

**SOLAR COLLECTOR  
CERTIFICATION AND RATING**



SRCC OG-100

**CERTIFIED SOLAR COLLECTOR**

**SUPPLIER:** Viessmann Manufacturing Company  
**(US) Inc.**  
45 Access Road  
Warwick, RI 02886 USA

**MODEL:** 300-T, SP3 -2m2

**COLLECTOR TYPE:** Tubular

**CERTIFICATION#:** 2005020A

**COLLECTOR THERMAL PERFORMANCE RATING**

Megajoules Per Panel Per Day				Thousands of BTU Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY	CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY
A (-5 °C)	30.6	23.0	15.5	A (-9 °F)	29.0	21.8	14.7
B (5 °C)	29.6	22.0	14.5	B (9 °F)	28.0	20.9	13.7
C (20 °C)	27.9	20.3	12.8	C (36 °F)	26.4	19.3	12.1
D (50 °C)	24.5	17.0	9.5	D (90 °F)	23.2	16.1	9.0
E (80 °C)	20.9	13.4	6.4	E (144 °F)	19.8	12.7	6.1

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: 31-JUL-06

**COLLECTOR SPECIFICATIONS**

**Gross Area:** 2.878 m<sup>2</sup> 30.97 ft<sup>2</sup>

**Dry Weight:** 57.6 kg 127. lb

**Test Pressure:** 130. KPa 19. psg

**Net Aperature Area:** 2.50 m<sup>2</sup> 26.95 ft<sup>2</sup>

**Fluid Capacity:** 1.3 liter 0.3 gal

**COLLECTOR MATERIALS**

**Frame:** Aluminum

**Cover (Outer):** Glass Vacuum Tube

**Cover (Inner):** None

**Pressure Drop**

Flow		ΔP	
ml/s	gpm	Pa	in H <sub>2</sub> O
20.00	0.32	411.40	1.65
50.00	0.79	1556.7	6.3
80.00	1.27	3336.00	13.41

**Absorber Material:** Tube - Copper /  
Plate - Copper Fin

**Absorber Coating:** Sputtered cermet

**Insulation Side:** Vacuum

**Insulation Back:** Vacuum

**TECHNICAL INFORMATION**

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

	Y INTERCEPT	SLOPE
<b>SI UNITS:</b> η = 0.508 -0.91560 (P)/I -0.00300 (P) <sup>2</sup> /I	0.509	-1.095 W/m <sup>2</sup> .°C
<b>I P UNITS:</b> η = 0.508 -0.16128 (P)/I -0.00029 (P) <sup>2</sup> /I	0.509	-0.193 Btu/hr.ft <sup>2</sup> .°F

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

**Kα = 1** 0.519 (S) -0.743 (S)<sup>2</sup>

**Kα = 1** -0.26 (S) Linear Fit

**Model Tested:** Vitosol 300T-SP3 2m2

**Test Fluid:** Propylene Glycol & Water

**Test Flow Rate:** 59 ml/s 0.94 gpm

**REMARKS:** Collector tested with long axis of tubes oriented north-south. IAM perpendicular to the tubes is listed above.  
IAM parallel to the tubes = 1.0 - 0.31(S)

March, 2010

Certification must be renewed annually. For current status contact:  
SOLAR RATING & CERTIFICATION CORPORATION  
c/o FSEC ♦ 1679 Clearlake Road ♦ Cocoa, FL 32922 ♦ (321) 638-1537 ♦ Fax (321) 638-1010

**SOLAR COLLECTOR  
CERTIFICATION AND RATING**



**SRCC OG-100**

**CERTIFIED SOLAR COLLECTOR**

**SUPPLIER:** Viessmann Manufacturing Company  
**(US) Inc.**  
45 Access Road  
Warwick, RI 02886 USA

**MODEL:** 300-T, SP3 -3m2

**COLLECTOR TYPE:** Tubular

**CERTIFICATION#:** 2005020B

**COLLECTOR THERMAL PERFORMANCE RATING**

Megajoules Per Panel Per Day				Thousands of BTU Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY	CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY
A (-5 °C)	45.6	34.3	23.1	A (-9 °F)	43.2	32.5	21.9
B (5 °C)	44.0	32.8	21.6	B (9 °F)	41.7	31.1	20.4
C (20 °C)	41.5	30.3	19.0	C (36 °F)	39.3	28.7	18.0
D (50 °C)	36.5	25.3	14.2	D (90 °F)	34.6	24.0	13.5
E (80 °C)	31.1	20.0	9.6	E (144 °F)	29.5	18.9	9.1

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: 09-AUG-06

**COLLECTOR SPECIFICATIONS**

**Gross Area:** 4.287 m<sup>2</sup> 46.15 ft<sup>2</sup>

**Dry Weight:** 68.0 kg 150. lb

**Test Pressure:** 130. KPa 19. psg

**Net Aperature Area:** 3.76 m<sup>2</sup> 40.47 ft<sup>2</sup>

**Fluid Capacity:** 1.8 liter 0.5 gal

**COLLECTOR MATERIALS**

**Frame:** Aluminum

**Cover (Outer):** Glass Vacuum Tube

**Cover (Inner):** None

**Pressure Drop**

Flow		ΔP	
m/s	gpm	Pa	in H <sub>2</sub> O

**Absorber Material:** Tube - Copper /  
Plate - Copper fin

**Absorber Coating:** Sputtered cermet

**Insulation Side:** Vacuum

**Insulation Back:** Vacuum

**TECHNICAL INFORMATION**

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Taj]	Y INTERCEPT	SLOPE
<b>SI UNITS:</b> η = 0.508 - 0.91560 (P)/I - 0.00300 (P) <sup>2</sup> /I	<b>0.509</b>	<b>-1.095 W/m<sup>2</sup>.°C</b>
<b>I P UNITS:</b> η = 0.508 - 0.16128 (P)/I - 0.00029 (P) <sup>2</sup> /I	<b>0.509</b>	<b>-0.193 Btu/hr.ft<sup>2</sup>.°F</b>

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

**Kα = 1** 0.519 (S) -0.743 (S)<sup>2</sup>

**Kα = 1** -0.26 (S) Linear Fit

**Model Tested:** Vitosol 300T-SP3 2m2

**Test Fluid:** Propylene Glycol & Water

**Test Flow Rate:** 0 ml/s 0.00 gpm

**REMARKS:** Collector tested with long axis of tubes oriented north-south. IAM perpendicular to the tubes is listed above.  
IAM parallel to the tubes = 1.0 - 0.31(S)

March, 2010

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