

**SOLAR COLLECTOR
CERTIFICATION AND RATING**



SRCC OG-100

CERTIFIED SOLAR COLLECTOR

SUPPLIER: **Haining Fadi Solar Energy Co., Ltd**
No. 100, Gongren Road
Haining, Zhejiang Province 314400 China

MODEL: **FADI FD-SC-30**

COLLECTOR TYPE: **Tubular**

CERTIFICATION#: **2011104E**

COLLECTOR THERMAL PERFORMANCE RATING

Kilowatt-hours 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)	13.0	9.8	6.6	A (-9 °F)	44.3	33.4	22.5
B (5 °C)	12.4	9.2	6.1	B (9 °F)	42.4	31.5	20.7
C (20 °C)	11.6	8.4	5.2	C (36 °F)	39.4	28.6	17.7
D (50 °C)	9.9	6.8	3.6	D (90 °F)	33.8	23.1	12.4
E (80 °C)	8.2	5.1	2.1	E (144 °F)	28.1	17.4	7.3

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: 15-SEP-11

COLLECTOR SPECIFICATIONS

Gross Area: 4.769 m² 51.33 ft² Net Aperture Area: 2.77 m² 29.85 ft²

Dry Weight: 105.0 kg 232. lb Fluid Capacity: 1.7 liter 0.5 gal

Test Pressure: 44. KPa 6. psig

COLLECTOR MATERIALS

Frame: Aluminum

Cover (Outer): Glass

Cover (Inner): Glass

Pressure Drop

Flow		ΔP	
ml/s	gpm	Pa	in H ₂ O

Absorber Material: Tube - Copper / Plate - Aluminum

Insulation Side: Fiber, vacuum

Absorber Coating: Selective coating

Insulation Back: fiber, vacuum

TECHNICAL INFORMATION

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

	Y INTERCEPT	SLOPE
SI Units: $\eta = 0.380 - 1.04780 (P)/I - 0.00196 (P)^2/I$	0.380	-1.131 W/m ² .°C
IP Units: $\eta = 0.380 - 0.18457 (P)/I - 0.00019 (P)^2/I$	0.380	-0.199 Btu/hr.ft ² .°F

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

Kτα = 1 1.422 (S) -1.054 (S)²

Kτα = 1 0.40 (S) Linear Fit

Test Fluid: Water

Test Flow Rate: 231.3 ml/s.m² 0.3406 gpm/ft²

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 - 0.1(S)

September, 2011

Certification must be renewed annually, For current status contact:

SOLAR RATING & CERTIFICATION CORPORATION

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