs.uni-stuttgart.de
Test report id. number / Prüberichtsnummer / F	08SYS- 45/2- , 46/2- , 47/2- , 48/1- OEM01
Date of test report / Datum G / date F	25.06.2009

Comments of test lab / Kommentare des Laboratoriums / Commentaires du laboratoire

According to manufacturers' instructions the store is filled with a water/glycol mixture instead of pure water in regions of frost.

TZS Stuttgart
Pfaffenwaldring 6
70550 Stuttgart

Version 0.5, 04-02-2008

Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultas d'essais selon EN 12976, Annexe au certificat Solar	**Registration** Registernummer Num. d'enregistreme	011-7S686 A
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Company / Firma / Société	Ekos srl		**Country**/Land/Pays	Italy	
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Postal Code, Place / PLZ, Ort / Code postal, Place	33080	Fiume Veneto (PN)	**E-mail**	michele.tesolin@ekosistemi.it	
			Tel. / Fax	+39	434 560 798

System family overview / G / F

Collector type G / F	**Number of collectors** / G / F **Storage type** / G / F			
	EasySun 120	EasySun 170	EasySun 200	EasySun 250
EasySun 120	1			
EasySun170		1		
EasySun 200			1	
EasySun 250				1

Name of system konfiguration / G / F

Collector type G / F	EasySun 120	**No. collectors** G / F	1	**Storage type** G / F	EasySun 120

Calculated annual results / G / F

Location G / F	**Daily draw-off litres/day** / G / F /											
	50 l/d	110 l/d	140 l/d	50 l/d	110 l/d	140 l/d	50 l/d	110 l/d	140 l/d	50 l/d	110 l/d	140 l/d
	Q_d MJ/a			Q_L MJ/a			f_{sol} %			Q_{par} kWh/y		
Stockholm, SE	2 776	6 107	7 772	1 288	2 082	2 308	46.4	34.1	29.7	0	0	0
Würzburg, DE	2 661	5 854	7 450	1 557	2 347	2 615	58.5	40.1	35.1	0	0	0
Davos, CH	3 013	6 628	8 435	1 980	3 168	3 509	65.7	47.8	41.6	0	0	0
Athens, GR	2 066	4 545	5 784	1 419	2 572	2 915	68.7	56.6	50.4	0	0	0

Perf. indicators G / F		
	Q_d	**Heat demand** / G / F
	Q_L	**System output** / G / F
	f_{sol}	**Q_L/Q_d; solar fraction** / G / F
	Q_{par}	**Elec. for pumps/controllers** / G / F

Ref. conditions G / F		Stockholm	Würzburg DE	Davos CH	Athens GR
	G	1 113	1 230	1 684	1 359
	Ta	6.9	9.0	3.2	18.2
	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/m²	**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

Max. operating press. - collector side G / F	Heat-Pipe	kPa	**Max. operating press. - tank side** G / F	pressure-less	kPa

Testing Laboratory / Prüflaboratorium / Laboratoire d'essais	TZS, ITW University of Stuttgart
Website	www.tzs.uni-stuttgart.de
Test report id. number / Prüberichtsnummer / F	08SYS45/2OEM01
Date of test report / G / F	25.06.2009
Test method / G / F	ISO 9459-5 (DST)

Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire

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