


SOLAR COLLECTOR CERTIFICATION AND RATING  SRCC OG-100	CERTIFIED SOLAR COLLECTOR SUPPLIER: Roth Industries, Inc. PO Box 245 Syracuse, NY 13211 USA MODEL: Heliostar 252 COLLECTOR TYPE: Glazed Flat-Plate CERTIFICATION#: 2008003A
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COLLECTOR THERMAL PERFORMANCE RATING							
Megajoules Per Panel Per Day				Thousands of BTU Per Panel Per Day			
CATEGORY	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY	CATEGORY	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY
A (-5 °C)	38.6	29.1	19.6	A (-9 °F)	36.6	27.5	18.6
B (5 °C)	35.5	25.9	16.5	B (9 °F)	33.6	24.6	15.6
C (20 °C)	30.5	21.1	11.9	C (36 °F)	28.9	20.0	11.2
D (50 °C)	20.7	12.1	3.9	D (90 °F)	19.6	11.5	3.7
E (80 °C)	11.6	4.1	0.0	E (144 °F)	11.0	4.1	0.0

Original Certification Date: 20-AUG-09

COLLECTOR SPECIFICATIONS

Gross Area: 2.528 m² 27.21 ft²
Dry Weight: 38.1 kg 84. lb
Test Pressure: 1103. KPa 160. psg

Net Aperature Area: 2.29 m² 24.65 ft²
Fluid Capacity: 1.5 liter 0.4 gal

COLLECTOR MATERIALS

Frame: Polycarbonate
Cover (Outer): Low Iron Tempered Glass
Cover (Inner): None
Absorber Material: Tube - Copper Tube on Aluminum / Plate - Aluminum
Absorber Coating: Selective Coating
Insulation Side: Rock Wool
Insulation back: Rock Wool

Pressure Drop

Flow		ΔP	
ml/s	gpm	gpm	in H ₂ O
20.00	0.32	349.00	1.40
50.00	0.79	1174.0	4.7
80.00	1.27	2359.00	9.48

TECHNICAL INFORMATION

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Taj]

	Y INTERCEPT	SLOPE
S I UNITS: $\eta = 0.7311 - 3.13000 (P)/I - 0.01261 (P)^2/I$	0.7	-3.9 W/m².°C
I P UNITS: $\eta = 0.7311 - 0.5513 (P)/I - 0.0012 (P)^2/I$	0.7	-0.7 Btu/hr.ft².°F

Incident Angle Modifier [(S)=1/cosθ - 1, 0°<θ<=60°]

K_a = 1 -0.126 (S) -0.201 (S)²
K_a = 1 -0.34 (S) Linear Fit

Model Tested: 2008003A
Test Fluid: Water
Test Flow Rate: 50 ml/s 0.79 gpm

REMARKS:

August, 2009

Certification must be renewed annually, For current status contact:

SOLAR RATING & CERTIFICATION CORPORATION

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