



OG-100 ICC-SRCC™ CERTIFIED SOLAR AIR HEATING COLLECTOR #2011123A

SUPPLIER: Matrix Energy 294 Labrosse Avenue Pointe Claire, Québec Canada H9R 5L8 www.matrixairheating.com	BRAND: MODEL: COLLECTOR TYPE: CERTIFICATION NUMBER: ORIGINAL CERTIFICATION: RENEWAL EXPIRATION DATE*:	MatrixAir DT Transpired 2011123A July 2, 2012 July 1, 2021
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*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 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			
1.2 scmm/m ² (4.0 scfm/ft ²)	0.51	0.35	0.21
2.1 scmm/m ² (7.0 scfm/ft ²)	0.68	0.56	0.35
3.4 scmm/m ² (11.0 scfm/ft ²)	0.74	0.68	0.54
4.3 scmm/m ² (14.0 scfm/ft ²)	0.75	0.71	0.65

1: Thermal efficiency (η) is based on aperture area.
 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.

Type	<input checked="" type="checkbox"/> Unglazed <input type="checkbox"/> Glazed
Description	2-Stage Transpired Free-Standing Triangular Solar Air Heating Collector
Max. Flow Rate	2.1 scmm/m ² (14.0 scfm/ft ²)*
Width	0.624 m (24.6 in)*
Length	3.05 m (10 ft)*
Air Inlet	Transpired – Absorber perforations
Air Outlet	Variable
Heat Transfer Fluid	Air
ABSORBER	
Type	Painted Perforated Plate
Material	Steel, 24 gauge*



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



TESTING SUMMARY

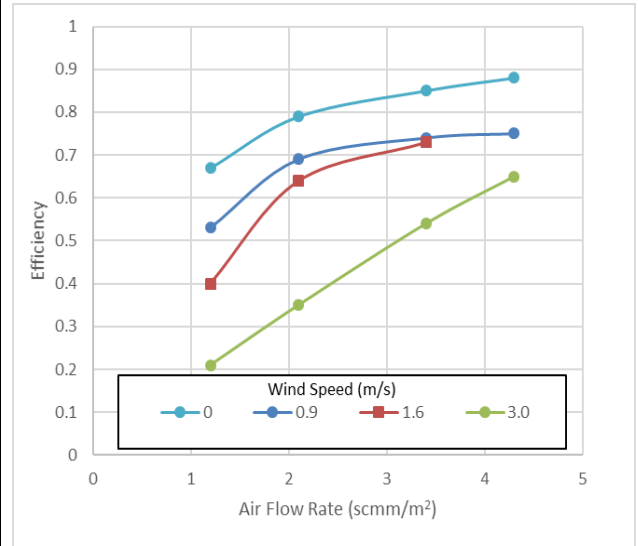
MATRIXAIR DT COLLECTOR

ICC-SRCC OG-100 CERTIFICATION #2011123A

Test Lab Exova
Test Report Number 09-08-0028
Test Report Date June 12, 2010
Test Standard CSA F378-1987

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	Steel
	Porosity	Not Reported
	Profile	Flat
Gross Area		1.716 m ² (18.47 ft ²)
Aperture Area (Net)		1.580/ m ² (17.01 ft ²)
Gross Sample Dimensions (LXWXD)		2.75 m x 0.54 m x 0.615 m 9.0 ft x 1.8 ft x 2.0 ft <i>(Depth measured at the base of triangle)</i>
Dry Weight		Not Reported
THERMAL EFFICIENCY TESTING DETAILS		
Testing Location		Indoors, Conditioned space (25° C)
Added Back Insulation		2" foil-faced fiberglass



THERMAL EFFICIENCY DATA SUMMARY (900 W/m ² average insolation)											
Air Flow		Wind Speed		0.0 m/s (0.0 mph)		0.9 m/s (2.0 mph)		1.6 m/s (3.6 mph)		3.0 m/s (6.7 mph)	
		η	ΔT (K) [‡]	η	ΔT (K) [‡]	η	ΔT (K) [‡]	η	ΔT (K) [‡]		
1.2 scmm/m ² (4.0 scfm/ft ²)		0.67	24.3	0.53	19.8	0.40	14.5	0.21	7.9		
2.1 scmm/m ² (7.0 scfm/ft ²)		0.79	16.5	0.69	15.0	0.64	13.3	0.35	7.7		
3.4 scmm/m ² (11.0 scfm/ft ²)		0.85	11.7	0.74	10.2	0.73	9.7	0.54	7.6		
4.3 scmm/m ² (14.0 scfm/ft ²)		0.88	9.3	0.75	8.7	0.73	8.0	0.65	5.8		

** Data measured by test lab at the time of collector testing per CSA F378.

‡ 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 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.
- 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

