



# OG-100 ICC-SRCC™ CERTIFIED

## SOLAR AIR HEATING COLLECTOR #201124A

<b>SUPPLIER:</b> Matrix Energy 294 Labrosse Avenue Pointe Claire, Québec Canada H9R 5L8 www.matrixairheating.com	<b>BRAND:</b> MatrixAir <b>MODEL:</b> TR <b>COLLECTOR TYPE:</b> Transpired <b>CERTIFICATION NUMBER:</b> 2011124A <b>ORIGINAL CERTIFICATION:</b> July 2, 2012 <b>RENEWAL EXPIRATION DATE*:</b> July 1, 2021	
---	---	--

*\*Certifications must be renewed annually*

Compliance with the following standard: **ICC 901/SRCC 100-2015**

This solar thermal collector listed below has been certified and rated under the OG-100 program by the Solar Rating & Certification Corporation (ICC-SRCC™), an ISO/IEC 17065 accredited Certification Body, in accordance with the latest version of the *ICC-SRCC Rules for Solar Heating & Cooling Product Listing Reports*. This award of certification is subject to all terms and conditions of the ICC-SRCC OG-100 program and the documents incorporated therein by reference. Thermal performance ratings are calculated in accordance with standard OG-100 rating conditions. This document must be reproduced in its entirety.

OG-100 COLLECTOR EFFICIENCY RATINGS <sup>1</sup> ( $\eta$ ) – Black Absorber Color <sup>2</sup>			
Wind Speed <sup>3</sup> ►	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			
0.9 scmm/m <sup>2</sup> (3.0 scfm/ft <sup>2</sup> )	0.43	0.36	0.27
1.5 scmm/m <sup>2</sup> (5.0 scfm/ft <sup>2</sup> )	0.57	0.49	0.40
2.1 scmm/m <sup>2</sup> (6.7 scfm/ft <sup>2</sup> )	0.60	0.53	0.46

1: Thermal efficiency ( $\eta$ ) is based on aperture area and does not include 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). Absorptivity is 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	
Collectors must match the design of the sample tested for certification. In order to be considered certified, installed collectors must match the following specifications.	
<b>Type</b>	<input checked="" type="checkbox"/> Unglazed <input type="checkbox"/> Glazed
<b>Description</b>	1-Stage, Transpired, Building-Integrated Solar Air Heating Collector
<b>Max. Flow Rate</b>	2.1 scmm/m <sup>2</sup> (6.7 scfm/ft <sup>2</sup> )*
<b>Panel Width</b>	900 mm (35.4 in)*
<b>Panel Length</b>	Varies
<b>Air Inlet</b>	Transpired – Absorber perforations
<b>Air Outlet</b>	Variable
<b>Installation Orientation</b>	0° (horizontal) - 90° (vertical)
<b>Heat Transfer Fluid</b>	Air
ABSORBER	
<b>Type</b>	Painted Perforated Plate
<b>Material</b>	Steel, 24 gauge*

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



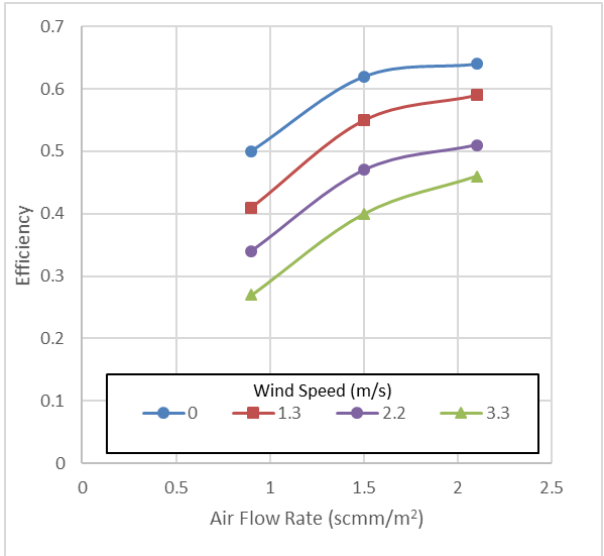
# TESTING SUMMARY

## MATRIXAIR TR COLLECTOR

### ICC-SRCC OG-100 CERTIFICATION #2011124A

**Test Lab** Bodycote Testing      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.  
**Test Report Number** 06-08-9157-A  
**Test Report Date** May 15, 2007  
**Test Standard** CSA F378-1987

COLLECTOR TEST SAMPLE DETAILS		
<b>Absorber</b>	<b>Coating</b>	Paint, Black, 6068
	<b>Absorptivity</b>	0.94**
	<b>Material</b>	Steel
	<b>Porosity</b>	Not Reported
	<b>Profile</b>	35150
<b>Gross Area</b>		4.720 m <sup>2</sup> (50.8 ft <sup>2</sup> )
<b>Aperture Area (Net)</b>		4.720 m <sup>2</sup> (50.8 ft <sup>2</sup> )
<b>Gross Sample Dimensions (LXWXD)</b>		2.465 m x 1.915 m x 22.86 cm 8.087 ft x 6.283 ft x 7.5 in. <i>(Depth varied from 9.0" at bottom to 7.5" at top)</i>
<b>Dry Weight</b>		Not Reported
THERMAL EFFICIENCY TESTING DETAILS		
<b>Testing Location</b>		Indoors, Conditioned space (25° C)
<b>Added Back Insulation</b>		2" rigid foam



THERMAL EFFICIENCY DATA SUMMARY (908 W/m <sup>2</sup> average insolation)									
Wind Speed		0.0 m/s (0.0 mph)		1.3 m/s (2.9 mph)		2.2 m/s (4.9 mph)		3.3 m/s (7.4 mph)	
		η	Δ T (K)‡	η	Δ T (K)‡	η	Δ T (K)‡	η	Δ T (K)‡
<b>Air Flow</b>	0.9 scmm/m <sup>2</sup> (3.0 scfm/ft <sup>2</sup> )	0.50	23.6	0.41	19.1	0.34	15.6	0.27	12.4
	1.5 scmm/m <sup>2</sup> (5.0 scfm/ft <sup>2</sup> )	0.62	0.48	0.55	15.6	0.47	13.3	0.40	11.3
	2.1 scmm/m <sup>2</sup> (6.7 scfm/ft <sup>2</sup> )	0.64	0.60	0.59	13.0	0.51	11.4	0.46	10.1

\*\* Data measured by test lab at the time of collector testing per CSA F378.  
 ‡ Δ T defined as T<sub>e</sub>-T<sub>a</sub> where T<sub>e</sub> is the temperature of the air exiting the collector and T<sub>a</sub> is the ambient (inlet) air temperature.

#### REMARKS AND CONDITIONS OF CERTIFICATION:

- The listed collector has been evaluated to the ICC 901/SRCC100-2015 standard and has been found to comply.
- OG-100 Standard Performance Ratings have been calculated for the tested components at the standardized conditions established by the program. Actual results will vary based on the specific usage, installation and local environmental conditions.
- The listed collector must display a label within the installation and operation manual(s) in accordance with the ICC-SRCC Certification, Trademark and Certificate Policy, which is available on the ICC-SRCC website.
- The listed collector must be installed in accordance with the manufacturer's published installation instructions and applicable codes. OG-100 certifications do not include mounting hardware and appurtenances.
- The listed collector 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.
- The listed collector, mounting hardware and appurtenances must comply with all local codes and requirements for fire resistance.
- The listed collector must be used with the heat transfer fluids listed in this document.
- All lengths of this collector are listed.
- The listed solar thermal collector is manufactured by Matrix Energy, Canada under a quality control program subjected to periodic evaluation in accordance with the requirements of ICC-SRCC.

*Shawn Martin*

Vice President of Technical Services, ICC-SRCC

