SOLAR RATING & CERTIFICATION CORPORATION™

An ICC Evaluation Service Program

OG-100 Solar Thermal Collector Certification

No./10001971

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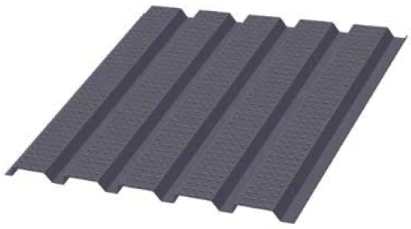
www.solar-rating.org | **(800) 423-6587** | **(562) 699-0543**

CERTIFICATION HOLDER:		**EVALUATION SUBJECT**	
Conserval Systems, Inc.			
200 Wildcat Road Toronto, ON M3J 2N5 Canada	10 John James Audobon Pkwy Suite 100 Amherst, NY 14228 USA	BRAND:	SolarWall
		MODEL:	SW 1-Stage
www.solarwall.com		TYPE:	Solar Air Heating Collector - Transpired, Building Integrated, Unglazed, Single Stage

PRODUCT CERTIFICAITON SYSTEM:
The ICC-SRCC OG-100 certification program includes evaluation and performance ratings for solar thermal collectors as established in the *ICC-SRCC Rules for Solar Heating & Cooling Product Listing Reports.* The program also includes periodic factory inspections and surveillance of the manufacturer's quality management system.

COMPLIANCE WITH THE FOLLOWING STANDARD(S): *ICC 901/SRCC 100 - 2020, Solar Thermal Collectors Standard*
THERMAL PERFORMANCE TEST STANDARD: ISO 9806-2013 (DEVIATION from ISO 9806-2017 specified in ICC 901)

COLLECTOR SPECIFICATIONS		
To be considered certified, installed collectors must match the following specifications.		
Max. Design Flow Rate	2.9 scmm/m^2 (10 scfm/ft^2)	
Panel Width	945 mm (37.2 in)	
Panel Length	Varies	
Air Inlet	Front absorber panel perforations	
Weight	9.8 - 19.5 kg/m^2 (2 – 4 lb/ft^2)	
Air Outlet	Location and size varies	
Orientation	0° (horizontal) - 90° (vertical)	
Absorber Type	Steel plate, painted, perforated, galvanized, 24 gauge	
Absorber Profile	SW150	

IDENTIFICATION:
Certified collectors must be identified with the OG-100 certification mark below in accordance with the *Rules for Certification Mark and Certificate Use* and labeled in with the information below per *ICC 901/SRCC 100*:

ICC-SRCC RATED ™

1. Manufacturer's name and model number.
2. ICC-SRCC OG-100 collector certification number
3. Maximum operating temperature
4. Dry (empty) weight
5. Fluid volume
6. Compatible heat transfer fluids
7. Standard stagnation temperature
8. Year of manufacture and/or serial number.

OG-100 COLLECTOR EFFICIENCY RATINGS[1] (η_a) – Black Absorber Color[2]			
Wind Speed[3] ▶ / **Air Flow Rate**	**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)**
0.6 scmm/m² (2.0 scfm/ft²)	0.40	0.34	0.29
1.2 scmm/m² (4.0 scfm/ft²)	0.56	0.51	0.46
2.1 scmm/m² (6.9 scfm/ft²)	0.68	0.63	0.58
2.9 scmm/m² (9.7 scfm/ft²)	0.72	0.69	0.65

1: Thermal efficiency (η_a) 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 are only valid for collectors painted the same color as the test sample.
3. Efficiency data calculated at 1.0, 2.0, 3.0 m/s speeds. Original data available in Testing Summary below.

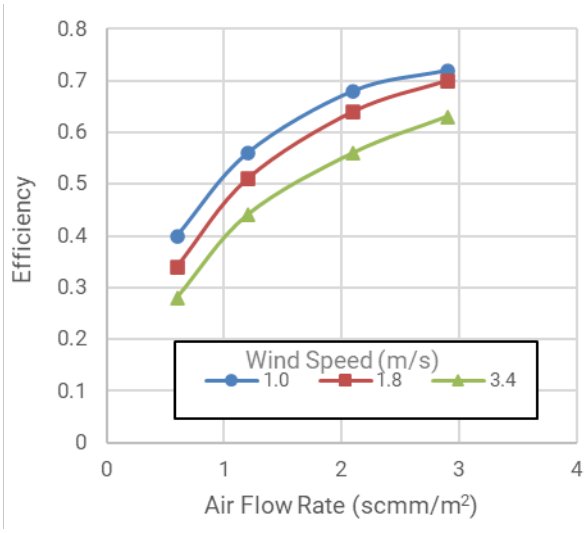
LABORATORY TESTING SUMMARY

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 sample tested for the purposes of OG-100 certification and the measured results.

TEST SAMPLE DETAILS

Absorber	**Coating**	Paint: Black
	Absorptivity	0.94 (not measured by lab)
	Material	Galvanized steel, 24 gauge
	Porosity	Not reported
Gross Area		6.834 m² (73.56 ft²)
Aperture Area (Net)		9.243 m² (99.49 ft²)
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)



THERMAL EFFICIENCY TESTING DETAILS

Testing Location	Indoor solar simulator @ 25°C
Added Back/Side Insulation	2" rigid foam (R-16)

THERMAL EFFICIENCY DATA SUMMARY (755 W/m² average insolation)

Wind Speed / **Air Flow Rate**	**1.0 m/s (2.2 mph)**		**1.8 m/s (4.0 mph)**		**3.4 m/s (7.6 mph)**	
	η	**Δ T (K)***	**η**	**Δ T (K)***	**η**	**Δ T (K)***
0.6 scmm/m² (2.0 scfm/ft²)	0.40	24.16	0.34	20.95	0.28	16.92
1.2 scmm/m² (4.0 scfm/ft²)	0.56	17.30	0.51	15.83	0.44	13.45
2.1 scmm/m² (6.9 scfm/ft²)	0.68	12.12	0.64	11.33	0.56	9.98
2.9 scmm/m² (9.7 scfm/ft²)	0.72	9.24	0.70	8.86	0.63	7.96

**Δ T 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.*

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CONDITIONS:

1. Collector must be installed and operated in accordance with the manufacturer's published instructions and local codes and regulations.
2. OG-100 Standard Performance Ratings and Standard Collector Power Output have been calculated for the tested components using standardized conditions established by the OG-100 program and associated test standards. Actual performance will vary based on the specific usage, installation, and local environmental conditions. OG-100 Thermal performance values are valid only for collectors with the same absorber profile, porosity, and color and where a pressure drop across the collector is less than 25 Pa.
3. Wind impact on efficiency should not be extrapolated to large-scale systems due to differences in the ratio of wind-blown edge loss to thermal gain across the surface area between large and small collectors.
4. The collector listed in this ICC-SRCC OG-100 certification must be labeled with the information listed above in accordance with the *ICC-SRCC Rules for Mark and Certificate Use*.
5. OG-100 certifications do not include mounting hardware and fixtures.
6. Solar thermal collectors and mounting hardware and appurtenances must comply with all applicable local requirements for fire resistance. Solar thermal collectors must be mounted in accordance with the requirements of the collector and mounting hardware manufacturers to comply with local codes for structural loading for wind, seismic, snow and other loads.
7. Solar thermal collectors must be used with the heat transfer fluids listed in this document.
8. Solar thermal collector manufactured under a quality control program subject to periodic evaluation in accordance with the requirements of ICC-SRCC.
9. This document must be reproduced in its entirety.
10. Certification status should be confirmed on the ICC-SRCC Directory at www.solar-rating.org

Vincent Chui, S.E.
VP of Evaluation Services

A2LA ACCREDITED
CERTIFICATE # 3299.01, 3299.03

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