



ICIM S.p.A. a socio unico

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Capitale Soc EUR. 260.000,00 int. versato ed esistente  
C.F./P. IVA e Iscriz. Reg. Imprese di Milano n. 12908230159 - R.E.A. n. 1596292

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<b>Summary of EN 12976 Test Results,</b> annex to Solar KEYMARK Certificate Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar KEYMARK	<b>Registration</b>	
	Registernummer	104BN/0
	Num. d'enregistrem	
	Date / Datum / Date	18/06/2013

Company / Firma / Société	Aristhon Thermo S.p.A.	Country/Land/Pays	IT
Street / Straße / Rue	Viale A. Merloni 45	Website	<a href="http://www.aristonthermo.com">www.aristonthermo.com</a>
Postal Code, Place / PLZ, Ort / Code postal, Place	60044 Fabiano (AN)	E-mail	<a href="mailto:info@aristonthermo.com">info@aristonthermo.com</a>
		Tel. / Fax	+39 0371 871 448

System classification / G / F	
Flow principle / G / F	Thermosyphon / G / F
Direct / indirect / G / F	Indirect / G / F
Press. principle / G / F	Closed / 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

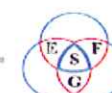
Collector(s) / Kollektor(en) / Capteur(s)					Storage(s) / Akkumulator(en) / F						
Company / Hersteller / Manufactuer Ariston Thermo S.p.A.					Company / Hersteller / Manufactuer Ariston Thermo S.p.A.						
Keymark reg. no. (optional) 102BN/0											
Model Bezeichnung Modèle	Per module / G / F				No. modules G F	Model Bezeichnung Modèle	Total volume G F litres	Gross diameter/width Diam. / Breite (Außenmaß) Diam. / Largeur hors Tout mm	Gross length Länge (Außenmaß) longueur hors tout mm	Back-up heated volume G F litres	El. back-up power G F kW
	Aperture area (A <sub>a</sub> ) Aperturfläche (A <sub>a</sub> ) Superficie d'entrée (A <sub>a</sub> ) m <sup>2</sup>	Gross length Länge (Außenmaß) Longueur Hors tout m	Gross width Breite (Außenmaß) Largeur hors Tout m	min - max							
ZELIOS VN 2.2	2,01	1995	1100	1 - 2	CNA 150	153	450	1077,5	--	--	
					CNA 200	202	450	1399	--	--	
					CNA 300	280	472	1845	--	--	

Controller / G / F			Fluid / G / F		
Company/Hersteller/Manufacteur			Company/Hersteller/Manufacteur		
Model / Bezeichnung / Modèle			Model / Bezeichnung / Modèle		
Functions G F			Freezing point G F °C		

System family overview / G / F						
Collector G F	No. collectors / G / F					
	Storage / G / F					
	CNA 150 HF		CNA 200 HF		CNA 300 HF	
ZELIOS VN 2.2	1		1 2		1 2	0 0

Testing Laboratory / Prüflaboratorium / Laboratoire d'essais	Eurofins - Modulo Uno;
Website	<a href="http://www.eurofins.it">www.eurofins.it</a>
Test report id. number / Prüfberichtsnummer / F:	M1.12.NRG.0200/46064-REV1; M1.12.NRG.0199/46064-REV1; M1.12.NRG.0181/46064-REV2
Date of test report / Datum G / date F	30/05/2012; 30/05/2012; 16/11/2012

Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire	Laboratorio di prova c/o Parco Scientifico Tecnologico Strada Savonese 9 - 15050 Rivalta Scrivia (AL) Tel. 0131.850.100 - Fax 0131.860.185 Sede Legale: Via Cuornè, 21 - 10156 TORINO (ITALY) Codice Fiscale e Partita IVA 01449620010
Additional reports: M1.12.NRG.0573/49381, M1.12.NRG.0574/49381 date: 03/12/2012; M1.13.NRG.0177/49482 date 09/05/2013	





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<b>Summary of EN 12976 Test Results,</b> <b>annex to Solar KEYMARK Certificate</b> Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar KEYMARK	<b>Registration No.</b> Registernummer Num. d'enregistrement	<b>104BN/0</b>
	<b>Date / Datum / Date</b>	<b>18/06/2013</b>

<b>Company / Firma / Société</b> Aristhon Thermo S.p.A.	<b>Country/Land/Pays</b> IT
<b>Street / Straße / Rue</b> Viale A. Merloni 45	<b>Website</b> <a href="http://www.aristonthermo.com">www.aristonthermo.com</a>
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b> 60044      Fabriano (AN)	<b>E-mail</b> <a href="mailto:info@aristonthermo.com">info@aristonthermo.com</a>
<b>Tel. / Fax</b>	<b>+39 0371 871 448</b>

System family overview / G / F												
Collector type	Number of collectors / G / F											
	Storage type / G / F											
	CNA 150 HF			CNA 200 HF			CNA 300 HF					
ZELIOS VN 2.2	1			1	2		1	2				

<b>Name of system konfiguration / G / F</b> CHAFFOTEAUX ZELIOS THERMO HF 150-1									
<b>Collector type</b> G F	ZELIOS VN 2.2	<b>No. collectors</b> G F	1	<b>Storage type</b> G F	CNA 150 HF				

Calculated annual results / G / F												
Location	Daily draw-off litres/day / G / F /											
	80	140	200	80	140	200	80	140	200	80	140	200
	I/d	I/d	I/d	I/d	I/d	I/d	I/d	I/d	I/d	I/d	I/d	I/d
	Qd MJ/y			QL MJ/y			fsol %			Qpar kWh/y		
Stockholm, SE	4.450	7.750	11.100	2.515	3.207	3.531	56,5	41,4	31,8	--	--	--
Würzburg, DE	4.250	7.450	10.650	2.643	3.307	3.609	62,2	44,4	33,9	--	--	--
Davos, CH	4.800	8.450	12.050	4.120	5.272	5.785	85,8	62,4	48,0	--	--	--
Athens, GR	3.300	5.800	8.250	2.799	4.045	4.621	84,8	69,7	56,0	--	--	--
Rome, IT	3.500	6.200	8.800	2.902	4.237	4.925	82,9	68,3	56,0	--	--	--
Tunis, TN	2.800	4.900	7.000	2.369	3.433	4.062	84,6	70,1	58,0	--	--	--

<b>Perf. indicators</b> G F	Qd	Heat demand / G / F
	QL	System output / G / F
	fsol	QL/Qd; solar fraction / G / F
	Qpar	Elec. for pumps/controllers / G / F

Ref. conditions	Stockholm	Würzburg DE	Davos CH	Athens GR	Rome, IT	Tunis, TN	
	G	1.200	1.270	1.740	1.753	1.800	2.050
G	Ta	6,9	9,5	3,2	17,7	17,2	19,3
F	Tc	8,5	12,0	5,4	17,8	16,0	22,0
	ΔTc	6,4	3	0,8	7,4	6,2	3,0

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

<b>Max. operating press. - collector side</b> G F	600 kPa	<b>Max. operating press. - tank side</b> G F	800 kPa
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<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b> Eurofins - Modulo Uno; <a href="http://www.modulouno.it">www.modulouno.it</a>	
<b>Website</b> <a href="http://www.modulouno.it">www.modulouno.it</a>	
<b>Test report id. number / Prüberichtsnummer / F</b> M1.12 NRG 020046061-REV	
<b>Date of test report / G / F</b> 30/5/2012	
<b>Test method / G / F</b> ISO 9459-5 (DST)	<b>Modulo Uno</b>

<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b> Eurofins - Modulo Uno SpA Laboratorio di prova c/o Parco Scientifico Tecnologico Strada Savonese 9 - 15050 Rivalta Scrivia (AL) Tel. 0131.850.100 - Fax 0131.860.185 Sede Legale: Via Cuornè, 21 - 10156 TORINO (ITALY) Codice Fiscale e Partita IVA 01449620010
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<b>Summary of EN 12976 Test Results,</b> <b>annex to Solar KEYMARK Certificate</b> Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar KEYMARK	<b>Registration No.</b>	<b>104BN/0</b>
	Registernummer	
	Num. d'enregistrement	
	<b>Date / Datum / Date</b>	<b>18/06/2013</b>

<b>Company / Firma / Société</b>	<b>Aristhon Thermo S.p.A.</b>	<b>Country/Land/Pays</b>	<b>IT</b>
<b>Street / Straße / Rue</b>	<b>Viale A. Merloni 45</b>	<b>Website</b>	<b><a href="http://www.aristonthermo.com">www.aristonthermo.com</a></b>
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>	<b>60044 Fabiano (AN)</b>	<b>E-mail</b>	<b><a href="mailto:info@aristonthermo.com">info@aristonthermo.com</a></b>
		<b>Tel. / Fax</b>	<b>+39 0371 871 448</b>

System family overview / G / F												
Collector type	Number of collectors / G / F											
	Storage type / G / F											
	CNA 150 HF			CNA 200 HF			CNA 300 HF					
	1	2	3	1	2	3	1	2	3	1	2	3
ZELIOS VN 2.2	1			1	2		1	2				

<b>Name of system konfiguration / G / F</b>				<b>CHAFFOTEAUX ZELIOS THERMO HF 200-1</b>			
<b>Collector type</b>	<b>ZELIOS VN 2.2</b>	<b>No. collectors</b>	<b>1</b>	<b>Storage type</b>	<b>CNA 200 HF</b>		
G		G		G			
F		F		F			

Calculated annual results / G / F												
Location	Daily draw-off litres/day / G / F /											
	140	200	300	140	200	300	140	200	300	140	200	300
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Qd MJ/y			QL MJ/y			fsol %			Qpar kWh/y		
Stockholm, SE	7.750	11.100	16.650	3.310	3.643	3.917	42,7	32,8	23,5	--	--	--
Würzburg, DE	7.450	10.650	15.950	3.427	3.743	4.004	46,0	35,1	25,1	--	--	--
Davos, CH	8.450	12.050	18.050	5.416	5.946	6.378	64,1	49,3	35,3	--	--	--
Athens, GR	5.800	8.250	12.400	4.173	4.774	5.319	72,0	57,9	42,9	--	--	--
Rome, IT	6.200	8.800	13.200	4.377	5.006	5.596	70,6	56,9	42,4	--	--	--
Tunis, TN	4.900	7.000	10.450	3.567	4.112	4.573	72,8	58,7	43,8	--	--	--

<b>Perf. indicators</b>	<b>Q<sub>d</sub></b>	<b>Heat demand / G / F</b>										
	<b>Q<sub>L</sub></b>	<b>System output / G / F</b>										
	<b>f<sub>sol</sub></b>	<b>QL/Q<sub>d</sub>; solar fraction / G / F</b>										
	<b>Q<sub>par</sub></b>	<b>Elec. for pumps/controllers / G / F</b>										
G												
F												

<b>Ref. conditions</b>		Stockholm	Würzburg DE	Davos CH	Athens GR	Rome, IT	Tunis, TN	
	<b>G</b>	1.200	1.270	1.740	1.753	1.800	2.050	
	<b>T<sub>a</sub></b>	6,9	9,5	3,2	17,7	17,2	19,3	
	<b>T<sub>c</sub></b>	8,5	12,0	5,4	17,8	16,0	22,0	
	<b>ΔT<sub>c</sub></b>	6,4	3	0,8	7,4	6,2	3,0	

<b>G</b>	<b>kWh/m<sup>2</sup></b>	<b>Annual irradiation South, 45° / G / F</b>
<b>T<sub>a</sub></b>	<b>°C</b>	<b>Annual mean air temp. / G / F</b>
<b>T<sub>c</sub></b>	<b>°C</b>	<b>Annual mean cold water temp. / G / F</b>
<b>ΔT<sub>c</sub></b>	<b>°C</b>	<b>Seasonal variation of T<sub>c</sub> / G / F</b>
<b>Th</b>	<b>45°C</b>	<b>Desired (mix. valve) temp. / G / F</b>

<b>Max. operating press. - collector side</b>	<b>600</b>	<b>kPa</b>	<b>Max. operating press. - tank side</b>	<b>800</b>	<b>kPa</b>
G			G		
F			F		

<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>	<b>Eurofins - Modulo Uno;</b>
<b>Website</b>	<b><a href="http://www.modulouno.it">www.modulouno.it</a></b>
<b>Test report id. number / Prüberichtsnummer / F</b>	<b>M1.12 NR.3.199/16074 (FE)</b>
<b>Date of test report / G / F</b>	<b>30/5/2012</b>
<b>Test method / G / F</b>	<b>ISO 9459-5 (DST)</b>

<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>	<b>Eurofins - Modulo Uno SpA</b> Laboratorio di prova c/o Parco Scientifico Tecnologico Strada Savonese 9 - 15050 Rivalta Scrivia (AL) Tel. 0131.850.100 - Fax 0131.860.185 Sede Legale: Via Cuornò, 21 - 10156 TORINO (ITALY) Codice Fiscale e Partita IVA 01449620010
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	<b>Date / Datum / Date</b>	<b>18/06/2013</b>

<b>Company / Firma / Société</b> Aristhon Thermo S.p.A.	<b>Country/Land/Pays</b> IT
<b>Street / Straße / Rue</b> Viale A. Merloni 45	<b>Website</b> <a href="http://www.aristonthermo.com">www.aristonthermo.com</a>
<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b> 60044 Fabiano (AN)	<b>E-mail</b> <a href="mailto:info@aristonthermo.com">info@aristonthermo.com</a>
<b>Tel. / Fax</b> +39 0371 871 448	

System family overview / G / F												
Collector type	Number of collectors / G / F											
	Storage type / G / F											
	CNA 150 HF			CNA 200 HF			CNA 300 HF					
	1	2	3	1	2	3	1	2	3			
ZELIOS VN 2.2	1			1	2		1	2				

<b>Name of system konfiguration / G / F</b> CHAFFOTEAUX ZELIOS THERMO HF 200-2			
<b>Collector type</b> G F	ZELIOS VN 2.2	<b>No. collectors</b> G F	2
<b>Storage type</b> G F	CNA 200 HF		

Calculated annual results / G / F												
Location	Daily draw-off litres/day / G / F /											
	140	200	300	140	200	300	140	200	300	140	200	300
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Qd MJ/y			QL MJ/y			fsol %			Qpar kWh/y		
Stockholm, SE	7.750	11.100	16.650	4.738	5.747	6.438	61,1	51,8	38,7	--	--	--
Würzburg, DE	7.450	10.650	15.950	5.061	6.105	6.863	67,9	57,3	43,0	--	--	--
Davos, CH	8.450	12.050	18.050	7.378	9.309	11.205	87,3	77,3	62,1	--	--	--
Athens, GR	5.800	8.250	12.400	5.134	6.654	8.495	88,5	80,7	68,5	--	--	--
Rome, IT	6.200	8.800	13.200	5.157	6.607	8.140	83,2	75,1	61,7	--	--	--
Tunis, TN	4.900	7.000	10.450	4.330	5.684	7.346	88,4	81,2	70,3	--	--	--

<b>Perf. indicators</b> G F	<b>Q<sub>d</sub></b>	<b>Heat demand / G / F</b>
	<b>Q<sub>L</sub></b>	<b>System output / G / F</b>
	<b>f<sub>sol</sub></b>	<b>QL/Q<sub>d</sub>; solar fraction / G / F</b>
	<b>Q<sub>par</sub></b>	<b>Elec. for pumps/controllers / G / F</b>

<b>Ref. conditions</b> G F		Stockholm	Würzburg DE	Davos CH	Athens GR	Rome, IT	Tunis, TN
	G	1.200	1.270	1.740	1.753	1.800	2.050
	T <sub>a</sub>	6,9	9,5	3,2	17,7	17,2	19,3
	T <sub>c</sub>	8,5	12,0	5,4	17,8	16,0	22,0
	ΔT <sub>c</sub>	6,4	3	0,8	7,4	6,2	3,0

G	kWh/m <sup>2</sup>	Annual irradiation South, 45° / G / F
T <sub>a</sub>	°C	Annual mean air temp. / G / F
T <sub>c</sub>	°C	Annual mean cold water temp. / G / F
ΔT <sub>c</sub>	°C	Seasonal variation of T <sub>c</sub> / G / F
T <sub>h</sub>	45°C	Desired (mix. valve) temp. / G / F

<b>Max. operating press. - collector side</b> G F	600 kPa	<b>Max. operating press. - tank side</b> G F	800 kPa
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<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b> Website	Eurofins - Modulo Uno; <a href="http://www.modulouno.it">www.modulouno.it</a>
<b>Test report id. number / Prüberichtsnummer / F</b>	M1.12 NR.G. 0978/19311 M1.13 NR.G. 0177/49482
<b>Date of test report / G / F</b>	03/12/2012; 09/05/2013
<b>Test method / G / F</b>	ISO 9459-5 (DST)

<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>	Eurofins - Modulo Uno SpA Laboratorio di prova c/o Parco Scientifico Tecnologico Strada Savonosa 9 - 15050 Rivalta Scrivia (AL) Tel. 0131.850.100 - Fax 0131.860.185 Sede Legale: Via Cuornè, 21 - 10156 TORINO (ITALY) Codice Fiscale e Partita IVA 01449620010
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	Num. d'enregistrement	
	<b>Date / Datum / Date</b>	<b>18/06/2013</b>

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<b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>	<b>60044 Fabiano (AN)</b>	<b>E-mail</b>	<b><a href="mailto:info@aristhonthermo.com">info@aristhonthermo.com</a></b>
		<b>Tel. / Fax</b>	<b>+39 0371 871 448</b>

System family overview / G / F												
Collector type G F	Number of collectors / G / F											
	Storage type / G / F											
	CNA 150 HF			CNA 200 HF			CNA 300 HF					
ZELIOS VN 2.2	1			1	2		1	2				

<b>Name of system konfiguration / G / F</b>				<b>CHAFFOTEAUX ZELIOS THERMO HF 300-1</b>			
<b>Collector type</b>	<b>ZELIOS VN 2.2</b>	<b>No. collectors</b>	<b>1</b>	<b>Storage type</b>	<b>CNA 300 HF</b>		
G		G		G			
F		F		F			

Calculated annual results / G / F												
Location G F	Daily draw-off litres/day / G / F /											
	140	300	400	140	300	400	140	300	400	140	300	400
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	<b>Qd MJ/y</b>			<b>QL MJ/y</b>			<b>f<sub>sol</sub> %</b>			<b>Q<sub>par</sub> kWh/y</b>		
Stockholm, SE	7.750	16.650	22.200	3.475	2.426	882	44,8	14,6	4,0	--	--	--
Würzburg, DE	7.450	15.950	21.300	3.645	2.184	338	48,9	13,7	1,6	--	--	--
Davos, CH	8.450	18.050	24.100	5.593	3.410	624	66,2	18,9	2,6	--	--	--
Athens, GR	5.800	12.400	16.500	4.188	4.948	4.539	72,2	39,9	27,5	--	--	--
Rome, IT	6.200	13.200	17.600	4.065	4.052	2.746	65,6	30,7	15,6	--	--	--
Tunis, TN	4.900	10.450	13.950	3.526	3.954	3.030	72,0	37,8	21,7	--	--	--

<b>Perf. indicators</b> G F	<b>Q<sub>d</sub></b>	<b>Heat demand / G / F</b>
	<b>Q<sub>L</sub></b>	<b>System output / G / F</b>
	<b>f<sub>sol</sub></b>	<b>QL/Q<sub>d</sub>; solar fraction / G / F</b>
	<b>Q<sub>par</sub></b>	<b>Elec. for pumps/controllers / G / F</b>

Ref. conditions G F	Stockholm	Würzburg DE	Davos CH	Athens GR	Rome, IT	Tunis, TN	
	G	1.200	1.270	1.740	1.753	1.800	2.050
G	Ta	6,9	9,5	3,2	17,7	17,2	19,3
F	Tc	8,5	12,0	5,4	17,8	16,0	22,0
	ΔTc	6,4	3	0,8	7,4	6,2	3,0
G	kWh/m <sup>2</sup>	<b>Annual irradiation South, 45° / G / F</b>					
Ta	°C	<b>Annual mean air temp. / G / F</b>					
Tc	°C	<b>Annual mean cold water temp. / G / F</b>					
ΔTc	°C	<b>Seasonal variation of Tc / G / F</b>					
Th	45°C	<b>Desired (mix. valve) temp. / G / F</b>					

<b>Max. operating press. - collector side</b>	<b>600</b>	<b>kPa</b>	<b>Max. operating press. - tank side</b>	<b>800</b>	<b>kPa</b>
G			G		
F			F		

<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b>	<b>Eurofins - Modulo Uno;</b>
<b>Website</b>	<b><a href="http://www.modulouno.it">www.modulouno.it</a></b>
<b>Test report id. number / Prüberichtsnummer / F</b>	<b>M1.12 NRG.0574/49381</b>
<b>Date of test report / G / F</b>	<b>03/12/2012</b>
<b>Test method / G / F</b>	<b>ISO 9459-5 (DST)</b>

<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>	<p><b>Eurofins - Modulo Uno SpA</b>          Laboratorio di prova c/o Parco Scientifico Tecnologico          Strada Savonesa 9 - 15050 Rivalta Scrivia (AL.)          Tel. 0131.850.100 - Fax 0131.860.185          Sede Legale: Via Cuornè, 21 - 10156 TORINO (ITALY)          Codice Fiscale e Partita IVA 01449620010</p>
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<b>Summary of EN 12976 Test Results,</b> <b>annex to Solar KEYMARK Certificate</b> Kurzfassung EN 12976 Test Ergebnisse, Anlage zum Solar KEYMARK-Zertifikat Synthèse des résultats d'essais selon EN 12976, Annexe au certificat Solar KEYMARK	<b>Registration No.</b> Registernummer Num. d'enregistrement	<b>104BN/0</b>
	<b>Date / Datum / Date</b>	<b>18/06/2013</b>

<b>Company / Firma / Société</b> <b>Street / Straße / Rue</b> <b>Postal Code, Place / PLZ, Ort / Code postal, Place</b>	Aristhon Thermo S.p.A. Viale A. Merloni 45 60044 Fabriano (AN)	<b>Country/Land/Pays</b> <b>Website</b> <b>E-mail</b> <b>Tel. / Fax</b>	IT <a href="http://www.aristonthermo.com">www.aristonthermo.com</a> <a href="mailto:info@aristonthermo.com">info@aristonthermo.com</a> +39 0371 871 448
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System family overview / G / F												
Collector type G F	Number of collectors / G / F											
	Storage type / G / F											
	CNA 150 HF			CNA 200 HF			CNA 300 HF					
	1	2	3	1	2	3	1	2	3			
ZELIOS VN 2.2	1			1	2		1	2				

<b>Name of system konfiguration / G / F</b> CHAFFOTEAUX ZELIOS THERMO HF 300-2			
<b>Collector type</b> G F	ZELIOS VN 2.2	<b>No. collectors</b> G F	2
		<b>Storage type</b> G F	CNA 300 HF

Calculated annual results / G / F												
Location G F	Daily draw-off litres/day / G / F /											
	140	300	400	140	300	400	140	300	400	140	300	400
	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d	l/d
	Qd MJ/y			QL MJ/y			fsol %			Qpar kWh/y		
Stockholm, SE	7.750	16.650	22.200	4.769	7.008	7.513	61,5	42,1	33,8	--	--	--
Würzburg, DE	7.450	15.950	21.300	5.155	7.242	7.746	69,2	45,4	36,4	--	--	--
Davos, CH	8.450	18.050	24.100	7.806	11.289	12.148	92,4	62,5	50,4	--	--	--
Athens, GR	5.800	12.400	16.500	5.247	8.893	9.862	90,5	71,7	59,8	--	--	--
Rome, IT	6.200	13.200	17.600	5.473	9.220	10.228	88,3	69,8	58,1	--	--	--
Tunis, TN	4.900	10.450	13.950	4.500	7.624	8.432	91,8	73,0	60,4	--	--	--

<b>Perf. indicators</b> G F	Q <sub>d</sub>	Heat demand / G / F
	Q <sub>L</sub>	System output / G / F
	f <sub>sol</sub>	QL/Q <sub>d</sub> ; solar fraction / G / F
	Q <sub>par</sub>	Elec. for pumps/controllers / G / F

<b>Ref. conditions</b> G F		Stockholm	Würzburg DE	Davos CH	Athens GR	Rome, IT	Tunis, TN
	G	1.200	1.270	1.740	1.753	1.800	2.050
	T <sub>a</sub>	6,9	9,5	3,2	17,7	17,2	19,3
	T <sub>c</sub>	8,5	12,0	5,4	17,8	16,0	22,0
	ΔT <sub>c</sub>	6,4	3	0,8	7,4	6,2	3,0

G	kWh/m <sup>2</sup>	Annual irradiation South, 45° / G / F
T <sub>a</sub>	°C	Annual mean air temp. / G / F
T <sub>c</sub>	°C	Annual mean cold water temp. / G / F
ΔT <sub>c</sub>	°C	Seasonal variation of T <sub>c</sub> / G / F
Th	45°C	Desired (mix. valve) temp. / G / F

<b>Max. operating press. - collector side</b> G F	600 kPa	<b>Max. operating press. - tank side</b> G F	800 kPa
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<b>Testing Laboratory / Prüflaboratorium / Laboratoire d'essais</b> <b>Website</b> <b>Test report id. number / Prüberichtsnummer / F</b> <b>Date of test report / G / F</b> <b>Test method / G / F</b>	Eurofins - Modulo Uno; <a href="http://www.modulouno.it">www.modulouno.it</a> M1.12-NEG.0181/46064-REV2 16/11/2013 ISO 9459-5 (DST)
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<b>Comments of test lab / Kommentare des laboratoriums / Commentaires du laboratoire</b>	<b>Modulo Uno</b> Eurofins - Modulo Uno SpA Laboratorio di prova c/o Parco Scientifico Tecnologico Strada Savonesa 9 - 15050 Rivalta Scrivia (AL) Tel. 0131.850.100 - Fax 0131.860.185 Sede Legale: Via Cuornè, 21 - 10156 TORINO (ITALY) Codice Fiscale e Partita IVA 01449620010
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