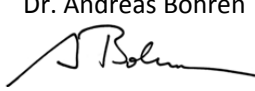


<b>Summary of EN 12975 Test Results, annex to Solar KEYMARK Certificate</b>						<b>Licence Number</b>		<b>011-7S2505 F</b>							
						<b>Issued</b>		<b>2015-04-09</b>							
<b>Company holding the</b>			Riello S.p.A.			<b>Country</b>		Italy							
<b>Brand (optional)</b>			-			<b>Website</b>		www.riello.com							
<b>Street, street number</b>			Via Mussa 20			<b>E-mail</b>		info@riello.it							
<b>Postal Code / City, province</b>			IT-35017 Piombino Dese			<b>Tel/Fax</b>		+39 049 932 39 11 /-46							
<b>Collector Type (flat plate glazed/un-glazed; evacuate tubular)</b>						Flat plate collector - glazed									
Thermal / photo voltaic hybrid collector? (PVT collector)						No									
Integration in the roof possible ? (manufacturers declaration)						Yes									
						<b>Power output per collector module</b>									
						G = 1000 W/m <sup>2</sup>									
						Tm-Ta									
						0 K	10 K	30 K	50 K	70 K					
<b>Collector name</b>						W	W	W	W	W					
CP25TOS						2.147	2'004	1'148	85	2.301	1'674	1'575	1'375	1'171	964
Performance test method						Glazed liquid heating collector - steady state - outdoor									
Performance parameters related to aperture						η <sub>0</sub>	a <sub>1</sub>	a <sub>2</sub>							
Units						-	W/(m <sup>2</sup> K)	W/(m <sup>2</sup> K <sup>2</sup> )							
Test results - Flow rate and fluid see note 1						0.778	4.57	0.0021							
Bi-directional incidence angle						Yes <i>Kθ values are obligatory for 50°.</i>									
Incidence angle modifiers Kθ(θT) transversal direction						Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
Incidence angle modifiers Kθ(θL) longitudinal direction						Kθ(θT)	1.00	1.00	0.99	0.97	0.93	0.86	0.72	0.47	0.00
Stagnation temperature - Weather conditions see note 2						Tstg						199	°C		
Effective thermal capacity						ceff = C/Ag						5.3	kJ/(m <sup>2</sup> K)		
Max. intende operation temperature - see note 3						Tmax,op						--	°C		
Max. operation pressure - see note 3						pmax,op						1000	kPa		
Pressure drop table - for a collector family, the values shall be for the module with highest ΔP per m <sup>2</sup> aperture area															
Flow rate		kg/(s m <sup>2</sup> )	0.004	0.008	0.012	0.016	0.020	0.025	0.029	0.033	0.037	0.041			
Pressure drop, ΔP		Pa	47	100	159	224	295	372	455	544	640	741			
Optional weather data		Location					Link								
Testing Laboratory		SPF, CH-8640 Rapperswil													
Website		www.spf.ch													
Test report id. number		C1657LPEN, C1657QPEN					Date of test reports		02.04.2015						
During the test GDIF/GTOT was always between		0.08	and		0.15										
<b>Comments of testing laboratory:</b>															
The outside surface of the collector frame within the collector height is available in two different wave pattern.															
Note 1		Flow rate		0.022	kg/(s m <sup>2</sup> )	Fluid		Water-Glycole							
Note 2		Irradiance, G = 1000 W/m <sup>2</sup> ; Ambient temperature , Ta=30 °C													
Note 3		Given by manufacturer													
Dr. Andreas Bohren 															
Datasheet version: 4.06, 2014-01-15															
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