



CERTIFIKAT

Solar Keymark Licence No. SP SC0959-09

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 28/8	Collector type:	Flat plate
Number of covers:	1	Cover material:	Low iron glass
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
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Appendix to CERTIFICATE

Solar Keymark Licence No. SP SC0959-09

Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate Kurzfassung EN 12975 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12975, annexe au certificat Solar KEYMARK		Registration No. Registernummer Numéro d'enregistrement SP SC0959-09									
		Date / Datum / Date 22-01-2010									
		Company / Firma / Société Arcon Solvarme A/S									
Country/Land/Pays Denmark		Brand (optional) Arcon HT 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 28/8	12,56	5 965	2 275	140	13,57	10 060	9 620	8 680	7 630	6 480	
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}	0,801	-			
						a_{1a}	3,37	W/(m ² K)			
						a_{2a}	0,01	W/(m ² K ²)			
Stagnation temperature / Stagnationstemperatur / Temperature de stagnation {note 2}						t_{stg}	205	°C			
Effective thermal capacity / Effektive Wärmekapazität / Capacité thermique effective						$c_{eff} = C/A_a$	6,26	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) Einfallswinkelkorrekturfaktoren K _θ (θ) Facteur d'angle d'incidence K _θ (θ)		G_{DIF}/G_{TOT}		θ_T / θ_L	50°	10°	20°	30°	40°	60°	70°
		min	max	K _θ (θ _T)	0,92	1	0,99	0,98	0,96	0,86	0,73
		0,10	1,00	K _θ (θ _L)	0,92	1	0,99	0,98	0,96	0,86	0,73
G _{DIF} /G _{TOT} : min&max while measuring / min&max während messen / min&max pendant qu'essayant						<i>Optional values / Angaben optional / Données</i>					
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'(τ)α _{en} * K _θ (θ) and 15% F'(τ)α _{en} * K _{θd} (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/m² 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 SC0959-09, dated 22nd January 2010

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SP Technical Research Institute of Sweden

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 For more information of Solar Keymark visit: www.estif.org/solarkeymark/regcol.php