Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate	Licence Number	011-7S2015 A
	Issued	2012.10.01

Company holding licence	Shandong Sunseason		**Country**	China	
Street	Jixi Industrial Park		**Website**	http://www.yjxktyn.com	
Postal Code	250400	Pingyin, Jinan	**E-mail**	info@	
			Tel. / Fax	+99	123 456 789/ -790

System classification / Systemeigenschaften / Caractéristiques du système	
Flow principle	Thermosyphon
Direct/indirect	Indirect
Press. principle	Closed
Drain back/down	Always filled (no drain)
Storage location	Outdoor
Storage position	Horizontal
Internal back-up	Electric
If other internal back-up, please specifiy:	
EN12976 type	Solar + supplementary

Collector(s)

Company	CollectorCompany
Keymark reg, no (if available)	*COLLECTOR-LIC-NO-01*

Model	**Per module/ Aperture area (Aa)**	**Gross length**	**Gross width**	**Number of modules**		
	m²	m	m	min	-	max
CollectorA	1,50	1,50	1,10	2	-	3
CollectorB	2,00	2,00	1,10	1	-	2
					-	
					-	
					-	

Storage(s)

Company	StorageCompany
Keymark reg, no. (if available)	*STORAGE-LIC-NO-01*

Model	**Total volume**	**Gross diameter/width**	**Gross length**	**Back-up heated volume**	**El. back-up power**
	litres	mm	mm	litres	kW
Store15	150	500	1146	50	1,1
Store30	300	500	2292	100	2,2

Controller

Company	-
Model	-
Functions	

Fluid

Company	FluidCompany	
Model	FluidA-30%	
	-30	°C

System family overview

Collector name	**Number of collectors**																													
	Storage																													
	Store15						Store30																							
CollectorA		2						3																						
CollectorB	1						2																							

Testing Laboratory	ANTL
Website	www.antl.com.au
Test report id. number	3888.11
Date of test reportd'essai	2012.09.10

Comments of test lab

Comments ...

ANTL
AUSTRALIAN NATIONAL TESTING LABORATORIES PTY. LTD.

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 2.2, 2012-09-09

Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate	Certification No.	011-7S2015 A
	Issued	01.10.2012

Company	Shandong Sunseason		**Country**		China
Street	Jixi Industrial Park		**Website**		http://www.yjxktyn.co
Postal Code	250400	Pingyin, Jinan	**E-mail**		sunseasonsolar@yahoo.c
			Tel. / Fax	+99	123 456 789/ -790

System family overview

Collector name	For each storage and collector size, give number of collectors																													
	Store15						Store30																							
CollectorA		2						3																						
CollectorB	1						2																							

Name of system konfiguration						Comb 2A15	
Collector name	CollectorA	**No. Collectors**	2			**Storage name**	Store15

Calculated annual results

Location Standort Sites	Daily draw-off (litres/day)								
	110	140	170	110	140	170	110	140	170
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Qd kWh/y			Qaux,net kWh/y			Qpar kWh/y		
Stockholm SE	1.757	2.236	2.715	537	956	1.375	0	0	0
WürzburgDE	1.686	2.146	2.606	466	866	1.266	0	0	0
Davos CH	1.958	2.492	3.026	738	1.212	1.686	0	0	0
Athens GR	1.241	1.580	1.918	21	300	578	0	0	0
Copenhagen DK	1.733	2.206	2.678	513	926	1.338	0	0	0

Perf. indicators for the table above

Qd	kWh/y	**Heat demand**
QL	kWh/y	**Back-up heating needed**
Qpar	kWh/y	**Electricity for pumps/controllers**

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR	Copenhagen		
	G	1.157	1.230	1.684	1.718	1.189		
	Ta	7,5	9,0	3,2	18,5	8,0		
	Tc	d.d	d.d	d.d	d.d	7,8		
	± ΔTc	d.d	d.d.	d.d.	d.d	d.d		

G	kWh/m²	**Annual irradiation South, 45°**
Ta	°C	**Annual mean air temperature**
Tc	°C	**Annual mean cold water temp.**
ΔTc	°C	**Seasonal variation of Tc**
Th	45 °C	**Desired hot water temperature (mixing valve temperature).**

Max. operating press. - collector side	9.999	kPa	Max. operating press. - tank side	9.999	kPa

Testing Laboratory	ANTL
Website	www.antl.com.au
Test report id. number	3888.11
Date of test report	2012.09.10
Test method	ISO 9459-5 (DST)

Comments of test lab laboratoire

No comments

ANTL
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Version 2.2, 2012-09-09

Summary of EN 12976 Test Results, annex to Solar KEYMARK Certificate	Certification No.	011-7S2015 A
	Issued	01.10.2012

Company	Shandong Sunseason		Country		China
Street	Jixi Industrial Park		Website		http://www.yjxktyn.com
Postal Code	250400		E-mail		sunseasonsolar@yahoo.cn
			Tel. / Fax	86	529,9970811

System family overview

Collector name	For each storage and collector size, give number of collectors			
	Sunseason 200	Sunseason 300	Sunseason 400	Sunseason 500
YJXK-58/1800/18		2		
YJXK-58/1800/24	1		2	
YJXK-58/1800/30				2

Name of system konfiguration					Closed Loop Forced Circulation		
Collector name	YJXK-58/1800/18		No. Collectors	2	Storage name		Sunseason 300

Calculated annual results

Location	Daily draw-off (litres/day)											
	170 l/d	200 l/d	250 l/d	170 l/d	200 l/d	250 l/d	170 l/d	200 l/d	250 l/d	170 l/d	200 l/d	250 l/d
	Q_d kWh/y			Q_L kWh/y			f_{sol} %			Q_{par} kWh/y		
Stockholm, SE	9.493	11.164	13.939	8.956	10.208	12.564	94	91	90	0	0	0
Würzburg, DE	8.579	10.091	12.614	8.113	9.225	11.348	95	91	90	0	0	0
Davos, CH	10.282	12.110	15.138	9.544	10.898	13.452	93	90	89	0	0	0
Athens, GR	7.063	8.327	10.408	7.042	8.027	9.830	100	96	94	0	0	0

Perf. indicators for the table above

Q_d	kWh/y	**Heat demand**
Q_L	kWh/y	**Back-up heating needed**
Q_{par}	kWh/y	**Electricity for pumps/controllers**

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1.157	1.230	1.684	1.718
	Ta	7,5	9,0	3,2	18,5
	Tc	d.d	d.d	d.d	d.d
	± ΔTc	d.d	d.d.	d.d.	d.d

G	kWh/m²	**Annual irradiation South, 45°**
Ta	°C	**Annual mean air temperature**
Tc	°C	**Annual mean cold water temp.**
ΔTc	°C	**Seasonal variation of Tc**
Th	45 °C	**Desired hot water temperature (mixing valve temperature).**

Max. operating press. - collector side	600	kPa	Max. operating press. - tank side	650	kPa

Testing Laboratory	ANTL
Website	www.antl.com.au
Test report id. number	3888.11
Date of test report	2012.09.10
Test method	ISO 9459-5 (DST)

Comments of test lab laboratoire

No comments

ANTL lab
AUSTRALIAN NATIONAL TESTING LABORATORIES PTY. LTD.

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Version 2.2, 2012-09-09