



SOLAR RATING
& CERTIFICATION
CORPORATION

OG-100 ICC-SRCC™ CERTIFIED SOLAR AIR HEATING COLLECTOR # 10001971

SUPPLIER:	BRAND:	SolarWall
USA: Conserval Systems, Inc. 4242 Ridge Lea Road, Unit 28 Buffalo, NY 14226 USA	MODEL:	SW 1-Stage
Canada: Conserval Engineering Inc. 200 Wildcat Road Toronto, ON M3J 2N5 Canada solarwall.com	COLLECTOR TYPE:	Air Transpired
	CERTIFICATION NUMBER:	10001971
	ORIGINAL CERTIFICATION DATE:	Jun. 03, 2015
	RENEWAL EXPIRATION DATE:	Oct. 31, 2018
	<i>Certifications are subject to annual renewal</i>	

The solar collector listed below has been evaluated by the Solar Rating & Certification Corporation™ (ICC-SRCC™), an ISO 17065 accredited Certification Body, in accordance with ICC-SRCC OG-100, *Operating Guidelines and Minimum Standards for Certifying Solar Collectors*, and has been certified by ICC-SRCC. This award of certification is subject to all terms and conditions of the OG-100 Program Agreement and the documents incorporated therein by reference. This document must be reproduced in its entirety.

OG-100 COLLECTOR EFFICIENCY RATINGS ¹ (η) – Black Absorber Color ²			
Wind Speed ³ ►	Low Wind (1.0 m/s, 2.2 mph)	Medium Wind (2.0 m/s, 4.5 mph)	High Wind (3.0 m/s, 6.7 mph)
Air Flow Rate			
0.6 scmm/m ² (2.0 scfm/ft ²)	0.40	0.34	0.29
1.2 scmm/m ² (4.0 scfm/ft ²)	0.56	0.51	0.46
2.1 scmm/m ² (6.9 scfm/ft ²)	0.68	0.63	0.58
2.9 scmm/m ² (9.7 scfm/ft ²)	0.72	0.69	0.65

1: Thermal efficiency (η) is based on aperture area and includes back losses.
 2: Efficiency ratings are based on test data for the specific collector described in the "Collector Test Sample Details" section below. Performance values for collectors that use an absorber painted a different color than the one tested can be estimated by multiplying the efficiency values above by the ratio of the absorptivity of the new paint color and the absorptivity of the tested collector (0.94 in this case). This assumes that the new color paint has a similar emissivity to the tested collector (0.88 in this case), the absorbers in each stage are the same color. Absorptivity should be measured per ASTM C1549.
 3: Efficiency data adjusted to 1.0, 2.0, 3.0 m/s speeds by means of linear interpolation. Original data available in Testing Summary below.

CERTIFIED COLLECTOR SPECIFICATIONS	
In order to be considered certified, installed collectors must match the following specifications. Collectors must match the design of the sample tested for certification.	
Description	1-Stage, Open-Loop, Unglazed, Transpired, Solar Air Heating Collector
Max. Flow Rate	2.9 scmm/m ² (10 scfm/ft ²)*
Panel Width	945 mm (37.21 in)
Panel Length	Varies
Air Inlet	Front perforated panel
Air Outlet	Varies
Installation Orientation	0° (horizontal) - 90° (vertical)
ABSORBER	
Type	Painted perforated plate
Material	Galvanized steel

* Data supplied by collector manufacturer and was not measured independently by the testing laboratory.



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TESTING SUMMARY

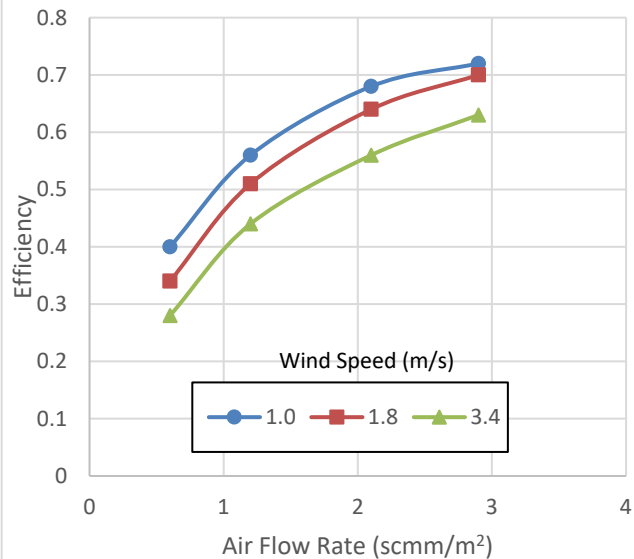
SOLARWALL SW-1 STAGE COLLECTOR

ICC-SRCC OG-100 CERTIFICATION #10001971

Test Lab Exova Canada, Inc.
Test Report Number 14-06-S0035-2RV2
Test Report Date February 23, 2015
Test Standard ISO 9806-2013

Laboratory testing of a collector sample is required for OG-100 certification to confirm that the collector passes qualification tests and to obtain performance results. The following sections provide information on the collector tested for the purposes of OG-100 certification.

COLLECTOR TEST SAMPLE DETAILS							
Absorber	Coating	Paint: Black					
	Absorptivity	0.94*					
	Material	Galvanized steel, 24 gauge					
	Porosity	Not reported					
Gross Area		6.834 m ² (73.56 ft ²)					
Aperture Area (Net)		9.243 m ² (99.49 ft ²)					
Gross Sample Dimensions (LXWXH)		2.445. m x 2.795 m x 0.23 m 8.02 ft x 9.17 ft x 0.75 ft					
Dry Weight		Not reported					
THERMAL EFFICIENCY TESTING DETAILS							
Testing Location		Indoors, conditioned space (25° C)					
Added Back/Side Insulation		2" rigid foam (R-16)					
THERMAL EFFICIENCY DATA SUMMARY (755 W/m ² average insolation)							
	Wind Speed	1.0 m/s (2.2 mph)		1.8 m/s (4.0 mph)		3.4 m/s (7.6 mph)	
Air Flow		η	ΔT (K)**	η	ΔT (K)**	η	ΔT (K)**
	0.6 scmm/m ² (2.0 scfm/ft ²)	0.40	24.16	0.34	20.95	0.28	16.92
	1.2 scmm/m ² (4.0 scfm/ft ²)	0.56	17.30	0.51	15.83	0.44	13.45
	2.1 scmm/m ² (6.9 scfm/ft ²)	0.68	12.12	0.64	11.33	0.56	9.98
	2.9 scmm/m ² (9.7 scfm/ft ²)	0.72	9.24	0.70	8.86	0.63	7.96



* Data supplied by collector manufacturer and was not measured independently by the test laboratory.

** ΔT defined as $T_e - T_a$ where T_e is the temperature of the air exiting the collector and T_a is the ambient (inlet) air temperature.

REMARKS:

1. Performance is unreliable if the collector is used at a pressure drop of less than 25 Pa.
2. Wind impact on efficiency should not be extrapolated to large-scale systems because the ratio of wind-blown edge loss to gain across the surface area is diminished for large vs. small collectors (arrays).
3. All lengths of this collector are certified.

Shawn Martin

Vice President of Technical Services, ICC-SRCC

