


SOLAR COLLECTOR CERTIFICATION AND RATING  SRCC OG-100	<u>CERTIFIED SOLAR COLLECTOR</u> SUPPLIER: Enerworks, Inc. PO Box 9, 252 Hamilton Crescent Dorchester, ON NOL 1G0 MODEL: Commercial Collector COL-4X8-NL-SG1-SH10US COLLECTOR TYPE: Glazed Flat-Plate CERTIFICATION #: 100-2006-006A
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COLLECTOR THERMAL PERFORMANCE RATING

Megajoules Per Panel Per Day				Thousands of Btu Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY 23 MJ/m ² -d	MILDLY CLOUDY 17 MJ/m ² -d	CLOUDY DAY 11 MJ/m ² -d	CATEGORY (Ti-Ta)	CLEAR DAY 2000 Btu/ft ² -d	MILDLY CLOUDY 1500 Btu/ft ² -d	CLOUDY DAY 1000 Btu/ft ² -d
A (-5°C)	48	36	25	A (-9°F)	46	35	23
B (5°C)	45	33	21	B (9°F)	42	31	20
C (20°C)	39	27	15	C (36°F)	37	26	15
D (50°C)	27	16	5	D (90°F)	25	15	5
E (80°C)	15	6		E (144°F)	15	5	

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: September 14, 2006

COLLECTOR SPECIFICATIONS

Gross Area:	2.873 m ²	30.93 ft ²	Net Aperture Area:	2.691 m ²	28.97 ft ²
Dry Weight:	50.4 kg	111 lb	Fluid Capacity:	1.9 l	0.5 gal
Test Pressure:	517 kPa	75 psig			

COLLECTOR MATERIALS

Frame:	Galvanized Steel
Cover (Outer):	Low Iron Tempered Glass
Cover (Inner):	None
Absorber Material:	Tube - Copper / Plate - Aluminum
Absorber Coating:	Vapor Deposition Selective Coating
Insulation (Side):	Isocyanurate Foam
Insulation (Back):	Mineral Wool

PRESSURE DROP

Flow		Δ P	
ml/s	gpm	Pa	in H ₂ O
20	0.32	14184	56.94
50	0.79	42171	169.30
80	1.27	78210	313.98

TECHNICAL INFORMATION

Efficiency Equation [NOTE: Based on gross area and (P) = Ti-Ta]				Y Intercept	Slope
SI Units:	$\eta = 0.7622$	$-3.2787 (P)/I$	$-0.0129 (P)^2/I$	0.7683	-4.0348 W/m ² ·°C
IP Units:	$\eta = 0.7622$	$-0.5778 (P)/I$	$-0.0013 (P)^2/I$	0.7683	-0.711 Btu/hr-ft ² ·°F

Incident Angle Modifier [(S) = 1/cos θ - 1, 0° ≤ θ ≤ 60°]			
K_{air}	= 1.0	+0.0566 (S)	-0.2167 (S) ²
K_{tr}	= 1.0	-0.17 (S)	(Linear Fit)

Model Tested:	COL-4x8-NL-SGI-SH10US
Test Fluid:	Propylene Glycol & Water
Test Flow Rate:	53 ml/s 0.84 gpm

REMARKS:

September, 2006

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