CERTIFIKAT

Solar Keymark Licence
No. SP SC0292-09

Holder/Issued to/Manufacturer

Company: SolarVenti A/S
Address: Fabriksvej 8, DK-8881 THORSÖ, DENMARK

Product name and description

Solar Collector for water heating. For more technical information see Appendix.

Brand name:	SV30 Hybrid	Number of covers:	1
Collector type:	Flat plate	Cover material:	Polycarbonate
Casing material:	Aluminium	Weight, empty:	40 kg
Absorber construction type:	PPH tubes and polyester felt	Heat transfer fluid:	Water

Certificate

The product mentioned above is found to comply with requirements in EN 12975 and the Specific CEN Keymark Scheme Rules for Solar Thermal Products.

Marking

Products conforming to this certificate shall be marked in accordance with the requirements in the Specific CEN Keymark Scheme Rules for Solar Thermal Products – v8.00. The marking shall, together with the Keymark logo show the identification code of the empowered certification body (SP Technical Research Institute of Sweden, No. 012), also see CEN-CENELEC Internal Regulations Part 4 Certification, Annex A.

Validity

This certificate is valid as long as the conditions in the EN standard and Keymark Rules are fulfilled and the standard or rules are not modified significantly. The validity of the certificate can be checked on:
http://www.estif.org/solarkeymark/Links/Internal_links/database/collector-database-updated.htm.

Miscellaneous

The manufacturer's factory production control procedures are under surveillance by the responsibility of SP. This is the first edition of this certificate no. SP SC0292-09.

Sweden, Borås 24th March 2009

SP Technical Research Institute of Sweden
Certification

Lennart Månsson
Certification Manager

Geron Johansson
Certification Officer

SP Technical Research Institute of Sweden

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SWEDEN			

Empowered Certification Body No. 012: SP Certification, Sweden
For more information of Solar Keymark visit: www.estif.org/solarkeymark/regcol.php
This certificate may not be reproduced other than in full,
except with the prior written approval by SP.

Appendix to

CERTIFICATE

Solar Keymark Licence No. SP SC0292-09

Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate Kurzfassung EN 12975 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultas d'essais selon EN 12975, annexe au certificat Solar KEYMARK	**Registration No.** Registernummer Numéro d'enregistrement	SP SC0292-09
	Date / Datum / Date	24-03-2009

Company / Firma / Société	SolarVenti A/S		**Country**/Land/Pays		Denmark
Street / Straße / Rue	Fabriksvej 8		**Website**		www.solarventi.dk
Postal Code, Place / PLZ, Ort / Code postal, Place	DK 8881 THORSÖ		**E-mail**		info@solarventi.dk
			Tel. / Fax	+45	86966700 / 86966955

Collector Type / Kollektorbauart / type de capteur	Flat plate / Flachkollektor / Capteur plan
To be roof integrated / im Dach eingegliedert zu sein / pour etre intégré dans le toit	No / nein / non

Product name Produktbezeichnung Modèle	**Aperture area** Aperturfläche Superficie d'entrée	**Gross length** Länge(Außenmaß) Longueuhors tout	**Gross width** Breite (Außenmaß) largeur hors tout	**Gross height** Höhe (Außenmaß) epaisseur hors tout	**Gross area** Bruttofläche Superficie hors-tout	**Power output per collector unit** Leistung je Kollektormodul Puissance fournie par le capteur {note 1} G = 1000 W/m² Tm-Ta :				
						0 K	10 K	30 K	50 K	70 K
	[m²]	[mm]	[mm]	[mm]	[m²]	[W]	[W]	[W]	[W]	[W]
SolarVenti SV30 Hybrid	2.784	3 000	1 020	100	3.06	1 322	1 207	936	610	16

Collector efficiency parameters related to aperture area Kollektorleistungsparameter bezogen auf die Aperturfläche Paramètres de performances thermiques rapportées à la superficie d'entrée	{note 1}	η_{0a}	0.475 -
		a_{1a}	3.88 W/(m²K)
		a_{2a}	0.025 W/(m²K²)
Stagnation temperature / Stagnationstemperatur / Temperature de stagnation	{note 2}	t_{stg}	75 °C
Effective thermal capacity / Effektive Wärmekapazität / Capacité thermique effective		$c_{eff} = C/A_a$	28.9 kJ/(m²K)
Max. operation pressure / max. Betriebsdruck / pression d'opération de maximum	{note 3}	p_{max}	20 kPa

Incidence angle modifiers $K_\theta(\theta)$ Einfallswinkelkorrekturfaktoren $K_\theta(\theta)$ Facteur d'angle d'incidence $K_\theta(\theta)$	G_{DIF}/G_{TOT} min	G_{DIF}/G_{TOT} max	θ_T / θ_L	50°	*10°*	*20°*	*30°*	*40°*	*60°*	*70°*
	0.09	0.498	$K_\theta(\theta_T)$	0.881	*0.997*	*0.986*	*0.967*	*0.934*	*0.785*	*0.587*
			$K_\theta(\theta_L)$	0.881	*0.997*	*0.986*	*0.967*	*0.934*	*0.785*	*0.587*
G_{DIF}/G_{TOT}: min&max while measuring / min&max während messen / min&max pendant qu'essayant					***Optional values** / Angaben optional / Données optionnelles*					

Testing Laboratory / Prüflaboratorium / Laboratoire d'essais	SP Technical Research Inst. of Sweden
Website	www.sp.se
Test report id. number / Prüberichtsnummer / numéro d'identification de rapport des essais	P8 03076-02
Date of test report / Datum des Prüfberichts / date de rapport des essais	03-03-2009
Perf. test method / Leistungstestmethode / méthode d'essai de performance	EN 12975-2 6.3 (outdoor/außen/extérieur)

Comments of testing laboratory / Kommentare des Prüflaboratoriums / commentaires du laboratoire d'essais :

English: The heat loss coefficient a1a is including wind 3.0 m/s. The collector efficiency η0 is weighted from 85% F'(τα)en * Kθ(15°) and 15% F'(τα)en * Kθd (Symbols according to EN 12975-2:2006).

Deutsch

Francais

Note 1	**Test conditions** Prüfbedingungen conditions d'essais	**Fluid** Flüssigkeit Liquide	Water Wasser Eau	**Flow rate** Durchfluss Débit	0.02	kg/s per m²	
Note 2	**Irradiance** / Bestrahlungsstärke / Irradiance **G_S=1000 W/m²** **Ambient temperature** / Umgebungstemperature / Temperature ambiante: **t_a=30 °C**						
Note 3	**Given by manufacturer** / Herstellerangaben / donnée par le fabricant						

Version 0.2.6, 04-02-2008

SP Technical Research Institute of Sweden

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