



SOLAR RATING
& CERTIFICATION
CORPORATION

OG-100 ICC-SRCC™ CERTIFIED SOLAR AIR HEATING COLLECTOR #10001797

SUPPLIER:	Aéronergie, Inc. 2000 André-C Hamel Drummondville, Québec	BRAND:	Aéronergie
	J2C8B1 Canada aeronergie.com	MODEL:	UnitAir
		COLLECTOR TYPE:	Air Transpired
		CERTIFICATION NUMBER:	10001797
		ORIGINAL CERTIFICATION DATE:	Mar. 17, 2013
		RENEWAL EXPIRATION DATE:	Mar. 31, 2019
<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 RATINGS¹ (η) – Black Absorber Color²

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			
1.2 scmm/m ² (4 scfm/ft ²)	0.54	0.44	0.36
2.1 scmm/m ² (7 scfm/ft ²)	0.67	0.57	0.50
3.1 scmm/m ² (10 scfm/ft ²)	0.72	0.64	0.58

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 (0.93 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 2.0, 3.0 m/s speeds by means of linear interpolation. No data below 1.0 m/s was collected, therefore interpolation was not possible. Original data available in Testing Summary below.

CERTIFIED COLLECTOR SPECIFICATIONS

Collectors must match the design of the sample tested for certification. In order to be considered certified, installed collectors must match the following specifications.

Collector Type	1-Stage, Transpired, Open-Loop Solar Air Heating Collector	
Flowrate Range	0 – 3.048 scmm/m ² (0 – 10 scfm/ft ²)	
Panel Width	2.44 m (8 ft)	
Panel Length	1.84 m (6 ft)	
Type	<input checked="" type="checkbox"/> Unglazed <input type="checkbox"/> Glazed	
Absorber Type	Black Matte Painted Corrugated Steel, 26 gauge	
Color	Black QC 8262	
	Absorptivity 93%	



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TESTING SUMMARY UNITAIR COLLECTOR ICC-SRCC™ OG-100 CERTIFICATION #10001797

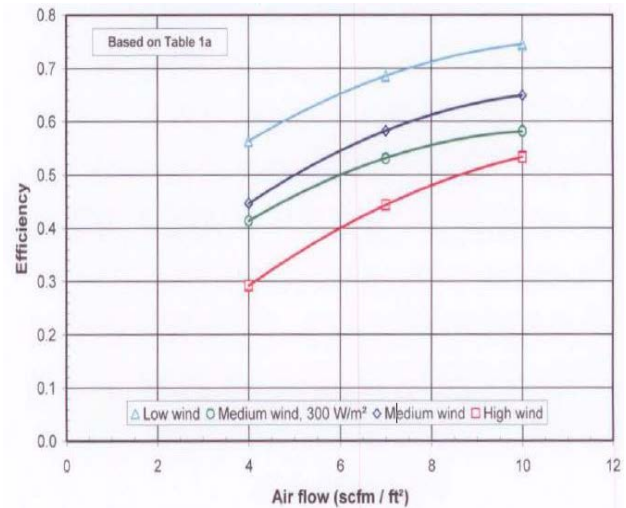
Test Lab Exova
Test Report Number 10-06-S0009RV1
Test Report Date August 9, 2011
Test Standard CSA F378-2-11

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
Absorber Absorptivity	0.93*
Absorber Material	Steel, Corrugated
Porosity	1.1%
Gross Area	4.49 m ² (48 ft ²)
Aperture Area (Net)	4.49 m ² (48 ft ²)
Gross Sample Dimensions (LXWXH)	2.44 m x 1.84 m x 18.5 cm 8 ft x 6 ft x 7.28 in

* Average data measured by test lab at the time of collector testing per CSA F378

THERMAL EFFICIENCY TESTING DETAILS	
Testing Location	Indoors, Conditioned Space (25° C)
Tilt	90 degrees (vertical)
Added Back Insulation	3" Roxul rock wool
Average Irradiance	900 W/m ²



THERMAL EFFICIENCY DATA SUMMARY (K at 913 W/m ² average insolation)							
Wind Speed		0.8 m/s (1.8 mph)		1.9 m/s (4.3 mph)		3.8 m/s (8.5 mph)	
		η	Δ T	η	η	Δ T	η
Air Flow	1.2 scmm/m ² (4 scfm/ft ²)	0.67	0.56	19.8	0.45	0.56	19.8
	2.1 scmm/m ² (7 scfm/ft ²)	0.73	0.69	14.1	0.58	0.69	14.1
	3.1 scmm/m ² (10 scfm/ft ²)	0.68	0.74	10.8	0.65	0.74	10.8

REMARKS:

- Performance is unreliable if the collector is used at a pressure drop of less than 25 Pa.
- 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).
- All lengths of this collector are certified.
- Each collector installation must be marked with an indelible label or mark in a location visible on the exterior of the collector. Marking must provide the model name and number and the SRCC OG-100 certification number, in accordance with the requirements of the *ICC-SRCC Trademark, Certification Mark and Certificate Policy*.

Shawn Martin

Technical Director, ICC-SRCC

