# CERTIFIED SOLAR COLLECTOR

| | | | |
|---|---|---|---|
| SUPPLIER: | | BRAND: | MatrixAir |
| Matrix Energy | | MODEL: | TR |
| 296 Labrosse | | COLLECTOR TYPE: | Air Transpired |
| Pointe Claire, Quebec | | CERTIFICATION #: | 2011-124A |
| Canada H9R 5L8 | | Original Certification: | July 2, 2012 |
| Matrixenergy.com | | Expiration Date: | May 15, 2019 |

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

COLLECTOR THERMAL EFFICIENCY and TEMPERATURE RISE (K at 908 W/m$^2$) (based on aperture area)

| Wind Speed / Air Flow Rate | 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 (7.5 mph) | |
|---|---|---|---|---|---|---|---|---|
| | η | Δ T | η | Δ T | η | Δ T | η | Δ T |
| 0.9 scmm/m2 (3.0 scfm/ft2) | 0.50 | 23.6 | 0.41 | 19.1 | 0.34 | 15.6 | 0.27 | 12.4 |
| 1.5 scmm/m2 (5.0 scfm/ft2) | 0.62 | 17.7 | 0.55 | 15.6 | 0.47 | 13.3 | 0.40 | 11.3 |
| 2.1 scmm/m2 (6.7 scfm/ft2) | 0.64 | 14.4 | 0.59 | 13.0 | 0.51 | 11.4 | 0.46 | 10.1 |

| TESTED COLLECTOR SPECIFICATIONS | | | | | |
|---|---|---|---|---|---|
| Gross Area: | 4.720 m2 | 50.81 ft2 | Dry Weight: | Not measured | |
| Net Aperture Area: | 4.720 m2 | 50.81 ft2 | Leakage Rate: | Not measured | |
| Absorber Area: | 4.720 m2 | 50.81 ft2 | Test Pressure: | Not conducted | |

ADDITIONAL INFORMATION

| SOLAR COLLECTOR CONSTRUCTION DETAILS OF THE TESTED COLLECTOR | | | | | |
|---|---|---|---|---|---|
| Gross Length: | 2.465 m | Gross Width: | 1.915 m | Gross Depth: | 0.23 m |

| COLLECTOR MATERIALS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Outer Cover: | None | Enclosure back: | Steel | Back Insulation: | Foam | | |
| Inner Cover: | None | Enclosure side: | Steel | Side Insulation: | Foam | | |
| Absorber Description: | Perforated plate | | Flow Pattern: | Plate | | | |
| Absorber Configuration: | Corrugated | | Impact Safety Rating: | 0 | | | |
| Absorber Coating: | Non-selective | | Absorptivity | 0.94 | Emissivity: | 0.88 | |

| | | | |
|---|---|---|---|
| Test Lab: | Exova Canada, Inc. | Test Report Date: | May 15, 2007 |
| Test Report Number: | 06-08-9157-A | Test conducted: | Indoors |
| Test Fluid: | Air | Tested in accordance with: | CSA F378-87 |
| Back insulation during test | Foam | Back losses included in efficiency: | No |

Remarks:

1. Performance is unreliable if the collector is used at a pressure drop of less than 25 Pa because wind influences the performance unpredictably
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).

Jim Huggins

Technical Director