


<b>SOLAR COLLECTOR CERTIFICATION AND RATING</b>    <b>SRCC OG-100</b>	<b>CERTIFIED SOLAR COLLECTOR</b>  <b>SUPPLIER: Solar Thermal Systems</b> 4723 Tidewater Avenue Oakland, CA 94601 USA  <b>MODEL: Solar Thermal Systems STS 410BP</b> <b>COLLECTOR TYPE: Glazed Flat-Plate</b> <b>CERTIFICATION #: 100-2007-001B</b>
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<b>COLLECTOR THERMAL PERFORMANCE RATING</b>							
Megajoules Per Panel Per Day				Thousands of Btu Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY 23 MJ/m <sup>2</sup> ·d	MILDLY CLOUDY 17 MJ/m <sup>2</sup> ·d	CLOUDY DAY 11 MJ/m <sup>2</sup> ·d	CATEGORY (Ti-Ta)	CLEAR DAY 2000 Btu/ft <sup>2</sup> ·d	MILDLY CLOUDY 1500 Btu/ft <sup>2</sup> ·d	CLOUDY DAY 1000 Btu/ft <sup>2</sup> ·d
A (-5°C)	56	42	28	A (-9°F)	53	40	27
B (5°C)	51	37	23	B (9°F)	48	35	22
C (20°C)	43	29	16	C (36°F)	40	28	15
D (50°C)	27	15	4	D (90°F)	25	14	4
E (80°C)	12	3		E (144°F)	12	3	

A-Pool Heating (Warm Climate) B-Pool Heating (Cool Climate) C-Water Heating (Warm Climate) D-Water Heating (Cool Climate) E-Air Conditioning

Original Certification Date: January 24, 2007

### COLLECTOR SPECIFICATIONS

<b>Gross Area:</b>	3.796 m <sup>2</sup>	40.86 ft <sup>2</sup>	<b>Net Aperture Area:</b>	3.445 m <sup>2</sup>	37.08 ft <sup>2</sup>
<b>Dry Weight:</b>	62.6 kg	138 lb	<b>Fluid Capacity:</b>	4.5 l	1.2 gal
<b>Test Pressure:</b>	1103 kPa	160 psig			

### COLLECTOR MATERIALS

<b>Frame:</b>	Aluminum Extrusion
<b>Cover (Outer):</b>	Low Iron Tempered Glass
<b>Cover (Inner):</b>	None
<b>Absorber Material:</b>	Tube - Copper / Plate - Copper
<b>Absorber Coating:</b>	Moderately Selective Black Paint
<b>Insulation (Side):</b>	Polyisocyanurate
<b>Insulation (Back):</b>	Polyisocyanurate & Fiberglass

### PRESSURE DROP

Flow		Δ P	
ml/s	gpm	Pa	in H <sub>2</sub> O

### TECHNICAL INFORMATION

<b>Efficiency Equation [NOTE: Based on gross area and (P) = Ti-Ta]</b>				<b>Y Intercept</b>	<b>Slope</b>
<b>SI Units:</b>	$\eta = 0.666 - 3.3563 (P)/I - 0.0138 (P)^2/I$			0.682	-4.5392 W/m <sup>2</sup> ·°C
<b>IP Units:</b>	$\eta = 0.666 - 0.5915 (P)/I - 0.0014 (P)^2/I$			0.682	-0.800 Btu/hr·ft <sup>2</sup> ·°F

**Incident Angle Modifier [(S) = 1/cos θ - 1, 0° ≤ θ ≤ 60°]**

<b>K<sub>air</sub> = 1.0</b>	+0.0045 (S)	-0.2088 (S) <sup>2</sup>
<b>K<sub>gr</sub> = 1.0</b>	-0.21 (S)	(Linear Fit)

**Model Tested:** 100-1981-098E

**Test Fluid:** Water

**Test Flow Rate:** 32 ml/s      0.51 gpm

### REMARKS:

October, 2007

Certification must be renewed annually. For current status contact:

SOLAR RATING & CERTIFICATION CORPORATION

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