



CERTIFIKAT

Solar Keymark Licence No. SP SC0960-09

Holder/Issued to/Manufacturer

Company: Arcon Solvarme A/S
Address: Skørping Nord 3, DK-9520 Skørping

Product name and description

Thermal Solar Collector. For technical information see Appendix.

Model:	Arcon HT-SA 28/8	Collector type:	Flat plate
Number of covers:	2	Cover material:	Low iron antireflective glass + ETFE Foil 0.025mm
Casing material:	Aluminium	Weight, empty:	250 kg
Absorber construction type:	Strips	Heat transfer fluid:	Anti freezing fluid

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 – v 11.03. 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.

Borås, Sweden 22nd January 2010

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 SC0960-09

Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate						Registration No.		SP SC0960-09							
Kurzfassung EN 12975 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat						Registernummer									
Synthèse des résultats d'essais selon EN 12975, annexe au certificat Solar KEYMARK						Numéro d'enregistrement									
						Date / Datum / Date		22-01-2010							
Company / Firma / Société			Arcon Solvarme A/S			Country/Land/Pays		Denmark							
Brand (optional)			Arcon HT-SA 28/8			Website		www.arcon.dk							
Street / Straße / Rue			Skorping Nord 3			E-mail		arcon@arcon.dk							
Postal Code, Place / PLZ, Ort / Code postal, Place			DK-9520 Skorping			Tel.		+45 98391477							
						Fax		+45 98392005							
Collector Type / Kollektorbauart / Type de capteur			Flat plate / Flachkollektor / Capteur plan												
To be roof integrated/ im Dach eingegliedert zu sein / pour être intégré dans le toit						No / nein / non									
Product name Produktbezeichnung Modèle	Aperture area A _a Aperturfläche Superficie d'entrée [m ²]	Gross length Länge (Außenmaß) Longueur hors tout [mm]	Gross width Breite (Außenmaß) largeur hors tout [mm]	Gross height Höhe (Außenmaß) épaisseur hors tout [mm]	Gross area A _G Bruttofläche Superficie hors-tout [m ²]	Power output per collector unit Leistung je Kollektormodul Puissance fournie par le capteur									
						G = 1000 W/m ² T _m -T _a :									
						0 K	10 K	30 K	50 K	70 K					
Arcon HT-SA 28/8	12,56	5 965	2 275	140	13,57	9 770 [W]	9 450 [W]	8 810 [W]	8 170 [W]	7 530 [W]					
Collector efficiency parameters related to aperture area						η _{0a}		0,778		-					
Kollektorleistungsparameter bezogen auf die Aperturfläche						a _{1a}		2,55		W/(m ² K)					
Paramètres de performances thermiques rapportées à la superficie d'entrée {note 1}						a _{2a}		--		W/(m ² K ²)					
Stagnation temperature / Stagnationstemperatur / Temperature de stagnation {note 2}						t _{stg}		230		°C					
Effective thermal capacity / Effektive Wärmekapazität / Capacité thermique effective						C _{eff} = C/A _a		6,83		kJ/(m ² K)					
Max. operation pressure / max. Betriebsdruck / pression d'opération de maximum {note 3}						p _{max}		1000		kPa					
Incidence angle modifiers K_θ(θ)		G _{DIF} /G _{TOT}		θ _T / θ _L		50°		10°		20°	30°	40°	60°	70°	
Einfallswinkelkorrekturfaktoren K _θ (θ)		min		max		K _θ (θ _T)		0,90		1,00	0,99	0,97	0,94	0,82	0,65
Facteur d'angle d'incidence K _θ (θ)		0,10		1,00		K _θ (θ _L)		0,90		1,00	0,99	0,97	0,94	0,82	0,65
G _{DIF} /G _{TOT} : min&max while measuring / min&max während messen / min&max pendant qu'essayant						Optional values / Angaben optional / Données									
Testing Laboratory / Prüflaboratorium / Laboratoire d'essais						SP Technical Inst. of Sweden									
Website						www.sp.se									
Test report id. number / Prüfberichtsnummer / numéro d'identification de rapport des essais						P9 04984									
Date of test report / Datum des Prüfberichts / date de rapport des essais						2009-12-21									
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 a _{1a} is including wind 3.0 m/s. The collector efficiency η ₀ is weighted from 85% F'(α) _{en} * K _θ (θ) and 15% F'(α) _{en} * K _θ (θ) (Symbols according to EN 12975-2:2006).															
Note 1	Test conditions Prüfbedingungen Conditions d'essais	Fluid Flüssigkeit Liquide	Water Wasser Eau	Flow rate Durchfluss Débit	0,020	kg/s per m ²									
Note 2	Irradiance / Bestrahlungsstärke / Irradiance G _s =1000 W/m ² Ambient temperature / Umgebungstemperatur / Temperature ambiante: t _a =30 °C														
Note 3	Given by manufacturer / Herstellerangaben / donnée par le fabricant														

Version 0.2.8, 19-08-2009

Certificate issued by SP Certification No. SP SC0960-09, dated 22nd January 2010

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SP Technical Research Institute of Sweden

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